

City of San Diego

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S.Amirrazi/H.McLintock/Lad

PROPOSAL DOCUMENTS



ORIGINAL



FOR

MISSION HILLS / HILLCREST LIBRARY DESIGN - BUILD CONTRACT

RFQ NO.:	<u>K-15-1233-DB2-3</u>
RFP NO.:	<u>K-16-1233-DB2-3-A</u>
SAP NO. (WBS/IO/CC):	<u>S-13022</u>
CLIENT DEPARTMENT:	<u>1713</u>
COUNCIL DISTRICT:	<u>3</u>
PROJECT TYPE:	<u>BD</u>

THIS CONTRACT IS SUBJECT TO THE FOLLOWING:

- PHASED-FUNDING
- THE CITY'S SUBCONTRACTING PARTICIPATION REQUIREMENTS FOR SLBE PROGRAM.
- PREVAILING WAGE RATES: STATE FEDERAL
- APPRENTICESHIP

PROPOSALS DUE:

12:00 NOON

JUNE 08, 2016

CITY OF SAN DIEGO

PUBLIC WORKS CONTRACTS

1010 SECOND AVENUE, 14th FLOOR, MS 614C

SAN DIEGO, CA 92101

ATTN: CONTRACT SPECIALIST

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REQUEST FOR PROPOSAL

1. INTRODUCTION

- 1.1. This is the City of San Diego's (City) second step (in a 2-step process) in the selection process to provide Design-Build services for the Mission Hills/Hillcrest Library Design – Build Contract.
- 1.2. Failure to submit all requested information in accordance with the requirements of the RFP may be cause for disqualification.
- 1.3. This RFP will not commit the City to award a contract, to defray any costs incurred in the preparation of a Proposal pursuant to this RFP, or to procure or contract for the Work.
- 1.4. Any architectural firms, engineering firms, specialty consultants, or individuals retained by the City to assist in drafting the RFPs or the Project's preliminary design may not be eligible to participate in the competition with any Design-Build Entity without the prior written consent of City. Any architectural firms, engineering firms, specialty consultants, or individuals retained by the City to assist in drafting any Reference Documents, such as the Water Department's Master Plan and any other document that was not prepared specifically for this contract, are considered to be eligible to participate.

2. **SUMMARY OF WORK:** This is the City solicitation process to acquire Design-Build services for a Design-Build project to **MISSION HILLS / HILCREST LIBRARY DESIGN – BUILD CONTRACT**. For additional information refer to Attachment A.

3. **COMPETITION:** This RFP is being issued only to the shortlisted contractors pursuant to RFQ No. **K-15-1233-DB2-3**.

3.1. This RFP is being issued to the selected firms for this selection process exclusively. These firms are:

1. BNB Builders, Inc.
2. Turner Construction Company
3. Ledcor Construction, Inc.
4. C.W. Driver
5. T.B. Penick & Sons

4. **PROPOSAL DUE DATE AND TIME ARE: June 8, 2016.**

5. **PROJECT VALUE:** The City's estimated cost for this project is **\$14,820,000**.

6. **DESIGN-BUILDER'S LICENSE REQUIREMENT AND PREQUALIFICATION STATUS:** The Design-Builder's license(s) and prequalification status as specified in the RFQ shall be valid when Proposal is submitted. Failure to comply with these requirements shall result in the rejection of the proposal and the removal of the Design-Builder from the short-list.

7. **CONTRACT PERIOD:** The Project shall be completed, including the Plant Establishment Period, within **682 Working Days** from the NTP.
8. **PREVAILING WAGE RATES APPLY TO THIS CONTRACT:** Refer to Attachment D.
9. **PHASED FUNDING:** For Phased Funding Conditions, see Attachment B.
10. **SUBCONTRACTING PARTICIPATION PERCENTAGES:** The City has incorporated mandatory SLBE-ELBE subcontractor participation percentages to enhance competition and maximize subcontracting opportunities. For the purpose of achieving the mandatory subcontractor participation percentages, a recommended breakdown of the SLBE and ELBE subcontractor participation percentages based upon certified SLBE and ELBE firms has also been provided to achieve the mandatory subcontractor participation percentages.

1. SLBE participation	3.6%
2. ELBE participation	10.1%
3. Total mandatory participation	13.7%

10.1. The Proposal may be declared non-responsive if the Design-Builder fails the following mandatory conditions:

10.1.1. Design-Builder's inclusion of SLBE-ELBE certified subcontractors at the overall mandatory participation percentage identified in this document; **OR**

10.1.2. Design-Builder's submission of Good Faith Effort documentation, saved in searchable Portable Document Format (PDF) and stored on Compact Disc (CD) or Digital Video Disc (DVD), demonstrating the Design-Builder made a good faith effort to outreach to and include SLBE-ELBE Subcontractors required in this document within **3 Working Days** of the Bid opening if the overall mandatory participation percentage is not met.

10.1.3. GFE documentation is to be sent to the attention of the Contract Specialist and address noted on the front of this solicitation.

10.1.4. GFE documentation is to be sent to the attention of the Contract Specialist and address noted on the front of this solicitation.

11. SELECTION AND AWARD SCHEDULE:

11.1. The City anticipates that the process for selecting a Design-Builder and awarding the contract will be according to the following tentative schedule. Dates are subject to change:

11.1.1. Pre-Proposal Meeting MAY 25, 2016

11.1.2. Proposal Due Date JUNE 08, 2016

- | | |
|------------------------------------|-----------------|
| 11.1.3. Selection and Notification | JULY 08, 2016 |
| 11.1.4. Limited Notice to Proceed | AUGUST 08, 2016 |
| 11.1.5. NTP | AUGUST 23, 2016 |

12. PRE-PROPOSAL MEETING:

- 12.1.** Those wishing to submit a Proposal are **required** to attend the Pre-Proposal Meeting. The purpose of the meeting is to discuss the scope of the Project, submittal requirements, the pre-qualification process and any Equal Opportunity Contracting Program requirements and reporting procedures. Failure to attend the Mandatory Pre-Proposal Meeting **shall** result in the Design-Builder's Proposal being deemed non-responsive. The Pre-Proposal meeting is scheduled as follows:

Date: MAY 25, 2016

Time: 10:00 AM to 11:00AM

Location: 1010 Second Avenue, Suite 1400, San Diego, CA, 92101.

Attendance at the Pre-Proposal Meeting will be evidenced by the Design-Builder's representative's signature on the attendance roster. It is the responsibility of the Design Builder's representative to complete and sign the attendance roster.

Design-Builders may not be admitted after the specified start time of the mandatory Pre-Proposal Meeting.

- 12.2.** To request a sign language or oral interpreter, call Public Works Contracts at (619) 533-3450 at least 5 Working Days prior to the meeting to ensure availability.

INSTRUCTIONS TO PROPOSERS AND GENERAL CONDITIONS

1. PREQUALIFICATION OF CONTRACTORS:

- 1.1. Contractors submitting proposals must be pre-qualified for the total amount proposed, inclusive of all alternate items or specified Task Order limits prior to the date of submittal. Proposals from contractors who have not been pre-qualified as applicable and Proposals that exceed the maximum dollar amount at which contractors are pre-qualified may be deemed **non-responsive** and ineligible for award. Complete information and links to the on-line prequalification application are available at:

<http://www.sandiego.gov/cip/bidopps/prequalification.shtml>

- 1.2. The completed application must be submitted online no later than 2 weeks prior to the Proposal due date. For additional information or the answer to questions about the prequalification program, contact David Stucky at 619-533-3474 or dstucky@sandiego.gov.
- 1.3. Due to the City's fiduciary requirement to safeguard vendor data, City staff will not be able to provide information regarding contractors' prequalification status over the telephone. Contractors may access real-time information about their prequalification status via their vendor profile on PlanetBids™.

2. ELECTRONIC FORMAT RECEIPT AND OPENING OF PROPOSALS: Proposals will be received in **electronic format (eBids) EXCLUSIVELY** at the City of San Diego's electronic bidding (eBidding) site, at:

<http://www.sandiego.gov/cip/bidopps/index.shtml> and are due by the date, and time shown on the cover of this solicitation.

- 2.1. **PROPOSERS MUST BE PRE-REGISTERED** with the City's bidding system and possess a system-assigned Digital ID in order to submit an electronic proposal.
- 2.2. The City's bidding system will automatically track information submitted to the site including IP addresses, browsers being used and the URLs from which information was submitted. In addition, the City's bidding system will keep a history of every login instance including the time of login, and other information about the user's computer configuration such as the operating system, browser type, version, and more. Because of these security features, Contractors who disable their browsers' cookies will not be able to log in and use the City's bidding system.

- 2.3. Upon entry of their proposal, the system will ensure that all required fields are entered. **The system will not accept a proposal for which any required information is missing.** This includes all necessary pricing, subcontractor listing(s) and any other essential documentation and supporting materials and forms requested or contained in these solicitation documents.
- 2.4. **PROPOSALS REMAIN SEALED UNTIL DUE DATE AND TIME.** eBids and eProposals are transmitted into the City's bidding system via hypertext transfer protocol secure (https) mechanism using SSL 128-256 bit security certificates issued from Verisign/Thawte which encrypts data being transferred from client to server. Proposals submitted prior to the Due Date and Time are not available for review by anyone other than the submitter, who will have until the Due Date and Time to change, rescind or retrieve its proposal should they desire to do so.
- 2.5. **PROPOSALS MUST BE SUBMITTED BY DUE DATE AND TIME.** Once the deadline is reached, no further submissions are accepted into the system. Once the Due Date and Time has passed, bidders, proposers, the general public, and City staff are able to immediately see the results on line. City staff may then begin reviewing the submissions for responsiveness, Equal Opportunity Contracting Program (EOCP) compliance and other issues.
- 2.6. **TECHNICAL PROPOSAL AND PRICE PROPOSAL ARE TO BE SEPARATE.** The proposer is to submit two separate proposal PDFs by the due date and time.
 - 2.6.1. The Technical proposal, which should contain the items detailed below and in Attachment G. There is to be **NO PRICING** information within this proposal. If a Technical proposal contains pricing information, the submission may be deemed non-responsive and ineligible for further consideration, and
 - 2.6.2. The Price proposal, which should detail the cost structure and include any forms as required herein.
- 2.7. **RECAPITULATION OF THE WORK.** Proposals shall not contain any recapitulation of the Work. Conditional proposals may be rejected as being **non-responsive**. Alternative proposals will not be considered unless called for.
- 2.8. **PROPOSALS MAY BE WITHDRAWN** by the Proposer prior to, but not after, the time set as Due Date and Time.
 - 2.8.1. **Important Note:** Submission of the electronic proposal into the system may not be instantaneous. Due to the speed and capabilities of the user's internet service provider (ISP), bandwidth, computer hardware and other variables, it may take time for the proposer's submission to upload and be received by the City's eBidding system. It is the proposer's sole responsibility to ensure their proposals are received on time by the City's eBidding system. The City of San Diego is not responsible for proposals that do not arrive by the required date and time.

- 2.9. **ACCESSIBILITY AND AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE:** To request a copy of this solicitation in an alternative format, contact the Public Works Contract Specialist listed in the cover of this solicitation at least five (5) working days prior to the Proposal due date to ensure availability.
3. **ELECTRONIC SUBMISSIONS CARRY FULL FORCE AND EFFECT**
- 3.1. The proposer, by submitting its electronic proposal, acknowledges that doing so carries the same force and full legal effect as a paper submission with a longhand (wet) signature.
- 3.2. By submitting an electronic proposal, the proposer certifies that the proposer has thoroughly examined and understands the entire Contract Documents (which consist of the plans and specifications, drawings, forms, affidavits and the solicitation documents), and that by submitting the eBid as its proposal, the proposer acknowledges, agrees to and is bound by the entire Contract Documents, including any addenda issued thereto, and incorporated by reference in the Contract Documents.
- 3.3. The Proposer, by submitting their electronic proposal, agrees to and certifies under penalty of perjury under the laws of the State of California, that the certification, forms and affidavits submitted as part of this proposal are true and correct.
4. **PROPOSALS ARE PUBLIC RECORDS:** Upon receipt by the City, proposals shall become public records subject to public disclosure. It is the responsibility of the respondent to clearly identify any confidential, proprietary, trade secret or otherwise legally privileged information contained within the proposal's General references to sections of the California Public Records Act (PRA) will not suffice. If the Contractor does not provide applicable case law that clearly establishes that the requested information is exempt from the disclosure requirements of the PRA, the City shall be free to release the information when required in accordance with the PRA, pursuant to any other applicable law, or by order of any court or government agency, and the Contractor will hold the City harmless for release of this information.
5. **CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM:**
- 5.1. **Prior** to the Award of the Contract or Task Order, you and your Subcontractors and Suppliers must register with the City's web-based vendor registration and bid management system. For additional information go to:
- <http://www.sandiego.gov/purchasing/bids-contracts/vendorreg.shtml>.
- 5.2. The City may not award the contract until registration of all subcontractors and suppliers is complete. In the event this requirement is not met within the time frame specified in the Notice of Intent to Award letter, the City reserves the right to rescind the Notice of Award / Intent to Award and to make the award to the next responsive and responsible bidder / proposer.

6. **JOINT VENTURE CONTRACTORS:** Provide a copy of the Joint Venture agreement and the Joint Venture license to the City within 10 Working Days after receiving the Contract forms. See 2-1.1.2, "Joint Venture Contractors" in The WHITEBOOK for
- 6.1. Each properly signed Proposal shall constitute a firm offer that may be accepted by the City within the time frame specified herein.
 - 6.2. This RFP will not commit the City to award a contract, to defray any costs incurred in the preparation of a Proposal pursuant to this RFP, or to procure or contract for the Work.
 - 6.3. Upon receipt by the City, Proposals shall become public records subject to public disclosure. It is the responsibility of the respondent to clearly identify any confidential, proprietary, trade secret or otherwise legally privileged information contained within the Proposal. General references to sections of the California Public Records Act (PRA) will not suffice. If the Contractor does not provide applicable case law that clearly establishes that the requested information is exempt from the disclosure requirements of the PRA, the City shall be free to release the information when required in accordance with the PRA, pursuant to any other applicable law, or by order of any court or government agency, and the Contractor will hold the City harmless for release of this information.
 - 6.4. Selection announcements, contract awards, and all data provided by the City shall be protected by the Design-Builder from public disclosure. The Design-Builders desiring to release information to the public shall receive prior written approval from the City.
 - 6.5. Design-Builders who submit a response to this RFP agree to provide the required services in accordance with the terms and conditions noted in this RFP and its attachments upon award by the City. The agreement and other terms and conditions are included in the Design-Build Contract, The GREENBOOK, The WHITEBOOK, and the Supplementary Special Provisions (SSP).
 - 6.6. Any architectural firms, engineering firms, specialty consultants, or individuals retained by the City to assist in drafting the RFPs or the Project's preliminary design may not be eligible to participate in the competition with any Design-Build Entity without the prior written consent of City. Any architectural firms, engineering firms, specialty consultants, or individuals retained by the City to assist in drafting any Reference Documents, such as the Water Department's Master Plan and any other document that was not prepared specifically for this contract, are considered to be eligible to participate.

7. EQUAL OPPORTUNITY CONTRACTING

7.1. As set forth in this RFP, the City is dedicated to the principles of equal opportunity in the workplace and in subcontracting. It is the City's expectation that firms doing business with the City have, and are able to demonstrate, the same level of commitment.

7.2. The Design-Builders are encouraged to take positive steps to diversify and expand their subcontractor solicitation base and to offer contracting opportunities to all eligible certified Subcontractors in accordance with the City's EOCP requirements included in the Contract Documents.

7.3. Design-Builder's Work Force

7.3.1. The Design-Builders shall submit with its Proposal a Work Force Report (EOC Form BB05) and prior to award of contract, the successful Design-Builder shall submit to the City's EOCP office an updated Work Force Report or an Equal Employment Opportunity (EEO) Plan.

7.3.2. If under representations are noted in the Work Force Report when compared to County Labor Force Availability data, the Design-Builder shall submit an Equal Opportunity Plan. Any Equal Employment Opportunity Plan submitted shall include the elements as outlined in the EOCP Requirements included in The WHITEBOOK.

7.3.3. The specified Equal Opportunity Contracting Program (EOCP) forms are available for download from the City's web site at:

<http://www.sandiego.gov/eoc/forms/index.shtml>

7.4. Nondiscrimination Ordinance (Municipal Code §§ 22.2701-22.2708)

7.4.1. The Design-Builder shall not discriminate on the basis of race, gender, religion, national origin, ethnicity, sexual orientation, age or disability in the solicitation, selection, hiring or treatment of the Subcontractors and Suppliers. The Design-Builder shall provide equal opportunity for Subcontractors to participate in subcontracting opportunities. The Design-Builder understands and agrees that violation of this clause shall be considered a material breach of the contract and may result in contract termination, debarment or other sanctions.

7.4.2. This language shall be in contracts between the Design-Builder and any Subcontractors and Suppliers.

7.4.3. As part of its Proposal, the Design-Builder shall provide to the City a list of all instances within the last 10 years where a complaint was filed or pending against Design-Builder in a legal or administrative proceeding alleging that Design-Builder discriminated against its employees, the Subcontractors, or

Suppliers, and a description of the status or resolution of that complaint, including any remedial action taken. If there have not been any complaints filed or pending against Design-Builder, a written statement from the Design-Builder to confirm shall be included in the Proposal.

7.5. Contractor Registration and Electronic Reporting System

7.5.1. Prior to the award of the Contract, the Design-Builder, Subcontractors, and Suppliers must register with the City's web-based vendor registration and bid management system, BidsOnline™ hosted by PlanetBids System. For additional information go to:

<http://www.sandiego.gov/purchasing/bids-contracts/vendorreg.shtml>.

7.5.2. Following the award of the Contract, the Design-Builder will be required to use the City's web-based contract compliance application for EOCP reporting purposes e.g., Weekly Certified Payroll, Monthly Employment Utilization, and Monthly Payments. Online tutorials are available at:

<http://stage.prisecompliance.com/etc/vendortutorials.htm>

7.5.3. The City may retain progress payments if:

7.5.3.1. The non-registered Design-Builder, Subcontractors, or Suppliers fail to register,

7.5.3.2. EOCP reporting is delinquent or inadequate, or

8. CONTRACTOR'S LICENSE CLASSIFICATION AND PRE-QUALIFICATION STATUS

8.1. The Design-Builder's California State License and City of San Diego prequalification status as specified herein must be valid at time of submission. Failure to comply with these requirements may result in the proposal being deemed non responsive and ineligible for further consideration.

8.2. Design-Builders interested in submitting a proposal for this Project shall be pre-qualified through the City's Prequalification program:

8.2.1. The Design-Builders must submit a complete prequalification application online to the Public Works Contracts, Prequalification Program no later than 2 weeks prior to **the Proposal due date and time**. Complete information and links to the online prequalification application are available at:

<http://www.sandiego.gov/cip/bidopps/prequalification.shtml>

8.2.2. For additional information or the answer to questions about the prequalification program, contact David Stucky at 619-533-3474 or dstucky@sandiego.gov.

8.2.3. Due to the City's fiduciary requirement to safeguard vendor data, City staff will not be able to provide information regarding contractors' prequalification status over the telephone. Contractors may access real-time information about their prequalification status via their vendor profile on PlanetBids™.

9. PRE-PROPOSAL ACTIVITIES

9.1. Submission of Questions

9.1.1. The Director (or designee) of the Public Works Department is the officer responsible for opening, examining, and evaluating the competitive Proposals submitted to the City for the acquisition, construction, and completion of any public improvement except when otherwise set forth in these documents. All questions related to this solicitation shall be submitted to:

Public Works Contracts
1010 Second Avenue, 14th Floor
San Diego, California, 92101
Attention: Contract Specialist listed on the front cover of this RFP.

OR:

To the Email address of the Contract Specialist listed on the front cover of this RFP.

9.1.2. Questions received less than 14 Days prior to the Proposal due date may not be considered.

9.1.3. Questions or clarifications deemed by the City to be material shall be answered via issuance of an addendum and posted to the City's online bidding service.

9.1.4. Only questions answered by formal written addenda shall be binding. Oral and other interpretations or clarifications shall be without legal effect. It is the Design-Builder's responsibility to be informed of any Addenda that have been issued and to adjust its Proposal accordingly.

9.2. Revisions to the RFP

The City, at its option, may respond to any or all questions submitted in writing via the City's eBidding web site in the form of an addendum. No other responses to questions, oral or written, shall be of any force or effect with respect to this solicitation.

Any changes to the Contract Documents through addendum are made effective as though originally issued with the Proposal. The Design-Builders shall acknowledge the receipt of Addenda at the time of Proposal submission.

10. EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE OF WORK

10.1. Contract Documents may be obtained by visiting the City's website: <http://www.sandiego.gov/cip/> Plans and Specifications for this contract are also available for review in the office of Public Works Contracts.

10.2. The Design-Builders shall carefully examine the Project Site, the Plans and Specifications, and other materials as described in or referenced by this RFP. The submission of a Proposal shall be conclusive evidence that the Design-Builder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of work, the quantities of materials to be furnished, local conditions, and as to the requirements of the Contract Documents.

11. CHANGES TO THE SCOPE OF WORK: Once a proposal has been accepted by the City and the award has been made, the Design-Builder shall immediately notify the City in writing of any proposed or anticipated change in the scope, contract amount, or contract time; and shall obtain the City's written consent to the change(s) prior to affecting them. In no event shall the City's consent be construed to relieve the Design-Builder from its duty to render all work and services in accordance with applicable laws and accepted industry standards

12. DESIGN SUBMITTALS: The City's review of the Design-Builder's Design Submittals shall not relieve the Design-Builder from its responsibilities under the Contract, or be deemed to be an acceptance or waiver by City of any deviation from, or of the Design-Builder's failure to comply with, any provision or requirement of the Contract Documents, unless such deviation or failure has been identified as such in writing in the document submitted for acceptance by the Design-Builder and accepted by City. Where approval or acceptance by City is required, it is understood to be general approval only, and does not relieve the Design-Builder of responsibility for complying with all applicable laws and good professional practices as the Design-Builder shall be the Engineer of Record.

13. BONDS AND INSURANCE: Prior to the award of the Contract (or Task Order), the Design-Builders shall submit evidence of separate bonds and insurance as specified in Sections 2-4, "CONTRACT BONDS," 7-3, "LIABILITY INSURANCE," and 7-4, "WORKERS' COMPENSATION INSURANCE" of the City's standard specifications for public works constructions unless specified otherwise in the Contract Documents.

14. SUBMITTAL REQUIREMENTS: PROPOSALS MUST BE RECEIVED NO LATER THAN THE DUE DATE AND TIME. Proposals may be withdrawn by the Design-Builder only up to the proposal due date and time.

IMPORTANT NOTE: Submission of the electronic proposals into the system may not be instantaneous. Due to the speed and capabilities of the user's internet service provider (ISP), bandwidth, computer hardware and other variables, it may take time for the bidder's submission to upload and be received by the City's eBidding system. It is the bidder's sole responsibility to ensure that their bids are received on time by the City's eBidding system. The City of San Diego is not responsible for bids that do not arrive by the required date and time.

14.1. TECHNICAL PROPOSAL REQUIREMENTS: Technical Proposals submitted in response to this RFP shall be in the following order and shall include:

- Legal name of company.
- Legal form of entity (partnership, corporation, joint venture, or other). If joint venture, identify the members of the joint venture, and provide all information required under this section for each member.
- Year of establishment of entity.
- If company is subsidiary of a parent company, identify the parent company.
- Address of main office.
- Address of San Diego satellite office if applicable.
- Contact information for firm, including name, title, email address and telephone number.
- Number of employees in San Diego County.
- Applicable License(s):
- City of San Diego Business License Number, including expiration date.
- State Contractor's License Number including expiration date, and all classifications. Professional Engineering/Architect License Number, including expiration date.
- Failure to provide all required information may result in the Proposal being considered non-responsive and ineligible for further consideration.

14.1.1. The Technical Proposal shall be concise, well organized, and demonstrate the Design-Builder's qualifications and experience applicable to the Project. The Technical Proposal shall be limited to 50 one-sided pages (8^{1/2}" x 11"), exclusive of resumes, graphics, forms, pictures, photographs, dividers, front and back cover, etc., that address the Technical Proposal contents; and of Equal Opportunity Contracting documentation. Font Type shall be Times New Roman in a minimum 12 Point font size, with a minimum 1" margin for text pages. A cover letter may be submitted but shall not contain any information that is a required element of the Technical Proposal. Any Technical Proposal that does not comply with these formatting standards may not be considered.

14.1.2. The Technical Proposals submitted in response to this RFP shall be in accordance with the requirements listed in ATTACHMENT G. The contents of the Technical Proposal shall be organized consistent with the format in Attachment G.

14.1.3. Design elements which deviate from the Scope of Work, City's design guidelines, or material substitutions which differ from the Approved Material List shall be highlighted in accordance with Attachment G.

14.1.4. Failure to comply with this section may render the Design-Builder's submittal non-responsive and ineligible for further consideration.

14.2. PRICE PROPOSAL REQUIREMENTS

14.2.1. A clearly marked, signed PDF of the Price Proposal is to be submitted in a separate PDF. This **is not** to be included with the Technical proposal. Refer to Attachment H of this RFP for any Price Proposal forms required to be used.

14.2.2. The Price Proposal shall be signed by an individual or individuals authorized to execute legal documents on behalf of the Design-Builder.

14.2.3. The lowest proposed price is not the determining factor for award of this contract. See Attachment G for the criteria by which the proposals will be evaluated.

14.2.4. In the event of any discrepancies, written numbers will govern over numerical. Also, the sum of all lump sum line items, unit price line items, allowance line items and any other priced items will govern over the "Total Design-Build Proposal" line item.

14.2.5. The required EOC information such as Subcontractor and Supplier listings shall be submitted as part of the Price Proposal.

15. SELECTION CRITERIA AND SCORING

15.1. An evaluation Panel comprised of representatives from the City will be established for this Project. The Panel may also include other interested parties such as additional participating agencies, representative from the community and other appropriate agencies such as the State Water Resource Control Board.

15.2. Proposals will be ranked according to the selection criteria set forth in Attachment G.

15.3. The Panel will review all proposals received. Interviews or presentations will be conducted as needed in accordance with Attachment G.

15.4. Based upon this technical review, the Panel will rank the Design-Builder's proposals in accordance with the selection criteria set forth in Attachment G of this RFP.

- 15.5. Once the Technical Proposals have been ranked by the Panel, the Design-Builders' price proposals will be made available to the panel and forwarded to EOCP for review and scoring of subcontractor participation. The EOCP score will then be added to the Design-Builders' cumulative scores.

16. AWARD

- 16.1. After the Technical Proposals have been evaluated, scored and ranked; the Price proposals will be factored in according to the criteria set forth in Attachment G. A Design-Builder selection will then be made.
- 16.2. The City will announce in writing to all the RFP participants the selected Design-Builder. The announcement will show the results of the evaluation. This notification to the Design-Builders shall constitute the public announcement of the selected Design-Builder. In the event that the selected Design-Builder is subsequently deemed non-responsive or non-responsible, a new public announcement will be provided to all proposers with the name of the newly designated selected Design-Builder.
- 16.3. To obtain the price Proposal results, view the results on the City's web site, or request the results by U.S. mail and provide a self-addressed, stamped envelope. If requesting by mail, be sure to reference the Proposal name and number. The Proposal tabulations will be mailed to you upon their completion. The results will not be given over the telephone.

17. ADDITIONAL POLICIES, PROCEDURES, TERMS AND CONDITIONS

- 17.1. The Program's Selection Process is based on the policies, procedures and guidelines set forth in the City Municipal Code Chapter 2, Article 2, Division 33.
- 17.2. **Protests.** A Design-Builder may protest the award of the Contract to another Design-Builder in accordance with San Diego Municipal Code.
- 17.3. **Changes to Key Personnel and Substitution of Subcontractors.** The Design-Builder shall not change or substitute any individual that is identified in its proposal as "key personnel" without the written consent of the City. The Design-Builder shall not change or substitute any material, supplier, or subcontractor identified in its Proposal without written consent of the City. The City's consent will not be unreasonably withheld.
- 17.4. **Project Team.** The Design-Builder shall maintain all representations, team members, and proposed tasks and work elements as valid, except for the schedule which may be adjusted as mutually agreed upon by the City and the Design-Builder.
- 17.5. **Submittal of "Or Equal" Items.** See 4-1.6, "Trade Names or Equals" in the SSP and as modified by the Scope of Work ATTACHMENT A.

- 17.6. Subcontract Limitations.** The Design-Builder's attention is directed to Standard Specification for Public Works Construction, Section 2-3, "SUBCONTRACTS" which requires the Design-Builder to perform not less than the specified amount under this RFP. Failure to comply shall render the Proposal non-responsive.
- 17.7. San Diego Business Tax Certificate.** All Contractors, including Subcontractors, not already having a City of San Diego Business Tax Certificate for the work contemplated shall secure the appropriate certificate from the City Treasurer, Civic Center Plaza, first floor, before the Contract can be executed.
- 17.8. City Standard Provisions.** The work resulting from this RFP is subject to the following standard provisions. See The WHITEBOOK for details.
- 17.8.1.** The City of San Diego Resolution No. R-277952 adopted on May 20, 1991 for a Drug-Free Workplace.
- 17.8.2.** The City of San Diego Resolution No. R-282153 adopted on June 14, 1993 related to the Americans with Disabilities Act.
- 17.8.3.** The City of San Diego Municipal Code §22.3004 for Pledge of Compliance.
- 17.8.4.** The City of San Diego's Labor Compliance Program and the State of California Labor Code §§1771.5(b) and 1776.
- 17.8.5.** Sections 1777.5, 1777.6, and 1777.7 of the State of California Labor Code concerning the employment of apprentices by contractors and subcontractors performing public works contracts.
- 17.8.6.** The City's Equal Benefits Ordinance (EBO), Chapter 2, Article 2, Division 43 of The San Diego Municipal Code (SDMC).
- 17.8.7.** The City's Information Security Policy (ISP) as defined in the City's Administrative Regulation 90.63.
- 17.9. Prevailing Wage Rates Apply:** Refer to Attachment D.

17.11. Reference Standards:

17.11.1. Except as otherwise noted or specified, the Work shall be completed in accordance with the following standards:

Title	Edition	Document Number
Standard Specifications for Public Works Construction ("The GREENBOOK")	2015	PWPI070116-01
City of San Diego Standard Specifications for Public Works Construction ("The WHITEBOOK")*	2015	PWPI070116-02
City of San Diego Standard Drawings*	2016	PWPI070116-03
Caltrans Standard Specifications	2010	PITS070112-04
Caltrans Standard Plans	2010	PITS070112-05
California MUTCD	2012	PITS070112-06
City Standard Drawings - Updates Approved For Use (when specified)*	Varies	Varies
Standard Federal Equal Employment Opportunity Construction Contract Specifications and the Equal Opportunity Clause Dated 09-11-84	1984	769023
NOTE: *Available online under Engineering Documents and References at: http://www.sandiego.gov/publicworks/edocref/index.shtml		

ATTACHMENTS

ATTACHMENT A

**PROJECT DESCRIPTION, SCOPE OF WORK, TECHNICAL SPECIFICATIONS,
AND/OR BRIDGING DOCUMENTS**

ATTACHMENT A

PROJECT DESCRIPTION, SCOPE OF WORK, TECHNICAL SPECIFICATIONS, AND/OR BRIDGING DOCUMENTS

This project was initiated as part of the 21st Century Library System / Library Department Facility Program in 2001 to provide a new 15,000 square foot library in a site adjacent to Florence Elementary School on a block bounded by Front Street, Washington Street and University Ave to better serve the Mission Hills and Hillcrest neighborhoods. The RFQ / RFP process is required to move forward with the design and construction of this library utilizing the bridging documents which is provided by Architects Mosher Drew.

1. PROJECT DESCRIPTION

The project will consist of demolition of the existing IBEW building and construction of a new single story, 14,500 SF library over a 37,800 SF two-story underground garage. The project is located at 215 W. Washington Street. The site is bounded by Front Street on the East, an alley on the West, and Florence Elementary School on the South. Entry into the parking garage will provided from Front Street. The library's main entry will be on Front Street and lead into a courtyard. The courtyard will serve as an extension of the community room, and support book sale activities for the Friends of the Mission Hills-Hillcrest Library and provide a welcoming "Front Porch" into the library. The project architectural style is to be Craftsman Style inspired. This project will be designed to a minimum of LEED Gold, however, maximum energy efficiency is desired. Additive Alternate 1 will be energy efficiency LEED Platinum. Additive Alternate 2 will be Zero Net Energy. Itemized components and budget, for both Alternatives, is required as part of the proposal. An energy efficiency component is part of the Design/Build Request for Proposals evaluation.

1.1 SCOPE OF WORK (Based on the Bridging Documents)

- a. Bridging Document (30% Plans). See Appendix P.
- b. Site Demolition
 - i. Remove existing 2 story building, basement, and site paving.
 1. See Appendix N: for Lead Abatement Specification
 2. See Appendix O: Asbestos Abatement Specification
 - ii. Remove existing adjacent sidewalks along Washington Street and Front Street.
- c. Off-Site Work
 - i. Construct a cul-de-sac, new sidewalks, and street paving on Front Street. Provide retaining walls, a catch basin, and a storm water collection vault along the south edge of the cul-de-sac.
 - ii. Provide street trees and landscaping within the right of way along W. Washington Street and the west side of Front Street.

- d. Site work
- i. Comply with the City of San Diego Storm Water regulations.
 - ii. Storm water measures will consist of water runoff treatment with the use of bio-filtration landscaped area, raised planters, and storm water runoff holding vaults.
 - iii. Provide an exterior courtyard on the east side of the building. The courtyard will occur over the parking structure and will consist of decorative pavers over a topping slab and membrane waterproofing. A healing garden will be provided on the west side of the building and will consist of raised planter areas and paving similar to the main courtyard.
 - iv. Work includes grading, drainage and storm water requirements, and wet utilities to support the new library building including the requirement to improve Front Street south of Washington Avenue, the public alley located on the west side of the property, and Washington Avenue.
 - v. Grading: The preliminary grading design of the site and the Front Street cul-de-sac will be in accordance with the requirements of the City of San Diego. The preliminary grading was focused on the improvements associated with the Front Street cul-de-sac as the proposed building includes underground parking (i.e. the grading associated with the building was not evaluated). The grading design of the site will result in an export condition.
 - vi. Drainage and Storm Water Requirements: A majority of the existing site generally drains from the northwest to the southeast and enters into an existing public storm drain system in Front Street. A small portion of the site drains into the public alley on the west side of the site. The drainage design shall respect this overall drainage pattern. The runoff from the building's roof(s) will be collected in drain systems as part of the building structure and directed to the various treatment control BMPs (i.e. bio-retention basins and flow-thru planters) as shown on sheet 5 of the civil engineering drawings). The runoff will be treated in the BMPs and then directed to storage tanks/vaults before connecting to the City's public storm drain system. Runoff from the two proposed courtyard areas are proposed to drain into Front Street and conveyed to a BMP (i.e. bio-retention basin) located south of the cul-de-sac. Runoff from Front Street will also drain into the BMP (i.e. bio-retention basin) located at the south end of the cul-de-sac. The treated runoff from this BMP will be stored in a tank/vault before connecting to the storm drain system exiting the property.
 1. Storm Water Management And Discharge Control
 - a. The Design-Builder shall comply with Chapter 4, Article 3, Division 3 of the San Diego Municipal Code, Storm Water Management and

Discharge Control, Municipal Storm Water Permit (MS4), California Regional Water Quality Control Board Order No. R9-2013-0001 (amended by R9-2015-0001 and R9-2015-0100), Storm Water Standards Manual, as amended from time to time, and any and all Best Management Practice (BMP) guidelines and pollution elimination requirements as may be established by the Enforcement Official. Design-Builder warrants and certifies that any and all plans, reports, and specifications prepared for the City in accordance with this agreement shall meet all requirements of the San Diego Municipal Code and Storm Water Standards Manual. Design-Builder understands that while the City will be reviewing Design-Builder's designs for storm water permit compliance prior to acceptance of Design-Builder's designs, Design-Builder understands and agrees that the City's Storm Water review process and its acceptance of Design-Builder's designs in no way limits the Design-Builder's obligations under this agreement to prepare designs that comply with all requirements of the San Diego Municipal Code and MS4 Permit.

- b. The Design-Builder shall complete and update the Storm Water Applicability Checklist (DS-560) to confirm the project's appropriate storm water requirements. For all applicable projects, and to the maximum extent practicable, the Design-Builder shall incorporate and include Source Control and Low Impact Development (LID) design features or Site Design BMPs on the construction plans. In addition, for Priority Development projects, the Design-Builder shall prepare a Storm Water Quality Management Plan (SWQMP) in accordance with the requirements of the Storm Water Standards Manual. The Design-Builder shall prepare a SWQMP Drainage Management Area Map showing all LID site design, source control and treatment control BMPs, hydromodification management plan facilities, tabulated calculations and include sufficient details and cross sections for construction. The Drainage Management Area Map shall be included as part of the construction plans in addition to the Storm Water Infrastructure cover sheet. A template of the Storm Water

- Infrastructure cover sheet will be provided by the City.
- c. Design-Builder shall attend the Pre-construction meeting. Design-Builder shall inspect and confirm that the permanent BMP was installed in accordance with the details on the plans and that the permanent BMP functions to meet the requirements of the MS4 Permit. Upon notification by the Engineer, the Design-Builder Engineer of Work shall sign and stamp the Permanent BMP Self Certification on the plans or the Permanent BMP Self Certification Form (DS-563) prior to final acceptance by the City.
 - d. For projects requiring soil-disturbance work such as geotechnical borings, street coring and potholing as component of the design, the Design-Builder shall complete a Minor Water Pollution Control Plan (DS-570), if applicable.
- vii. Wet Utilities: The City of San Diego is requiring that the existing water services in Washington Street be “killed”. In addition, they are requiring the existing 4-inch and 6-inch domestic water main in Front Street to be upsized to a 12-inch main. Finally, they are requiring that the existing water services in Front Street to be reconstructed. All of these water facilities are shown on sheet 3 of the civil engineering plans and are to be designed in accordance with the requirements of the City of San Diego. There is an existing sewer lateral located on the west side of the property. The design team has the option to utilize this lateral (assuming its size and depth are adequate) or construct a new lateral. Sheet 3 of the civil engineering plans show a new sewer lateral.
- viii. Storm Water Regulations: The preliminary water quality design approach was based on the general understanding of the new storm water regulations that become effective 02/16/15. These new regulations are in a draft form and subject to revisions prior to the 02/16/15 date. Also, the selected Design-Build Team will be required to develop an approach consistent with the new storm water requirements. The preliminary design shown on the bridging documents is a concept only and shall be verified or modified by the design-build team.
- ix. Public Street and Alley Improvements: The design of the Front Street cul-de-sac, as well as the widening of the public alley, will be in accordance with the requirements of the City of San Diego. The preliminary design of Front Street anticipates demolishing the existing curb, curb and gutter, sidewalk, and surface improvements (i.e. asphalt and

concrete) and replacing with new curb and gutter, sidewalk, and paving. The improvements will include reconstructing the existing driveways located on the east side of the cul-de-sac. The preliminary design of Washington Street includes the reconstruction of the curb and gutter and sidewalk adjacent to the project frontage only. The City required the alley to be widened by 2.5 feet. Finally, the design anticipates new pedestrian ramps at the alley and Front Street. Although the preliminary design doesn't show all of the required improvements, the design shall include the required signage, striping, street lights, etc.

- x. Miscellaneous: The preliminary design includes retaining walls. The design of these walls may need to be a special design as they may not be consistent with the intent of the Regional Standard drawings.

e. Landscape Architecture

- i. As part of this project, complete landscape design of the exterior and selected interior space shall be provided. The landscape design is intended to compliment the proposed building and site. The planting component of this project shall focus on drought tolerant plant material that will thrive in the San Diego zone of exposure, water conservation and ease of maintenance.
- ii. Street trees have been selected from the approved list per the City of San Diego's Uptown Community Plan. Tree grates shall also be used per the City's Landscape Standards and Technical Manual.
- iii. Interior pots and selected plant material shall enhance the public space at the north and south patios from the main front porch entry. An interior garden situated directly in line with the main entry shall act as a focal point at the west end. Benches, succulent plantings and a green wall shall be main components of this space.
- iv. On the southwest exterior of the building there shall be a greens-screen with flowering vine. A bio-retention swale shall also be planted with appropriate plant material to help filter drainage water.
- v. All irrigation design shall use the latest technology for water conservation, water efficiency and control.
- vi. The main landscape components of this project are water conservation, Low maintenance and durability, aesthetic suitability, Natural form, growth characteristics and mature size.
- vii. Public safety relating to placement, type, etc....

- f. Exterior Building Materials
 - i. Exterior walls will consist of cement plaster with stone veneer bases over wood framing.
 - ii. Glazing will consist of a curtain wall system for the north and south walls of the large library space. Store front glazing will be used for lower window walls. A folding glass wall will be provided at the community room. All glazing to be low-e.
 - iii. Sloped roofing to be standing seam metal. Flat roofs to be single ply roofing.
 - iv. Pergolas and trellises to be steel framed and painted.
 - v. Decorative gates to be provided at the courtyard.
- g. Interior Building Materials-per plans.
 - i. All main library spaces will have carpet tile flooring. Bathrooms will have ceramic tile floors and wainscots.
 - ii. Interior wall storefront glazing systems will be provided at the meeting rooms.
 - iii. Ceilings will typically consist of suspended acoustic panel ceilings except for the high roofs which will have exposed decorative wood paneling, and exposed steel trusses.
 - iv. Built-in casework will be custom grade and consist of plastic laminate and solid surface counters (open for discussion).
- h. Special Built-in Equipment
 - i. A two way parking gate with an automated payment system will be provided.
 - ii. An automated book drop system will be provided near the front street entry.
- i. Structural System
 - i. The library will be a single story wood-framed building over a two level concrete underground parking garage.
 - ii. Low flat roofs will be wood framed and high roofs will have exposed custom steel trusses.
 - iii. The underground parking will consist of cast in place concrete walls and two way reinforced concrete floor slabs.
 - iv. Shoring will be accomplished by temporary tie-back anchors.
- j. Mechanical and Plumbing Systems
 - i. The HVAC systems for the Mission Hills / Hillcrest Library will consist of a variable refrigerant volume system capable of simultaneous heating and cooling. An energy efficient mechanical system will need to be coordinated with the team to support the LEED goals of the project.
 - ii. The plumbing systems shall be as required by to meet code and the LEED goals of the project. Low flow fixtures will be provided to support the LEED goals of the project.

- iii. Elevator. The passenger elevator will consist of a three-stop holeless hydraulic system. An elevator pit and sump pump will be required to collect and discharge water runoff into a collection tank adjacent elevator machine room. The elevator, hoistway, passenger car, elevator controls, and machine room will meet all applicable regulatory requirements and codes, Cal OSHA, and ADA Standards.
- k. Electrical Systems
 - i. The scope of work shall generally include all power, lighting, and lighting controls.
 - ii. Provide a minimum 28KW Solar Photovoltaic System to meet city program requirements.
- l. Interior Design: Enhanced selection and detailing of building exterior and interior finishes to reflect Craftsmen Style, Detailed Furnishing, Fixtures and Equipment schedule.

2. SCOPE OF WORK

- 2.1 The City is initiating a state of art project with bridging documents design (Attached to the RFP) and seeking a technical quality design build process conforming to, or exceeding, the minimum program and performance requirements established herein. Exceptions or deviations from these minimum requirements will not be allowed unless specifically authorized by this RFP or by addenda.
- 2.2 The Design-Builder services sought by this RFP include all services necessary to design in accordance with the Bridging documents prepared by Architects Mosher Drew and to construct the branch library. This includes, but is not limited to design and construction document phase services (based on the Bridging documents), scheduling, estimating, energy modeling, Energy Savings based on LEED Gold requirements (or beyond LEED Gold, if possible) and SDG&E savings by design program, value management, Value Engineering (based on the most cost efficient design and construction methods), recommendations for the most expeditious design and construction schedule and phasing plan, general contracting during the construction phase, building commissioning and project closeout. The design and construction must comply with the requirements of all applicable State and City agencies having jurisdiction over the project. The Design-Builder shall work to obtain approvals in increments that will facilitate the schedule. The completed project is to be a fully functioning facility as described in the Contract between the City and Design-Builder.
- 2.3 The Design-Build firms will be encouraged to briefly discuss design concept based on the bridging documents, a narrative of their approach including but not limited to LEED Project Checklist with explanatory notes with their Proposal. Design-Build firms are encouraged to prepare proposals that limit construction impact on the surrounding community, insuring the design/construction schedule completion within the contract duration and within budget.

- 2.4 Design Build teams need to provide cost estimate for Additive Alternate 1 in regard to LEEDS Platinum or Zero Net Energy.

Design Builder is required to consult with Architects Mosher Drew during the design build phase. In addition coordination with the Artist, Janet Zweig, throughout the design build process is required in order to incorporate any significant structural, mechanical, electrical, power, data, etc. which may be required for completion of the art work. Christine Jones with Arts & Culture department of City of San Diego could be contacted at: Christine E. Jones www.VibrantCultureVibrantCity.com. For any further information regarding the art element please contact the project Manager.

- 2.4.1. The artist is still in the early artwork development phase. It is anticipated that the artwork will be a mixed media work with mechanical elements (6 hubs; 3 with small motors) installed in the three wall bays that face you as you walk into the library through the main entrance.

The design/build team will need to assist with integrating the artwork into the library by adding reinforcement to the walls. In addition, it is anticipated that coordination assistance will be needed for electrical wiring for mechanical elements and lighting as well as general coordination with artist for seamless integration of artwork into the design.

Anticipated technical requirements:

1. Structural steel support behind the wall at each hub location to bolt the steel hub mount so that it will be capable of holding the weight of the artwork components (approx. 200 lbs) at all 6 locations.
2. Low voltage electrical in the wall leading only to the three hubs with the motors and leading from them to a computer in the electrical closet at ground level. No wires should be visible outside the walls.
3. Low voltage electrical wiring to 6 locations in the sloped ceiling (TBD) above the 6 hubs for position-able lighting that will point at the artwork. Fixtures will be attached at those 6 locations and positioned to light the 6 circles as gallery lighting.

This artwork concept will further evolve but should provide an idea of the artwork development to date.

3. **DESIGN GUIDELINES AND PERFORMANCE REQUIREMENTS.**

- 3.1 Design guidelines and performance requirements to establish basic design criteria, minimum material quality and equipment standards are provided in this RFP. Each proposal must include a certification that the proposal

meets or exceeds these criteria within the stipulated Contract. The Design-Builder is encouraged to provide a basis of design narrative and a description of how the project will progress based on the bridging documents and to maintain quality levels established by the program requirements (specifically time, quality and budget)

3.1.1. Proposals shall also take into consideration some attributes that would enhance the minimum building design criteria, provide additional space within prescribed limits, and incorporate low operating cost building systems that reduce annual operating costs, or provide other features that will help achieve cost-effective public facilities of lasting value.

3.1.2 Bridging documents are based on a detailed library program. These are minimum requirements. Design-Builder will need to stipulate where their design could possibly exceed the Program and inform the City of any decisions regarding exceeding these requirements.

3.2 The Scope of Work for the Design-Build firms includes but is not limited to:

3.2.1. Architectural and engineering design services.

3.2.2. Permitting submittal and approvals from local and state agencies including Construction General Permit (CPG) and Municipal Storm Water Permit (MS4).

3.2.3. Coordination of payment of all fees.

3.2.4. Project Management.

3.2.5. Energy Modeling and Analysis.

3.2.6. Value Engineering of Bridging Documents as needed to fit the project budget

3.2.7. Construction, including off-site improvements as indicated in the Design Guidelines.

3.2.8. On site and off site wet and dry utilities design, coordination, and installation in the public right of way.

3.2.9. Commissioning of systems and equipment.

3.2.10 Coordination and payment of all test and inspection services.

3.2.11. Community meetings (as may be required).

3.2.12. Coordination and scheduling work of Team and others providing services to design and construct the project.

3.2.13. All on-site and off-site grading for new construction storm water compliance (SWPPP, BMPs, SUSMP, SM4).

3.2.14. Insurance and bonding.

3.2.15. Coordination with City representatives.

3.2.16. LEED Gold compliance or better

- 3.2.17. ADA Compliance
- 3.2.18. Soils Report Update
- 3.2.19. Data/Cable/Voice/Communication
- 3.2.20. Surveying
- 3.2.21. Integration and coordination with the artist (part of basic services)
There is an artist, Janet Zweig, on board commissioned by City's Arts & Culture Program. The artist fees are provided by the City.
- 3.2.22. Traffic improvements in the Public Right of Way including but not limited to offsite improvements of Front Street.
- 3.2.23. Furnishings (allowance)
- 3.2.24. The design and construction must comply with the requirements of all applicable agencies having jurisdiction over the project.
- 3.3 The design and construction must comply with the requirements of all applicable agencies having jurisdiction over the project.
- 3.4 Project Schedule.
 - 3.4.1. The project schedule is to have the library completed and ready for public use by July 2018. The Design-Builder shall obtain construction permits in two phases: Demolition and building permits.
- 3.5 **Proposed Project Budget:** The Design-Builder shall submit with the Proposal a project budget as follows:
 - 3.5.1 Project Budget: Provide a budget amount for the project proposed within the bridging documents parameter. Any exceptions and or limitations affecting or deviating from the program shall be identified (Value Engineering of these items could be utilized and considered).
 - 3.5.2. Provide a brief summary of proposed utilization between Furniture, Fixtures, and Equipment (FF&E), material and finish upgrades and thematic elements (Value Engineering will be utilized and considered as necessary to meet the project budget).
 - 3.5.2.1 FF&E should include, but not limited to, movable furniture and movable furniture lighting
 - 3.5.2.2 FF&E will not include fixed bookshelves, fixed furnishings, book drop, booksorter, and Vode Bookshelf lighting as these are apart of the building and are included in the Construction part of the Base Bid.
 - 3.5.3 The City will reimburse the Design-Builder the actual cost of the plan checking, permits, and Utilities fees without markup through fees allowances specified in the Proposal.

3.6 Written Submittals.

- 3.6.1. Project Design Description (limit 1 pages):** A brief narrative description of the basis of design development and construction documents. Include reference to some of the systems that would achieve the programmatic goals and performance requirements of the project which would follow the design intent and philosophy of the bridging documents proposed by Architects Mosher Drew towards achieving Library department's program goals for this project.
- 3.6.2. Project Schedule:** The Design-Builder identification of the key milestones from Notice to Proceed through Completion Date. The schedule shall identify major construction milestones, their duration and completion dates based on Construction duration provided by the City considering allowances for City and other agency review periods during the design development documents, Construction documents and final plans and specifications. The schedule shall be in color and in 11"x 17" foldout format.
- 3.6.3. Project Budget:** The D-B's cost estimate for the project shall include all the elements detailed in the chart above detailed by major building components.
- 3.6.4. The design Builder shall comply with Minimum Program and Performance Requirements:** A brief written statement certifying that all mandatory program and performance requirements of the RFP are met by the proposal.
- 3.6.5. LEED Gold rating:** New Construction Project Checklist will be achieved by the selected design builder. A brief description regarding the design builder commitment to achieving LEED Gold rating status, or better, and the past experience examples with previous projects.
- 3.6.6. Summary of Value-Added or Creative Enhancements (optional):** A brief narrative of any new or innovative ideas the design builder may have or have experienced in the previous projects which would add value or enhance the project within the existing program.
- 3.6.7. The proposal shall be in the required format with all forms, answers and attachments sequentially numbered to correspond to the applicable question or requirement.**

3.7 Graphic Submittals (Optional).

- 3.7.1. Any graphic submittal, diagrams, charts or drawings are at the discretion of the Design-Build firms and is not mandatory.** The design builder shall keep in mind that any drawings, 3-D computer model or massing study model shall follow the bridging documents requirements and program parameters

3.8 Design Deliverables (After the Selection Process)

- 3.8.1.** Design deliverables during the design process shall include 60%, 90% and 100% phases. Plans, Specifications and LEED progress packages shall be delivered for review at each phase.
- 3.8.2.** Design-Builder shall provide five (5) full size (24"x36"), ten (10) one-half size (11"x17"), and one (1) CD of design drawings, and five (5) sets of specifications for each phase of design submittals. Design-Builder shall provide final as-built drawings in Mylar.

3.9 Performance Requirements and Standards.

3.9.1. The adequate performance of the completed improvements is of paramount importance. The completed project shall meet or exceed all performance requirements identified in this RFP. The following are considered general minimum standards:

- A.** Basic, minimum code performance: this is the basis of minimum facility performance resultant from compliance with code and regulation requirements. The completed project shall comply with, or exceed, all Local, State and Federal Codes, Regulations and Applicable Standards. The project design, detailing and construction quality and workmanship shall be equivalent to or exceed that of the Serra Mesa Branch Library.
- B.** Leadership in Energy and Environmental Design (LEED): the completed facility shall meet or exceed the required points for a Gold Certification, or better as evidenced by a completed LEED for New Construction v4 Project Scorecard/Checklist, accompanied by a brief explanation of how each point will be achieved, and the requisite energy modeling to demonstrate. LEED measurement and verification must be included. LEED certification is required. Enhanced commissioning is optional at the Offeror's discretion. The City may retain these services to confirm that the finished project meets the stipulated criteria.
- C.** Accessibility: the completed facility shall comply with the requirements of the Americans with Disabilities Act (ADA), State Title 24 access requirements and all applicable City Access Memos published by the City's Access Law Technical Group (see link below).

<http://www.sandiego.gov/publicworks/edocref/cipaccessdocs.shtml>

- D.** Specifications and Reference Documents:
 - 1.** Except as otherwise noted or specified, the Work shall be completed in accordance with the following standards:

Title	Edition	Document Number
Standard Specifications for Public Works Construction ("The GREENBOOK")	2012	PITS070112-01
City of San Diego Standard Specifications for Public Works Construction ("The WHITEBOOK")*	2012	PITS070112-02
City of San Diego Standard Drawings*	2012	PITS070112-03
Caltrans Standard Specifications	2010	PITS070112-04
Caltrans Standard Plans	2010	PITS070112-05
California MUTCD	2012	PITS070112-06
City Standard Drawings - Updates Approved For Use (when specified)*	Varies	Varies
Standard Federal Equal Employment Opportunity Construction Contract Specifications and the Equal Opportunity Clause Dated 09-11-84	1984	769023
<p>NOTE: *Available online under Engineering Documents and References at: http://www.sandiego.gov/publicworks/edocref/index.shtml</p>		

2. The As-Built Drawings for the IBEW Building may be obtained from Maps & Records, Development Services, City of San Diego under Plan File No. 46943-D dated 11-15-1973.
3. Design-Build Team will produce additional specifications necessary for the project that will be titled "**Technical Specifications**".
4. California Uniform Building Code
5. 2012 Citywide CADD and Drafting Standards.
6. City of San Diego Street Design Manual
7. City of San Diego Drainage Design Manual

8. Sewer Design Guide
9. Water Design Guide
10. Standards and Specifications Guidelines for Facilities Maintenance Division
11. Consultant Standards for Preparation of Plans, Specifications, and Estimates

3.10. Ease of operation, maintenance and replacement of equipment is essential. For the purposes of this project, the following are considered general minimum maintenance standards:

1. Personnel with a reasonable level of training shall be able to easily operate the facility, equipment and systems.
2. The various systems and equipment shall be selected with as few variations as possible to standardize the products.
3. Training of City's personnel in operation of equipment and systems shall be provided.
4. Minimize the amount of maintenance required.
5. Make provisions for convenient access for service and replacement of equipment and system components, not required to have the expected service life span equal to that required for the project(s) as a whole, without undue disruption of building operation.

3.11. Functional service life expectancy and durability of all work is vital. For the purposes of this project, the following are considered general minimum durability standards:

1. Life expectancy: The structural and general life expectancy of all work shall be 60 years, with the following exceptions: paved surfaces (25 year service life under normal usage), roof membranes (20 year service life, fully functional), and doors (20 year service life under normal usage).
2. Roofs: All components of roofing (not just roof covering) shall be easily accessible by maintenance personnel on foot without the use of portable ladders. Rooftop fixtures, if any, shall be serviceable by simple replacement of parts, minimizing the time required on the roof. Surfaces need withstand maintenance foot traffic only.

3.12. Security is essential. The design and construction of the improvements shall conform to the ideals of Crime Prevention through Environmental Design (CPTED). The guidelines of CPTED should be utilized to ensure well planned, located and shaped buildings within the site that enhance supervision and emergency readiness.

3.13. General Performance Requirements. These general performance requirements describe the character, quality, or level of performance required for all improvements relative to construction assemblies and building systems:

3.13.1 GENERAL / ENVIRONMENTAL

- A. Safety: Design and construct all exterior and interior spaces to incorporate accepted principles of crime prevention using environmental and technological methods of providing surveillance and access control.
 - 1. Roofs: Provide permanent access and safety systems to all areas of roofs for maintenance of roofing and rooftop-mounted equipment. Access to be controlled to prevent access by unauthorized persons.
 - 2. Entries: Provide slip-resistant walking surfaces, including floors, ramps and stairs with a minimum static coefficient of friction of 0.80.
 - 3. Restrooms: Provide all elements, including fixtures, partitions, counters, mirrors, etc., that have a high safety rating.
- B. Fire and Life Safety: Provide code approved fire and life safety systems for site and building including emergency vehicle circulation, on-site hydrants as required, and building access for fire apparatus and emergency response vehicles.
- C. Acoustics: minimize noise intrusion from noise-source into occupied spaces, and on-site public, gathering environments.
 - 1. Structure-borne sound and vibration: prevent transmission of perceptible sound and vibration from equipment that rotates, vibrates, or generates sound by isolating such equipment from superstructure or by isolating equipment support foundations from building foundations.
 - 2. Mechanical: Maintain the sound transmission characteristics of assemblies through which systems pass.
 - i. All sounds of flushing and liquid running through pipes are prohibited outside of the rooms housing toilets and other fixtures, with the exception of when doors to those rooms are open.
 - ii. Equipment noises: noise level shall be below that which may be objectionable, based on

- occupancy of space.
- iii. When systems are located within or pass through assemblies that perform sound isolation functions, consider the noise produced by the system itself as one of the external sound sources.
 - iv. Provide any necessary acoustical treatment to main supply and return duct as required to maintain acceptable NC levels. Sound mitigation components include sound attenuators, double wall lined ductwork, duct offsets, architectural soffits and/or insulation around ductwork (especially where main vertical supply and return ducts penetrate into acoustically sensitive areas).
- D. Access: The design shall provide full accessibility wherein accessibility-related elements shall be fully integrated as basic design elements.
- E. Aesthetics: The City desires facilities that exhibit an inviting, human scale with the use of forms, materials, textures and colors that appeal to a wide spectrum of users.
- F. Thermal Comfort: Indoor spaces shall maintain thermostat settings plus or minus 2 degrees and integrate controllability of systems within individual spaces.
- G. Utilities: Conceal all utilities and services underground.
1. Provide the following as required:
 - i. Water and Drainage: A means of delivery of water to points of utilization; automatic heating and conditioning of domestic water; and unattended removal of water, rainwater, and liquid waste.
 - ii. HVAC: A controlled means of maintaining interior space comfort and air quality, including heating, cooling, ventilation and energy supply.
 - iii. Fire Protection: Automatic fire detection, suppression, and warning, as well as manual fire-fighting equipment.
 - iv. Electrical Power: Energy to operate all electrically operated devices, including those included under other services and those provided separately by the City.

- v. Artificial Lighting: Illumination of spaces and tasks, both interior and exterior, independent of reliance on natural light.
 - vi. Telecommunications: Services that include providing cables and conduits for voice and data transmission and cable TV services as well as coordination with Library department IT staff.
 - vii. Other services: Services that include integrated facility controls, surveillance and security controls, and a library theft detection system.
2. Utility Sources and Outlets: connect utilities and services to and from:
- i. Water source: Existing public utility in the Public Right of Way.
 - ii. Sewage Disposal: Connect building sewer to the existing public sewage system in Public Right of Way.
 - iii. Rain Water Drainage Outlet: Comply with the City's Storm Water Pollution Prevention Plan (SWPPP) requirements, consistent with the Low Impact Development Handbook, including but not limited to on-site drainage retention.
 - iv. Electrical power source: Existing public utility in Pubic Right of Way.
- H. Lighting: provide clear ingress, on-site, and egress hierarchical illumination, such that a user may be able to intuitively find their way at night, LED Lighting throughout consistent with LEED criteria.
- 1. Outdoor Spaces and Landscaped Areas: residential scale, pathway and courtyard illumination. Drought Tolerance Landscaping
 - 2. Interior Spaces: maximize the effectiveness of day lighting. Artificial lighting shall provide uniform distribution at desk height to allow unlimited furniture arrangement with variable lighting levels and special presentation lighting.
 - i. Community Multi-Purpose: accommodate specialized, independent uses as follows: uniform distribution over audience seating area with variable lighting levels and presentation/display lighting.

- ii. Book Stacks: provide uniform illumination on entire vertical surface of full height book shelves.

4. **SITE CONSTRUCTION**

- A. Walkway, Pedestrian Ramp, and Exterior Stair Paving: provide paved surfaces to contrast, in color and texture, from vehicular areas.
- B. Exterior Seating: wood, metal, concrete, or combination thereof for comfort, permanent installation and minimum maintenance. Standard manufacturer's product or custom field constructed.
- C. Exterior power for exterior patios: a 100 amp, 3 phase service panel dedicated for outdoor concerts. There should be 6 discrete 20A circuits on the distribution box. There should be appropriate night lighting for gatherings.
- D. Site Walls: concrete or concrete unit masonry walls with integral color, texture, and finish. No applied finishes. Segmental retaining wall for planting may be constructed using the proprietary specifications as provided by the manufacturer all textures and colors are to be integral. No applied colors or finishes will be accepted. Non-planted site walls must be graffiti proof. Unit masonry segments must not be dislodgeable.

ATTACHMENT B

PHASED FUNDING PROVISIONS

ATTACHMENT B PHASED FUNDING PROVISIONS

1. PHASED FUNDING

- 1.1. The selected The Design-Builder will be required to provide a Pre-award Schedule in accordance with sections 9-3 and 6-1 of the Supplementary Special Provisions (SSP) prior to award of Contract.
- 1.2. For phased funded contracts, the City typically secures enough funds for the first 90 Days of the contract prior to award. Within 10 Working Days after announcement of the Apparent Winner, the Design-Builder must contact the Project Manager to discuss fund availability and the duration of the first phase and submit the Pre-Award Schedule to the City for approval and preparation of the first Phased Funding Schedule Agreement.
- 1.3. The Design-Builder will be required to provide a Pre-award Schedule in accordance with 6-1, "CONSTRUCTION SCHEDULE AND COMMENCEMENT OF THE WORK" and 9-3, "PAYMENT" prior to award of Contract.
- 1.4. If the Proposal submitted by the Selected Design-Builder is rejected by the City for any reason, then within 5 Working Days after receiving notice, the subsequent Selected Design-Builder must provide the Pre-Award Schedule. This process will continue until the City has awarded the contract or has decided to reject all Proposals.
- 1.5. The first Phased Funding Schedule Agreement must show the fund availability for the first phase. Within 22 Working Days from the date of the announcement of, or notice to the next Selected Design-Builder (whichever occurs last) and once a Pre-Award Schedule is accepted by the City, the City will present the first Phased Funding Schedule Agreement to you when you are selected as the awarded Design-Builder.
- 1.6. At the City's request, you must meet with the City's Project manager before execution of the first Phased Funding Schedule Agreement to discuss their comments and requests for revision to the Pre-Award Schedule.
- 1.7. Your failure to perform the following may result in the Proposal being rejected as **non-responsive**:
 - 1.7.1. Meet with the City's Project manager, if requested to do so, to discuss and respond to the City's comments regarding the Pre-Award Schedule,
 - 1.7.2. Revise the Pre-Award Schedule as requested by the City within the specified 22 Working Days timeframe, or
 - 1.7.3. Execute the first Phased Funding Schedule Agreement within a Day after receipt.

PHASED FUNDING SCHEDULE AGREEMENT

Check one:

- First Phased Funding Schedule Agreement
- Final Phased Funding Schedule Agreement

RFP NUMBER: K-16-1233-DB2-3A

CONTRACT OR TASK TITLE: Mission Hills Hillcrest Library

CONTRACTOR: C.W. Driver

Funding Phase	Phase Description	Phase Start	Phase Finish	Not-to-Exceed Amount
1	Bonds (Payment and Performance) (\$113,387); Architectural, Engineering and Design Services (\$1,252,298); Demolition (\$165,693); Water Pollution Control Program Development (\$10,844); Contingency (\$75,000); Disposal of Class I Regulated Waste Material (\$2,169); Disposal of Class II Regulated Waste Material (\$4,452); Plan Checking, Permits & Utility Fees - Type 1 (\$250,000); Builder's Risk Insurance (\$60,178)	07/22/16	04/13/17	\$1,934,021
2	Design Team Construction Administration (\$259,715); Construction (\$13,805,844); Water Pollution Control Program Implementation (\$319,747); Contingency (\$725,000); FF&E (\$750,000)	04/14/17	07/03/18	\$15,860,306
Total				\$17,794,327

Notes:

- (1) City Supplement 9-3.6, "PHASED FUNDING COMPENSATION" applies.
- (2) The total of all funding phases shall be equal to the TOTAL BID PRICE as shown on BID SCHEDULE 1 - PRICES.
- (3) This PHASED FUNDING SCHEDULE AGREEMENT will be incorporated into the CONTRACT and shall only be revised by a written modification to the CONTRACT.

CITY OF SAN DIEGO

By: *Sepi Amirazizi*
 Name: Sepi Amirazizi
 Project Manager

Department Name: public works
 Date: 8/4/16

CONTRACTOR: C. W. Driver, Inc.

By: *Dana Roberts*
 Name: DANA ROBERTS

Title: CEO
 Date: 8/04/16

ATTACHMENT C
EQUAL OPPORTUNITY CONTRACTING PROGRAM

EQUAL OPPORTUNITY CONTRACTING PROGRAM REQUIREMENTS

1. To The WHITEBOOK, Chapter 10, Sections D and E, DELETE each in its entirety, and SUBSTITUTE with the following:

D. CITY'S EQUAL OPPORTUNITY COMMITMENT.

1. Nondiscrimination in Contracting Ordinance.

1. The Contractor, Subcontractors and Suppliers shall comply with requirements of the City's Nondiscrimination in Contracting Ordinance, San Diego Municipal Code §§22.3501 through 22.3517.

The Contractor shall not discriminate on the basis of race, gender, religion, national origin, ethnicity, sexual orientation, age, or disability in the solicitation, selection, hiring, or treatment of subcontractors, vendors, or suppliers. The Contractor shall provide equal opportunity for subcontractors to participate in subcontracting opportunities. The Contractor understands and agrees that violation of this clause shall be considered a material breach of the contract and may result in contract termination, debarment, or other sanctions.

The Contractor shall include the foregoing clause in all contracts between the Contractor and Subcontractors and Suppliers.

2. Disclosure of Discrimination Complaints. As part of its Bid or Proposal, the Bidder shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending against Bidder in a legal or administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors, or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.
3. Upon the City's request, the Contractor agrees to provide to the City, within 60 days, a truthful and complete list of the names of all Subcontractors and Suppliers that the Contractor has used in the past 5 years on any of its contracts that were undertaken within San Diego County, including the total dollar amount paid by the Contractor for each subcontract or supply contract.
4. The Contractor further agrees to fully cooperate in any investigation conducted by the City pursuant to the City's Nondiscrimination in Contracting Ordinance, Municipal Code §§22.3501 through 22.3517. The Contractor understands and agrees that violation of this clause shall be considered a material breach of the Contract and may result in remedies being ordered against the Contractor up to and including contract termination, debarment and other sanctions for violation of the provisions of the Nondiscrimination in Contracting Ordinance. The Contractor further understands and agrees that the procedures, remedies

and sanctions provided for in the Nondiscrimination in Contracting Ordinance apply only to violations of the Ordinance.

E. EQUAL EMPLOYMENT OPPORTUNITY OUTREACH PROGRAM.

1. The Contractor, Subcontractors and Suppliers shall comply with the City's Equal Employment Opportunity Outreach Program, San Diego Municipal Code §§22.2701 through 22.2707.

The Contractor shall not discriminate against any employee or applicant for employment on any basis prohibited by law. Contractor shall provide equal opportunity in all employment practices. Prime Contractor shall ensure their subcontractors comply with this program. Nothing in this section shall be interpreted to hold a prime contractor liable for any discriminatory practice of its subcontractors.

The Contractor shall include the foregoing clause in all contracts between the Contractor and Subcontractors and Suppliers.

2. If the Contract is competitively solicited, the selected Bidder shall submit a Work Force Report (Form BB05), within 10 Working Days after receipt by the Bidder of Contract forms to the City for approval as specified in the Notice of Intent to Award letter from the City.
3. If a Work Force Report is submitted, and the City determines there are under-representations when compared to County Labor Force Availability data, the selected Bidder shall submit an Equal Employment Opportunity Plan.
4. If the selected Bidder submits an Equal Employment Opportunity Plan, it shall include the following assurances:
 1. The Contractor shall maintain a working environment free of discrimination, harassment, intimidation and coercion at all sites and in all facilities at which the Contractor's employees are assigned to work.
 2. The Contractor reviews its EEO Policy, at least annually, with all on-site supervisors involved in employment decisions.
 3. The Contractor disseminates and reviews its EEO Policy with all employees at least once a year, posts the policy statement and EEO posters on all company bulletin boards and job sites, and documents every dissemination, review and posting with a written record to identify the time, place, employees present, subject matter, and disposition of meetings.
 4. The Contractor reviews, at least annually, all supervisors' adherence to and performance under the EEO Policy and maintains written documentation of these reviews.

5. The Contractor discusses its EEO Policy Statement with subcontractors with whom it anticipates doing business, includes the EEO Policy Statement in its subcontracts, and provides such documentation to the City upon request.
6. The Contractor documents and maintains a record of all bid solicitations and outreach efforts to and from subcontractors, contractor associations and other business associations.
7. The Contractor disseminates its EEO Policy externally through various media, including the media of people of color and women, in advertisements to recruit, maintains files documenting these efforts, and provides copies of these advertisements to the City upon request.
8. The Contractor disseminates its EEO Policy to union and community organizations.
9. The Contractor provides immediate written notification to the City when any union referral process has impeded the Contractor's efforts to maintain its EEO Policy.
10. The Contractor maintains a current list of recruitment sources, including those outreaching to people of color and women, and provides written notification of employment opportunities to these recruitment sources with a record of the organizations' responses.
11. The Contractor maintains a current file of names, addresses and phone numbers of each walk-in applicant, including people of color and women, and referrals from unions, recruitment sources, or community organizations with a description of the employment action taken.
12. The Contractor encourages all present employees, including people of color and women employees, to recruit others.
13. The Contractor maintains all employment selection process information with records of all tests and other selection criteria.
14. The Contractor develops and maintains documentation for on-the-job training opportunities, participates in training programs, or both for all of its employees, including people of color and women, and establishes apprenticeship, trainee, and upgrade programs relevant to the Contractor's employment needs.
15. The Contractor conducts, at least annually, an inventory and evaluation of all employees for promotional opportunities and

encourages all employees to seek and prepare appropriately for such opportunities.

16. The Contractor ensures the company's working environment and activities are non-segregated except for providing separate or single-user toilets and necessary changing facilities to assure privacy between the sexes.

ATTACHMENT D
PREVAILING WAGES

PREVAILING WAGES

1. **PREVAILING WAGE RATES:** Pursuant to San Diego Municipal Code section 22.3019, construction, alteration, demolition, repair and maintenance work performed under this Contract is subject to State prevailing wage laws. For construction work performed under this Contract cumulatively exceeding \$25,000 and for alteration, demolition, repair and maintenance work performed under this Contract cumulatively exceeding \$15,000, the Contractor and its subcontractors shall comply with State prevailing wage laws including, but not limited to, the requirements listed below.
 - 1.1. **Compliance with Prevailing Wage Requirements.** Pursuant to sections 1720 through 1861 of the California Labor Code, the Contractor and its subcontractors shall ensure that all workers who perform work under this Contract are paid not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations (DIR). This includes work performed during the design and preconstruction phases of construction including, but not limited to, inspection and land surveying work.
 - 1.1.1. Copies of such prevailing rate of per diem wages are on file at the City and are available for inspection to any interested party on request. Copies of the prevailing rate of per diem wages also may be found at <http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>. Contractor and its subcontractors shall post a copy of the prevailing rate of per diem wages determination at each job site and shall make them available to any interested party upon request.
 - 1.1.2. The wage rates determined by the DIR refer to expiration dates. If the published wage rate does not refer to a predetermined wage rate to be paid after the expiration date, then the published rate of wage shall be in effect for the life of this Contract. If the published wage rate refers to a predetermined wage rate to become effective upon expiration of the published wage rate and the predetermined wage rate is on file with the DIR, such predetermined wage rate shall become effective on the date following the expiration date and shall apply to this Contract in the same manner as if it had been published in said publication. If the predetermined wage rate refers to one or more additional expiration dates with additional predetermined wage rates, which expiration dates occur during the life of this Contract, each successive predetermined wage rate shall apply to this Contract on the date following the expiration date of the previous wage rate. If the last of such predetermined wage rates expires during the life of this Contract, such wage rate shall apply to the balance of the Contract.
 - 1.2. **Penalties for Violations.** Contractor and its subcontractors shall comply with California Labor Code section 1775 in the event a worker is paid less than the prevailing wage rate for the work or craft in which the worker is employed.

- 1.3. Payroll Records.** Contractor and its subcontractors shall comply with California Labor Code section 1776, which generally requires keeping accurate payroll records, verifying and certifying payroll records, and making them available for inspection. Contractor shall require its subcontractors to also comply with section 1776. Contractor and its subcontractors shall submit weekly certified payroll records online via the City's web-based Labor Compliance Program. Contractor is responsible for ensuring its subcontractors submit certified payroll records to the City.

 - 1.3.1.** For contracts entered into on or after April 1, 2015, Contractor and their subcontractors shall furnish records specified in Labor Code section 1776 directly to the Labor Commissioner in the manner required by Labor Code section 1771.4.
- 1.4. Apprentices.** Contractor and its subcontractors shall comply with California Labor Code sections 1777.5, 1777.6 and 1777.7 concerning the employment and wages of apprentices. Contractor is held responsible for the compliance of their subcontractors with sections 1777.5, 1777.6 and 1777.7.
- 1.5. Working Hours.** Contractor and their subcontractors shall comply with California Labor Code sections 1810 through 1815, including but not limited to: (i) restrict working hours on public works contracts to eight hours a day and forty hours a week, unless all hours worked in excess of 8 hours per day are compensated at not less than 1½ times the basic rate of pay; and (ii) specify penalties to be imposed on design professionals and subcontractors of \$25 per worker per day for each day the worker works more than 8 hours per day and 40 hours per week in violation of California Labor Code sections 1810 through 1815.
- 1.6. Required Provisions for Subcontracts.** Contractor shall include at a minimum a copy of the following provisions in any contract they enter into with a subcontractor: California Labor Code sections 1771, 1771.1, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860 and 1861.
- 1.7. Labor Code Section 1861 Certification.** Contractor in accordance with California Labor Code section 3700 is required to secure the payment of compensation of its employees and by signing this Contract, Contractor certifies that "I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract."
- 1.8. Labor Compliance Program.** The City has its own Labor Compliance Program authorized in August 2011 by the DIR. The City will withhold contract payments when payroll records are delinquent or deemed inadequate by the City or other governmental entity, or it has been established after an investigation by the City or other governmental entity that underpayment(s) have occurred. For questions or assistance, please contact the City of San Diego's Equal Opportunity Contracting Department at 619-236-6000.

1.9. Contractor and Subcontractor Registration Requirements. This project is subject to compliance monitoring and enforcement by the DIR. As of March 1, 2015, no contractor or subcontractor may be listed on a bid or proposal for a public works project unless registered with the DIR pursuant to Labor Code section 1725.5. As of April 1, 2015, a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, or enter into any contract for public work, unless currently registered and qualified to perform public work pursuant to Labor Code section 1725.5. By submitting a bid or proposal to the City, Contractor is certifying that he or she has verified that all subcontractors used on this public work project are registered with the DIR in compliance with Labor Code sections 1771.1 and 1725.5, and Contractor shall provide proof of registration to the City upon request.

1.9.1. A Contractor's inadvertent error in listing a subcontractor who is not registered pursuant to Labor Code section 1725.5 in response to a solicitation shall not be grounds for filing a bid protest or grounds for considering the bid non-responsive provided that any of the following apply: (1) the subcontractor is registered prior to bid opening; (2) within twenty-four hours after the bid opening, the subcontractor is registered and has paid the penalty registration fee specified in Labor Code section 1725.5; or (3) the subcontractor is replaced by another registered subcontractor pursuant to Public Contract Code section 4107.

ATTACHMENT E
SUPPLEMENTARY SPECIAL PROVISIONS (SSP)

SUPPLEMENTARY SPECIAL PROVISIONS

The following Supplementary Special Provisions (SSP) modifies the following documents:

- 1) Standard Specifications for Public Works Construction (The GREENBOOK) currently in effect.
 - 2) The City of San Diego Standard Specifications for Public Works Construction (The WHITEBOOK).
-

SECTION 2 - SCOPE AND CONTROL OF WORK

2-3.2 Self Performance. DELETE in its entirety and SUBSTITUTE with the following:

1. You must perform, with your own organization, Contract work amounting to at least 50% of the base bid alone or base bid and any additive or deductive alternate(s) that together when added or deducted form the basis of award.
2. The self performance percentage requirement will be waived for contracts when a "B" License is required or allowed.

2-5.3.1 General. To the City Supplement, ADD the following

7. For products for which an AML is available, products listed in the AML shall be used. A submittal review will be conducted for products not identified on an AML on a case-by-case basis when:
 - a) The product type or category is not in the AML.
 - b) The AML does not list at least two available manufacturers of the product.
 - c) The material or manufacturer listed in the AML is no longer available. Documentation to substantiate the product is no longer available or in production is required as part of the submittal.

In the case of conducting a submittal review when required by the Plans or Special Provisions, or when requested by the Engineer, all submittals shall be accompanied by the City's submittal form.

The Product Submittal Form is available for download at:

<http://www.sandiego.gov/publicworks/edocref/index.shtml>

2-7

SUBSURFACE DATA. ADD the following:

4. In preparation of the Contract Documents, the designer has relied upon the following reports of explorations and tests of subsurface conditions at the Work Site:
 1. Geotechnical Engineering Investigation Report, dated March 26, 2007 by Testing Engineers San Diego, INC. and updated letter by NV5 dated May 29, 2015.
5. The report(s) listed above is(are) available for review by contacting the Contract Specialist or visiting:

<ftp://ftp.sannet.gov/OUT/ECP/2-7%20SUBSURFACE%20DATA/>

2-9.1

Permanent Survey Markers. To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

Pursuant to Division 3, Chapter 15 of the Business and Professions Code, the Contractor shall not disturb survey monuments that “control the location of subdivisions, tracts, boundaries, roads, streets, or highways, or provide horizontal or vertical survey control” until they have been tied out by a Registered Land Surveyor or Registered Civil Engineer authorized to practice land surveying within the State of California.

Monument Preservation will be performed by City Public Works Field Engineering Division (PW-FED) Field Survey Section on all Projects, unless permission is obtained for these services in writing by PW-FED.

The Contractor shall submit to the Engineer a minimum of 7 Days prior to the start of the Work a list of controlling survey monuments which may be disturbed. The Agency (or the owner on a Private Contract) will:

- a) set survey points outside the affected work area that reference and locate each controlling survey monument that may be disturbed,
- b) file a Corner Record or Record of Survey with the County Surveyor after setting the survey points to be used for re-establishment of the disturbed controlling survey monuments, and
- c) file a Corner Record of Record of Survey with the County Surveyor after re-establishment of the disturbed controlling survey monuments.

2-9.2

Survey Service. DELETE in its entirety and SUBSTITUTE with the following:

Prior to start of construction, you shall submit a letter to the Engineer identifying the Licensed Land Surveyor or the Registered Civil Engineer authorized to practice land surveying within the State of California performing the survey services for the Project.

You are responsible for performing and meeting the accuracy of surveying standards adequate for construction through a Licensed Land Surveyor or a Registered Civil Engineer authorized to practice land surveying within the State of California.

Survey stakes shall be set and stationed by you for curbs, headers, water mains, sewers, storm drains, structures, rough grade, and any other structures and appurtenances that are needed for the Project. A corresponding cut or fill to finished grade (or flow line) must be indicated on a grade sheet.

Surveys performed must list the basis of bearings as tied to Record of Survey 14492 or equivalent, based on the California Coordinate System of 1983, Zone 6, U.S. Survey foot, epoch 1991.35, along with a completed calibration sheet (blank form will be supplied by City Surveys). The vertical datum used must be NGVD 29 in accordance with the City of San Diego Vertical Bench Book.

You shall preserve construction survey stakes, control points and other survey related marks for the duration of the Project. If any construction survey stakes are lost or disturbed, and need to be replaced, such replacement will be performed by the Engineer at your expense.

2-9.2.1

Survey Files. All Computer Aided Drafting (CAD) work must be done in accordance with The City of San Diego's Citywide Computer Aided Design and Drafting (CADD) Standards and must be in City seed files (.job, .txt, .dgn, .alg, .raw, .fwd, .dtm, .pdf, .docx, .xlsx, .tif, and .jpg).

All survey files must be completed in accordance with the City of San Diego's Citywide CADD Standards and must adhere to City's Microstation level and attribute structure.

The survey file deliverable will be either one Master .dgn file containing all xref's in geospatially referenced (and attached) models or one Master dgn with all xref's geospatially referenced (and attached) as dgn files. Resource files will be sent to Contractor if requested.

Survey files must include, but not limited to, the following items:

- a. Street center line and (record width) right-of-way lines
- b. Project geometry (.alg) files (this will be generated for use in InRoads)
- c. 3D surface model (.dtm, break line and spot elevation) file

- d. Spot elevations of the new utility main at each intersection, midblock and for any change in grade
- e. Monuments
- f. Curb lines (top curb and gutter)
- g. All other appurtenances including but not limited to water valves, meters, vaults, manholes, fire hydrants, utility boxes, cleanouts and poles

You shall use the survey information to produce red-lines drawings as described in Section 2-5.4 "Red-Lines and Record Documents."

2-9.2.2 Submittal. Survey files shall be submitted in accordance with Section 2-5.3 "Submittals" and 2-5.4 "Red-Lines and Record Documents." You shall provide the Survey Files, proposed Drawings and or Red-Line Drawings on a CD/DVD to the Engineer and post the Survey Files, proposed Drawings and or Red-Line Drawings at the following website:

<ftp://ftp.sannet.gov/IN/SURVEYS/>

After the documents have been posted the website, you shall send a confirmation email, which includes the hyperlink to the website, to the Engineer and SurveyReview@sanidiego.gov.

All survey work and submittals which reveal non-compliance with the requirements of the Construction Documents shall be corrected as deemed necessary by the Engineer and the cost of the corrections to your survey submittals will be at your expense.

2-9.2.3 Payment. Payment for survey services shall be included in the Contract price.

2-11.1.1 General. To the City Supplement, item 2, ADD the following:

Time lapse video robotic cameras must provide a clear view of backfill and compaction operations. When this is not possible if camera is mounted on excavator, camera must be mounted on a portable tower or similar device and repositioned as Work progresses.

2-14.3 Coordination. To the City Supplement, ADD the following:

Other adjacent City project(s) is (are) scheduled for construction for the same time period in the vicinity of Front Street and Washington Street. See Appendix F below for approximate location. Coordinate the Work with the adjacent project(s) as listed below:

- a) University Ave. pipeline replacement Project, Project Manager: Mike Bajoua, MBajoua@sanidiego.gov.

2-15

TECHNICAL STUDIES AND DATA. To the City Supplement, ADD the following:

5. In preparation of **the Contract Documents**, the designer has relied upon the following reports of explorations and tests at the Work Site:
 1. Mission Hills/Hillcrest Library LEED Checklist 2015 (attached to the RFP).
 2. Mission Hills/Hillcrest Library Energy Performance Platt (attached to the RFP).
 3. Mission Hills/Hillcrest Library Street Dedication (attached to the RFP).
 4. Technical Specification Mission Hills/Hillcrest Library (attached to the RFP).
 5. Construction Standards and Specification Guideline from Facilities Division.
 6. Lead Abatement Specification for IBEW Building, dated October 21, 2015 (attached to the RFP)
 7. Asbestos Abatement Specification for IBEW Building, dated October 21, 2015 (attached to the RFP)

SECTION 4 - CONTROL OF MATERIALS

4-1.3.4 Inspection Paid For By the Contractor. To the City Supplement, ADD the following:

The following areas need special inspection provided and paid for by the design builder:

Soils, roofing, welding, concrete, and required special inspections, as necessary.

4-1.3.6 Preapproved Materials. To the City Supplement, ADD the following:

3. You shall submit in writing a list of all products to be incorporated in the Work that are on the AML.

ADD:

4-1.3.7 Testing Under the Direction of the Engineer. When a bid item for Testing under the direction of the Engineer is provided, the Contractor must employ and pay for the services of a qualified third party independent laboratory to perform the required testing. The Contractor will be reimbursed for the cost of testing under this bid item.

4-1.6 Trade Names or Equals. ADD the following:

You must submit your list of proposed substitutions for “an equal” (“or equal”) item(s) **no less than 15 Working Days prior to Bid due date** and on the City’s Product Submittal Form available at.

<http://www.sandiego.gov/publicworks/edocref/index.shtml>

SECTION 5 - UTILITIES

5-2 PROTECTION. ADD the following:

1. You shall repair or replace traffic signal and lighting system equipment within 72 hours after notification of defects by the Engineer.
2. While working in or around meter boxes, you shall protect in place all Advanced Metering Infrastructure (AMI) devices attached to the water meter or located in or near water meter boxes, coffins, or vaults. This includes any antenna installed through the meter box lid.
 - a) Avoid damaging the antenna, cable, and endpoints when removing the meter box lid and when disconnecting AMI endpoints from the register on top of the water meter.
 - b) If meters or AMI devices need to be removed or relocated, the AMI endpoints shall be reinstalled with the Encoder/Receiver/Transmitter (ERT) pointing upwards.
 - c) Because the AMI equipment is uniquely matched to each service location and to specific meter serial numbers, any AMI devices that are removed or disconnected shall be reinstalled on the same service lateral as well as to the same meter serial number it was attached to originally.
 - d) Do not change or modify the lid if the lid has an antenna drilled through it.
 - e) If you encounter damaged, disconnected, buried, or broken AMI endpoints, cables between the registers, antennae, lids, or ERTs, notify the Engineer within 24 hours.
 - f) Any AMI equipment damaged by you shall be repaired or replaced by City Forces at your expense.

SECTION 6 - PROSECUTION, PROGRESS AND ACCEPTANCE OF WORK

6-1.1 Construction Schedule. To item 20, ADD the following:

The 120 Calendar Days for the Plant Establishment Period is included in the stipulated Contract Time.

6-7.1 General. To the City Supplement, ADD the following:

5. For Water projects where shutdowns of 16 inch and larger pipes are required, there is a shutdown moratorium from May until October. Contractor shall plan and schedule work accordingly. No additional payment or working days will be granted for delays due to this moratorium.
6. 30 Working days for full depth asphalt final mill and resurfacing work required per SDG-107.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

7-3 LIABILITY INSURANCE. DELETE in its entirety and SUBSTITUTE with the following:

The insurance provisions herein must not be construed to limit your indemnity obligations contained in the Contract.

7-3.1 Policies and Procedures.

1. You must procure the insurance described below, at its sole cost and expense, to provide coverage against claims for loss including injuries to persons or damage to property, which may arise out of or in connection with the performance of the Work by you, your agents, representatives, officers, employees or Subcontractors.
2. Insurance coverage for property damage resulting from your operations is on a replacement cost valuation. The market value will not be accepted.
3. You must maintain this insurance for the duration of this contract and at all times thereafter when you are correcting, removing, or replacing Work in accordance with this contract. Your liabilities under the Contract, e.g., your indemnity obligations, is not deemed limited to the insurance coverage required by this contract.
4. Payment for insurance is included in the various items of Work as bid by you, and except as specifically agreed to by the City in writing, you are not entitled to any additional payment. Do not begin any work under this contract until you have provided and the City has approved all required insurance.
5. Policies of insurance must provide that the City is entitled to 30 days (10 days for cancellation due to non-payment of premium) prior written notice of cancellation or non-renewal of the policy. Maintenance of specified insurance coverage is a material element of the Contract. Your failure to maintain or renew coverage or to provide evidence of renewal during the term of the Contract may be treated by the City as a material breach of the Contract.

7-3.2 Types of Insurance.

7-3.2.1 Commercial General Liability Insurance.

1. Commercial General Liability Insurance must be written on the current version of the ISO Occurrence form CG 00 01 07 98 or an equivalent form providing coverage at least as broad.
2. The policy must cover liability arising from premises and operations, XCU (explosions, underground, and collapse), independent contractors, products/completed operations, personal injury and advertising injury, bodily injury, property damage, and liability assumed under an insured's contract (including the tort liability of another assumed in a business contract).
3. There must be no endorsement or modification limiting the scope of coverage for either "insured vs. insured" claims or contractual liability. You must maintain the same or equivalent insurance for at least 10 years following completion of the Work.
4. All costs of defense must be outside the policy limits. Policy coverage must be in liability limits of not less than the following:

<u>General Annual Aggregate Limit</u>	<u>Limits of Liability</u>
Other than Products/Completed Operations	\$2,000,000
Products/Completed Operations Aggregate Limit	\$2,000,000
Personal Injury Limit	\$1,000,000
Each Occurrence	\$1,000,000

7-3.2.2 Commercial Automobile Liability Insurance.

1. You must provide a policy or policies of Commercial Automobile Liability Insurance written on the current version of the ISO form CA 00 01 12 90 or later version or equivalent form providing coverage at least as broad in the amount of \$1,000,000 combined single limit per accident, covering bodily injury and property damage for owned, non-owned, and hired automobiles ("Any Auto").
2. All costs of defense must be outside the limits of the policy.

7-3.2.3 Contractors Pollution Liability Insurance.

1. You must procure and maintain at your expense or require Subcontractor, as described below to procure and maintain, the Contractors Pollution Liability Insurance including contractual liability coverage to cover liability arising out of cleanup, removal, storage, or handling of hazardous or toxic chemicals, materials, substances, or any other pollutants by you or any Subcontractor in an amount not less than \$2,000,000 limit for bodily injury and property damage.

2. All costs of defense must be outside the limits of the policy. Any such insurance provided by Subcontractor instead of you must be approved separately in writing by the City.
3. For approval of a substitution of Subcontractor's insurance, you must certify that all activities for which the Contractors Pollution Liability Insurance will provide coverage will be performed exclusively by the Subcontractor providing the insurance. The deductible must not exceed \$25,000 per claim.
4. Contractual liability must include coverage of tort liability of another party to pay for bodily injury or property damage to a third person or organization. There must be no endorsement or modification of the coverage limiting the scope of coverage for either "insured vs. insured" claims or contractual liability.
5. Occurrence based policies must be procured before the Work commences and must be maintained for the Contract Time. Claims Made policies must be procured before the Work commences, must be maintained for the Contract Time, and must include a 12 month extended Claims Discovery Period applicable to this contract or the existing policy or policies must continue to be maintained for 12 months after the completion of the Work without advancing the retroactive date.
6. Except as provided for under California law, the policy or policies must provide that the City is entitled to 30 days prior written notice (10 days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

7-3.2.4

Contractors Hazardous Transporters Pollution Liability Insurance.

1. You must provide at your expense or require Subcontractor to provide, as described below Contractors Hazardous Transporters Pollution Liability Insurance including contractual liability coverage to cover liability arising out of transportation of hazardous or toxic, materials, substances, or any other pollutants by you or any Subcontractor in an amount not less than \$2,000,000 limit per occurrence/aggregate for bodily injury and property damage.
2. All costs of defense must be outside the limits of the policy. The deductible must not exceed \$25,000 per claim. Any such insurance provided by a subcontractor instead of you must be approved separately in writing by the City.
3. For approval of the substitution of Subcontractor's insurance the Contractor shall certify that all activities for which Contractors Hazardous Transporters Pollution Liability Insurance will provide coverage will be performed exclusively by the Subcontractor providing the insurance.

4. Contractual liability must include coverage of tort liability of another party to pay for bodily injury or property damage to a third person or organization. There must be no endorsement or modification of the coverage limiting the scope of coverage for either “insured vs. insured” claims or contractual liability. Occurrence based policies must be procured before the Work commences and must be maintained for the duration of this contract. Claims Made policies must be procured before the Work commences, must be maintained for the duration of this contract, and must include a 12 month extended Claims Discovery Period applicable to this contract or the existing policy or policies must continue to be maintained for 12 months after the completion of the Work under this contract without advancing the retroactive date.
5. Except as provided for under California law, the policy or policies must provide that the City is entitled to 30 days prior written notice (10 days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

7-3.2.5 Contractors Builders Risk Property Insurance..

1. You must provide at its expense, and maintain until Final Acceptance of the Work, a Special Form Builders Risk Policy or Policies. This insurance must be in an amount equal to the replacement cost of the completed Work (without deduction for depreciation) including the cost of excavations, grading, and filling. The policy or policies limits must be 100% of this contract value of the Work plus 15% to cover administrative costs, design costs, and the costs of inspections and construction management.
2. Insured property must include material or portions of the Work located away from the Site but intended for use at the Site, and must cover material or portions of the Work in transit. The policy or policies must include as insured property scaffolding, falsework, and temporary buildings located at the Site. The policy or policies must cover the cost of removing debris, including demolition.
3. The policy or policies must provide that all proceeds thereunder must be payable to the City as Trustee for the insured, and must name the City, the Contractor, Subcontractors, and Suppliers of all tiers as named insured. We as Trustee will collect, adjust, and receive all monies which may become due and payable under the policy or policies, may compromise any and all claims thereunder, and will apply the proceeds of such insurance to the repair, reconstruction, or replacement of the Work.
4. Any deductible applicable to the insurance must be identified in the policy or policies documents and responsibility for paying the part of any loss not covered because of the application of such deductibles must be apportioned among the parties except for the City as follows: if there is more than one claimant for a single occurrence, then each

claimant must pay a pro-rata share of the per occurrence deductible based upon the percentage of their paid claim to the total paid for insured. The City must be entitled to 100% of its loss. The Contractor must pay the City any portion of that loss not covered because of a deductible, at the same time the proceeds of the insurance are paid to the City as trustee.

5. Any insured, other than the City, making claim to which a deductible applies must be responsible for 100% of the loss not insured because of the deductible. Except as provided for under California law, the policy or policies must provide that the City is entitled to 30 days prior written notice (10 days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

7-3.3 Rating Requirements. Except for the State Compensation Insurance Fund, all insurance required by this contract as described herein must be carried only by responsible insurance companies with a rating of, or equivalent to, at least "A-, VI" by A.M. Best Company, that are authorized by the California Insurance Commissioner to do business in the State, and that have been approved by the City.

7-3.3.1 Non-Admitted Carriers. The City will accept insurance provided by non-admitted, "surplus lines" carriers only if the carrier is authorized to do business in the State and is included on the List of Approved Surplus Lines Insurers (LASLI list).

All policies of insurance carried by non-admitted carriers must be subject to all of the requirements for policies of insurance provided by admitted carriers described herein.

7-3.4 Evidence of Insurance. Furnish to the City documents e.g., certificates of insurance and endorsements evidencing the insurance required herein, and furnish renewal documentation prior to expiration of this insurance. Each required document must be signed by the insurer or a person authorized by the insurer to bind coverage on its behalf. We reserve the right to require complete, certified copies of all insurance policies required herein.

7-3.5 Policy Endorsements.

7-3.5.1 Commercial General Liability Insurance.

7-3.5.1.1 Additional Insured.

- a) You must provide at your expense policy endorsement written on the current version of the ISO Occurrence form CG 20 10 11 85 or an equivalent form providing coverage at least as broad.
- b) To the fullest extent allowed by law e.g., California Insurance Code §11580.04, the policy must be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured.

- c) The additional insured coverage for projects for which the Engineer's Estimate is \$1,000,000 or more must include liability arising out of: (a) Ongoing operations performed by you or on your behalf, (b) your products, (c) your work, e.g., your completed operations performed by you or on your behalf, or (d) premises owned, leased, controlled, or used by you.
- d) The additional insured coverage for projects for which the Engineer's Estimate is less than \$1,000,000 must include liability arising out of: (a) Ongoing operations performed by you or on your behalf, (b) your products, or (c) premises owned, leased, controlled, or used by you.

7-3.5.1.2 Primary and Non-Contributory Coverage. The policy must be endorsed to provide that the coverage with respect to operations, including the completed operations, if appropriate, of the Named Insured is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives. Further, it must provide that any insurance maintained by the City and its elected officials, officers, employees, agents and representatives must be in excess of your insurance and must not contribute to it.

7-3.5.1.3 Project General Aggregate Limit.

The policy or policies must be endorsed to provide a Designated Construction Project General Aggregate Limit that will apply only to the Work. Only claims payments which arise from the Work must reduce the Designated Construction Project General Aggregate Limit. The Designated Construction Project General Aggregate Limit must be in addition to the aggregate limit provided for the products-completed operations hazard.

7-3.5.2 Commercial Automobile Liability Insurance.

7-3.5.2.1 Additional Insured. Unless the policy or policies of Commercial Auto Liability Insurance are written on an ISO form CA 00 01 12 90 or a later version of this form or equivalent form providing coverage at least as broad, the policy must be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured, with respect to liability arising out of automobiles owned, leased, hired or borrowed by you or on your behalf. This endorsement is limited to the obligations permitted by California Insurance Code §11580.04.

7-3.5.3 Contractors Pollution Liability Insurance Endorsements.

7-3.5.3.1 Additional Insured.

- 1. The policy or policies shall be endorsed to include as an Insured the City and its respective elected officials, officers, employees, agents, and representatives, with respect to liability arising out of:
 - a) Ongoing operations performed by you or on your behalf,

- b) your products,
- c) your work, e.g., your completed operations performed by you or on your behalf, or
- d) premises owned, leased, controlled, or used by you.

Except that in connection with, collateral to, or affecting any construction contract to which the provisions of subdivision (b) of § 2782 of the California Civil Code apply, this endorsement shall not provide any duty of indemnity coverage for the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives in any case where an agreement to indemnify the City and its respective elected officials, officers, employees, agents, and representatives would be invalid under subdivision (b) of §2782 of the California Civil Code.

- 2. In any case where a claim or loss encompasses the negligence of the Insured and the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives that are not covered because of California Insurance Code §11580.04, the insurer's obligation to the City and its respective elected officials, officers, employees, agents, and representatives shall be limited to obligations permitted by California Insurance Code §11580.04.

7-3.5.3.2 Primary and Non-Contributory Coverage. The policy or policies must be endorsed to provide that the insurance afforded by the Contractors Pollution Liability Insurance policy or policies is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives with respect to operations including the completed operations of the Named Insured. Any insurance maintained by the City and its elected officials, officers, employees, agents and representatives must be in excess of your insurance and must not contribute to it.

7-3.5.3.3 Severability of Interest. For Contractors Pollution Liability Insurance, the policy or policies must provide that your insurance must apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability and must provide cross-liability coverage.

7-3.5.4 Contractors Hazardous Transporters Pollution Liability Insurance Endorsements.

7-3.5.4.1 Additional Insured.

- 1. The policy or policies must be endorsed to include as an Insured the City and its respective elected officials, officers, employees, agents, and representatives, with respect to liability arising out of:
 - a) Ongoing operations performed by you or on your behalf,

- b) your products,
- c) your work, e.g., your completed operations performed by you or on your behalf, or
- d) premises owned, leased, controlled, or used by you.

Except that in connection with, collateral to, or affecting any construction contract to which the provisions of subdivision (b) of §2782 of the California Civil Code apply, this endorsement shall not provide any duty of indemnity coverage for the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives in any case where an agreement to indemnify the City and its respective elected officials, officers, employees, agents, and representatives would be invalid under subdivision (b) of §2782 of the California Civil Code.

- 2. In any case where a claim or loss encompasses the negligence of the Insured and the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives that are not covered because of California Insurance Code §11580.04, the insurer's obligation to the City and its respective elected officials, officers, employees, agents, and representatives shall be limited to obligations permitted by California Insurance Code §11580.04.

7-3.5.4.2 Primary and Non-Contributory Coverage. The policy or policies must be endorsed to provide that the insurance afforded by the Contractors Pollution Liability Insurance policy or policies is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives with respect to operations including the completed operations of the Named Insured. Any insurance maintained by the City and its elected officials, officers, employees, agents and representatives must be in excess of your insurance and must not contribute to it.

7-3.5.4.3 Severability of Interest. For Contractors Hazardous Transporters Pollution Liability Insurance, the policy or policies must provide that your insurance must apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability and must provide cross-liability coverage.

7-3.5.5 Builders Risk Endorsements.

7-3.5.5.1 Waiver of Subrogation. The policy or policies must be endorsed to provide that the insurer will waive all rights of subrogation against the City, and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from work performed by the Named Insured for the City.

7-3.5.5.2 Builders Risk – Partial Utilization. If the City desire to occupy or use a portion or portions of the Work prior to Acceptance in accordance with this contract, the City will notify you and you must immediately notify your

Builder's Risk insurer and obtain an endorsement that the policy or policies must not be cancelled or lapse on account of any such partial use or occupancy. You must obtain the endorsement prior to our occupation and use.

7-3.6 Deductibles and Self-Insured Retentions. You must pay for all deductibles and self-insured retentions. You must disclose deductibles and self-insured retentions to the City at the time the evidence of insurance is provided.

7-3.7 Reservation of Rights. The City reserves the right, from time to time, to review your insurance coverage, limits, deductibles and self-insured retentions to determine if they are acceptable to the City. The City will reimburse you, without overhead, profit, or any other markup, for the cost of additional premium for any coverage requested by the Engineer but not required by this contract.

7-3.8 Notice of Changes to Insurance. You must notify the City 30 days prior to any material change to the policies of insurance provided under this contract.

7-3.9 Excess Insurance. Policies providing excess coverage must follow the form of the primary policy or policies e.g., all endorsements.

7-3.10 Architects and Engineers Professional Insurance (Errors and Omissions Insurance).

1. For Contracts with required engineering services (e.g., Design-Build, preparation of engineered Traffic Control Plans (TCP), and etc.) by you, you shall keep or require all of your employees or Subcontractors, who provide professional engineering services under this contract, Professional Liability coverage with a limit of \$1,000,000 per claim and \$2,000,000 annual aggregate in full force and effect.
2. You shall ensure the following:
 - a) The policy retroactive date is on or before the date of commencement of the Project.
 - b) The policy will be maintained in force for a period of 3 years after completion of the Project or termination of this Contract, whichever occurs last. You agree that for the time period specified above, there will be no changes or endorsements to the policy that affect the specified coverage.
3. If professional engineering services are to be provided solely by the Subcontractor, you shall:
 - a) Certify this to the City in writing and

- b) Agree in writing to require the Subcontractor to procure Professional Liability coverage in accordance with the requirements set forth above.

7-4 WORKERS' COMPENSATION INSURANCE. DELETE in its entirety and SUBSTITUTE with the following:

7-4.1 Workers' Compensation Insurance and Employers Liability Insurance.

- 1. In accordance with the provisions of §3700 of the California Labor Code, you must provide at your expense Workers' Compensation Insurance and Employers Liability Insurance to protect you against all claims under applicable state workers compensation laws. The City, its elected officials, and employees will not be responsible for any claims in law or equity occasioned by your failure to comply with the requirements of this section.

- 2. Limits for this insurance must be not less than the following:

<u>Workers' Compensation</u>	<u>Statutory Employers Liability</u>
Bodily Injury by Accident	\$1,000,000 each accident
Bodily Injury by Disease	\$1,000,000 each employee
Bodily Injury by Disease	\$1,000,000 policy limit

- 3. By signing and returning the Contract you certify that you are aware of the provisions of §3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code and you must comply with such provisions before commencing the Work as required by §1861 of the California Labor Code.

7-4.1.1 Waiver of Subrogation.

The policy or policies must be endorsed to provide that the insurer will waive all rights of subrogation against the City, and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from work performed by the Named Insured for the City.

7-8.6 Water Pollution Control. ADD the following:

- 1. Based on a preliminary assessment by the City, the Contract is subject to WPCP.

7-10.2.2.3 Engineered Traffic Control Plans Provided by the Contractor. To the City Supplement, ADD the following:

Engineered "D" size TCP are required for the following areas:

1. Washington Street and Front Street

7-10.5.3 Steel Plate Covers. Table 7-10.5.3(A), REVISE the plate thickness for 5'-3" trench width to read 1 3/4".

7-15 INDEMNIFICATION AND HOLD HARMLESS AGREEMENT. To the City Supplement, fourth paragraph, last sentence, DELETE in its entirety and SUBSTITUTE with the following:

Your duty to indemnify and hold harmless does not include any claims or liability arising from the established active or sole negligence, or willful misconduct of the City, its officers, or employees.

7-16 COMMUNITY LIAISON. To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

ADD:

7-16 COMMUNITY OUTREACH.

7-16.1 General.

1. To ensure consistency with the City's community outreach plan for the project, the City shall work with you to inform the public (which includes, but shall not be limited to, property owners, renters, homeowners, business owners, recreational users, and other community members and stakeholders) of construction impacts. Your efforts to mitigate construction impacts by communicating with the public require close coordination and cooperation with the City.
2. You shall perform the community outreach activities required throughout the Contract Time. You shall assign a staff member who shall perform the required community outreach services.
3. You shall closely coordinate the Work with the businesses, institutions, residents, and property owners impacted by the Project.
4. Your example duties include notifying businesses, institutions, and residents of the commencement of construction activities not less than 5 Days in advance, coordinating access for vehicular and pedestrian traffic to businesses, institutions, and residences impacted by the Project, reporting activities at all Project progress meetings scheduled by the Engineer, attending the Project Pre-construction meeting, attending 2 community meetings, responding to community questions and complaints related to your activities, and documenting, in writing, as well as logging in all inquiries and complaints received into the City's internal public contact tracking system.

5. You shall execute the Information Security Policy (ISP) Acknowledgement Form - For Non-City Employees within 15 Days of the award of the Contract if any of the following apply:
 - a) Your contact information is made available on any outreach materials.
 - b) You will be the primary point of contact to resolve project related inquiries and complaints.
6. Electronic Communication.
 - a) All inquiries and complaints shall be logged in to the City's internal public contact tracking system within 24 hours of receipt of inquiries and complaints.
 - b) Any updates or a resolution of inquiries and complaints shall be documented in the City's internal public contact tracking system within 24 hours.
 - c) Copies of email communications shall be saved individually on to the City's internal public contact tracking system in an Outlook Message Format (*.msg).
 - d) All graphics, photos, and other electronic files associated with inquiries and/or complaints shall be saved into the individual records, located within the City's internal public contact tracking system.

7-16.1.1 Quality Assurance.

1. During the course of community outreach, you shall ensure that the character of all persons that conduct community outreach (distributing door hangers, attending community meetings, interacting with the public, etc.) on your behalf shall:
 - a. Have the ability to speak and comprehend English and/or Spanish, as appropriate for the community or public they are informing,
 - b. Possess and display easily verifiable and readable personal identification that identifies the person as your employee,
 - c. Have the interpersonal skills to effectively, professionally, and tactfully represent you, the project, and the City to the public.

7-16.1.2 Submittals.

1. You shall submit to the Resident Engineer, for review and approval, all drafts of letters, notices, postcards, door hangers, signs, mailing lists, proposed addresses for hand-delivery, and any other notices and letters that are to be mailed and or distributed to the public.

- a. Prior to distributing or mailing, you shall submit final drafts of letters, notices, postcards, door hangers, signs, and any other notices and letters to the Resident Engineer for final review and approval. Submit a PDF copy of the approved door hangers to the Engineer.
 - b. After distributing or mailing, you shall submit verification of delivery and any copies of returned notices to the Resident Engineer. Submit a PDF copy of the approved letters and notices to the Engineer.
2. You shall use the City's SDSshare site to identify and summarize communications (via phone, in person, and email) with the public within 24 hours of receipt, even if your response to the individual is still incomplete. You shall upload to the City's SDSshare site copies of all written, electronic, and verbal communications and conversations with the public.

7-16.2 Community Outreach Services.

7-16.2.1 Public Notice by Contractor.

1. Post Project Identification Signs in accordance with section 7-10.6.2
2. Notify businesses, institutions, property owners, residents or any other impacted stakeholders, within a minimum 300 feet radius of the Project, of construction activities and utility service interruptions not less than 5 days in advance.
3. Furnish and distribute public notices in the form of door hangers using the City's format to all occupants and/or property owners along streets:
 - a. Where Work is to be performed at least 5 days before starting construction or survey activities or impacting the community as approved by the Resident Engineer.
 - b. Within 5 days of the completion of your construction activities where work was performed, you shall distribute public notices in the form of door hangers, which outlines the anticipated dates of Asphalt Resurfacing or Slurry Seal.
 - c. No less than 48 hours in advance and no more than 72 hours in advance of the scheduled resurfacing.
4. Leave the door hanger notices on or at the front door of each dwelling and apartment unit and at each tenant of commercial buildings abutting each of the street block segments. Where the front doors of apartment units are inaccessible, distribute the door hanger notices to the apartment manager or security officer.

5. Door Hanger Material: You shall use Blanks/USA brand, Item Number DHJ5B6WH, 1 1/4" Holes (removed), 2-up Jumbo Door Hanger in Bristol White, or approved equal.
6. Mailed Notice Material: You shall use Cougar by Domtar, Item Number 2834 or approved equal.
7. For all Work on private property, contact each owner and occupant individually a minimum of 15 days prior to the Work. If the Work has been delayed, re-notify owners and occupants of the new Work schedule, as directed by the Resident Engineer.
8. A sample of public notices is included in the Contract Appendix.

7-16.2.2 Communications with the Public.

1. Coordinate access for vehicular and pedestrian traffic to businesses, institutions and residences impacted by the Project.
2. You shall provide updates on construction impacts to the Resident Engineer. You shall notify the Resident Engineer in advance about time-sensitive construction impacts and may be required to distribute construction impact notices to the public on short notice.
3. You shall incorporate community outreach activities related to construction impacts in the baseline schedule and update the Resident Engineer with each week's submittal of the Three-Week Look Ahead Schedule.
4. At the request of the Resident Engineer, you shall attend and participate in project briefings at community meetings.
5. You shall coordinate with the Resident Engineer on all responses and actions taken to address public inquiries and complaints within 24-hours that they are received.

7-16.2.3 Communications with Media.

1. The City may allow members of the media access to its construction site(s) on a case-by-case basis only.
2. Occasionally, members of the media may show up at construction sites, uninvited. Members of the media (including, but not limited to newspaper, magazine, radio, television, bloggers, and videographers) do not have the legal right to be in the construction site without the City's permission.
3. In the event media representatives arrive near or on the construction site(s), you shall keep them off the site(s), in a courteous and professional manner, until a Public Information Officer is available to meet them at an approved location.

4. You shall report all members of the media visits to the Resident Engineer as quickly as possible, so that the City's Public Information Officer can meet with the members of the media at the construction site(s).
5. If the City allows members of the media to access a construction site, you shall allow the City to escort the media representatives while they are on the construction site and shall ensure their safety.
6. You shall require media representatives to sign in and out of the Site Visitor Log and to use Personal Protective Equipment.
7. You have a right to speak to members of the media about your company and its role on the project. All other questions shall be referred to the City.

7-16.4 Payment. The Payment for the Community Outreach Service is included in the Contract price.

7-20 ELECTRONIC COMMUNICATION. ADD the following:

Virtual Project Manager will be used on this contract.

SECTION 8 - FACILITIES FOR AGENCY PERSONNEL

8-2 FIELD OFFICE FACILITIES. To the City Supplement, ADD the following.

Provide a Class "A" Field Office.

SECTION 9 - MEASUREMENT AND PAYMENT

9-3.2 Partial and Final Payment. DELETE paragraph three in its entirety and SUBSTITUTE with the following:

Upon commencement of the Work, an escrow account shall be established in a financial institution chosen by you and approved by the City. As progress payments are made to you, the retention portion is deposited by the City into the Escrow account. Documentation for an Escrow payment must have an Escrow agreement signed by you, the City and the Escrow Agent. Upon completion of the contract the City notifies the Escrow agent in writing to release the funds to you. Only the designated representative of the City shall sign the request for the release of Escrow funds.

9-3.2.5 Withholding of Payment. To the City Supplement, item i), DELETE in its entirety and SUBSTITUTE with the following:

- i) Your failure to comply with 7-2.3, "PAYROLL RECORDS" and 2-16, "CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM."

ADD:

9-3.7 Compensation Adjustments for Price Index Fluctuations. To the City Supplement, subsection c), item 2, DELETE in its entirety and SUBSTITUTE with the following:

- 2) In the event of an overrun of Contract time, adjustment in compensation for asphalt binder included in estimates during the overrun period shall be determined using the California Statewide Crude Oil Price Index in effect on the first business day of the month within the pay period in which the overrun began.

ADD the following:

- e) This Contract is not subject to the provisions of The WHITEBOOK for Compensation Adjustments for Price Index Fluctuations for the paving asphalt.

SECTION 203 – BITUMINOUS MATERIALS

203-15 RUBBER POLYMER MODIFIED SLURRY (RPMS). To the City Supplement, CORRECT section numbering as follows:

OLD SECTION NUMBER	TITLE	NEW SECTION NUMBER
203-15	RUBBER POLYMER MODIFIED SLURRY (RPMS)	203-16
203-15.1	General	203-16.1
203-15.2	Materials	203-16.2
203-15.3	Composition and Grading	203-16.3
203-15.4	Mix Design	203-16.4

ADD the following:

RPMS shall be used on this contract.

SECTION 207 – PIPE

207-17.2.3 Pipe Manufacturer. To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

PVC products as manufactured or distributed by J-M Manufacturing Company shall not be used on the Contract for pressurized pipe **unless specified otherwise.**

207-26.4 Butterfly Valves. To the City Supplement, Paragraph (2), DELETE the last sentence.

To the City Supplement, Paragraph (3), DELETE in its entirety and SUBSTITUTE with the following:

3. The operator shall be manual with a 2" (50 mm) square operating nut, and shall open the valve when turned counterclockwise.

SECTION 209 – STREET LIGHTING AND TRAFFIC SIGNAL MATERIALS

209-6.4 Induction Cobra Head Luminaire. To the City Supplement, CORRECT certain section numbering as follows:

OLD SECTION NUMBER	TITLE	NEW SECTION NUMBER
209-6.4.7	Luminaire Identification	209-6.4.8
209-6.4.8	Photometric Documentation	209-6.4.9
209-6.4.9	Quality Assurance	209-6.4.10

SECTION 212 - LANDSCAPE AND IRRIGATION MATERIALS

212-1.2.4 Organic Soil Amendment. ADD the following:

Type 4 organic soil amendment (compost) shall be derived from Green Material (yard waste and/or food waste) that is composted in accordance with California Code of Regulations, Title 14, Chapter 3 Article 7, 17868.3 (15-day Process to Further Reduce Pathogens and kill weed and other seeds). Incorporated into the soil, compost improves soil texture; increases both nutrient and water holding capacity; and reduces the need for commercial fertilizer. Where applicable, Organic Soil Amendment can qualify as a component of LEED certification.

Type 4 organic soil amendment must come from a compost facility that tests its compost on a quarterly basis and meets the requirements listed in Table 212-1.2.4(B). Contractor shall provide a copy of the most recent quarterly test results, and a current representative sample of the compost to be used on the project, to the City, prior to approval and the compost being used.

The City of San Diego’s Miramar Greenery produces Type 4 organic soil amendment (compost) and complies with the U.S. Composting Council’s Seal of Testing Assurance Program. The Miramar Greenery is located within the City’s Miramar Landfill at State Hwy. 52 and Convoy St. in San Diego.

<http://www.sandiego.gov/environmental-services/miramar/greenery/>

Table 212-1.2.4 (B)

Test Criteria	Acceptable Range	Unit of Measure	TMCC Test Method
pH	6.0 - 8.0		04.11-A 1:5 Slurry pH
Soluble salts	0 - 10	dS/m (mmhos/cm)	04.10-A 1:5 Slurry Method
Organic Matter	30 - 75%	% dry weight basis	05.07-A Loss-on-ignition Organic Matter Method (LOI)
Stability	≤ 8	mg CO ₂ /g OM/day	05.08-B carbon Dioxide Evolution Rate
Maturity	> 80% emergence	average % of control	05.05-A Germination and vigor
Pathogens			
Fecal coliform	Pass	Pass/Fail per U.S. EPA Class A standard, 40CFR 503.32(a)	07.01-B Fecal coliforms
Salmonella	Pass	Pass/Fail per U.S. EPA Class A standard, 40CFR 503.32(a)	07.02 Salmonella
Heavy Metal	Pass	Pass/Fail per U.S. EPA Class A standard, 40CFR 503.13(a) Tables 1 and 3.	04.06-Heavy Metals standards, and Hazardous Elements.
Particle Size	≥ 90%	% dry weight passing through 11mm	02.02-B Sample Sieving for Aggregate Size Classification

ADD:

212-3.2.2.3 Trench Marker Tape. To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

1. Trench marker tape shall be installed in accordance with Standard Drawing SDM-105, "Warning/Identification Tape Installation".

ADD:

212-4 BIORETENTION SOIL MEDIA (BSM).

212-4.1 General. Bioretention Soil Media (BSM) is a formulated soil mixture that is intended to filter storm water and support plant growth while minimizing the leaching of chemicals found in the BSM itself. BSM consists of 70% to 85% by volume washed sand and 15% to 30% by volume compost or alternative organic amendment. Alternative proportions may be justified under certain conditions. BSM shall be mixed thoroughly using a mechanical mixing system at the plant site prior to delivery. In order to reduce the potential for leaching of nutrients, the proportion of compost or alternative organic amendment shall be held to a minimum level that will support the proposed vegetation in the system.

212-4.1.1 Sand for Bioretention Soil Media. The sand shall conform to ASTM C33 "fine aggregate concrete sand" requirements. A sieve analysis shall be performed in accordance with ASTM C 136, ASTM D 422, or approved equivalent method to demonstrate compliance with the gradation limits shown in Table 212-4.1.1 (A). The sand shall be thoroughly washed to remove fines, dust, and deleterious materials prior to delivery. Fines passing the No. 200 sieve shall be non-plastic.

Table 212-4.1.1 (A) Sand Gradation Limits

Sieve Size (ASTM D422)	Percent Passing (by weight)	
	Minimum	Maximum
3/8 inch	100	100
#4	95	100
#8	80	100
#16	50	85
#30	25	60
#50	5	30
#100	0	10
#200	0	5

Note: Coefficient of Uniformity (Cu = D60/D10) equal to or greater than 4

212-4.1.2 Compost. Compost shall be certified by the U.S. Composting Council's Seal of Testing Assurance Program or an approved equivalent program. Compost shall comply with the following requirements:

1. Organic Material Content shall be 35% to 75% by dry weight.
2. Carbon to nitrogen (C:N) ratio shall be between 15:1 and 40:1, preferably above 20:1 to reduce the potential for nitrogen leaching/washout.
3. Physical contaminants (manmade inert materials) shall not exceed 1% by dry weight.
4. pH shall be between 6.0 and 7.5.
5. Soluble Salt Concentration shall be less than 10 dS/m (Method TMECC 4.10-A, USDA and U.S. Composting Council).
6. Maturity (seed emergence and seedling vigor) shall be greater than 80% relative to positive control (Method TMECC 5.05-A, USDA and U.S. Composting Council)
7. Stability (Carbon Dioxide evolution rate) shall be less than 2.5 mg CO₂-C per g compost organic matter (OM) per day or less than 5 mg CO₂-C per g compost carbon per day, whichever unit is reported. (Method TMECC 5.08-B, USDA and U.S. Composting Council). Alternatively a Solvita rating of 6 or higher is acceptable.
8. Moisture shall be 25%-55% wet weight basis.
9. Select Pathogens shall pass US EPA Class A standard, 40 CFR Section 503.32(a).
10. Trace Metals shall pass US EPA Class A standard, 40 CFR Section 503.13, Tables 1 and 3.
11. Shall be within gradation limits in Table 800-4.1.2 (ASTM D 422 sieve analysis or approved equivalent).

Table 212-4.1.2 Compost Gradation Limits

Sieve Size	Percent Passing (by weight)
16 mm (5/8")	99 to 100
6.3 mm (1/4")	40 to 95
2 mm	40 to 90

212-4.1.3

Alternative Mix Components and Proportions. Alternative mix components and proportions may be utilized, provided that the whole blended mix (212-4.2) conforms to agricultural, chemical, and hydraulic suitability criteria, as applicable. Alternative mix designs may include alternative proportions, alternative organic amendments and/or the use of natural soils. Alternative mixes are subject to approval by the City Engineer.

Alternative mixtures may be particularly applicable for systems with underdrains in areas where phosphorus is associated with a water quality impairment or a Total Maximum Daily Load (TMDL) in a downstream receiving water. BSM with 15% to 30% compost by volume (as specified in 212-4.1.2) will likely contribute to increased phosphorus in effluent. Alternative organic amendments, such as coco coir pith, in place of compost should be considered in these areas. A sand or soil substrate with low plant available phosphorus (< 5 mg/kg) should also be considered. The use of compost in these mixes should be limited to the top three to six inches of soil and limited to the minimum level needed to augment fertility. Additionally, an activated alumina polishing layer can be considered to control phosphorus leaching.

Additional mix components, such as granular activated carbon, zeolite, and biochar may be considered to improve performance for other parameters.

212-4.2

Whole BSM Testing Requirements and Criteria. You shall submit the following information to the City Engineer at least 30 Days prior to ordering materials:

1. Source/supplier of BSM,
2. Location of source/supplier,
3. A physical sample,
4. Available supplier testing information,
5. Whole BSM test results from a third party independent laboratory,
6. Description of proposed methods and schedule for mixing, delivery, and placement of BSM.

Test results shall be no older than 120 Days and shall accurately represent the materials and feed stocks that are currently available from the supplier.

Test results shall demonstrate conformance to agricultural suitability criteria (212-4.2.1), chemical suitability criteria (212-4.2.2), and hydraulic suitability criteria (212-4.2.3). No delivery, placement, or planting of BSM shall begin until test results confirm the suitability of the BSM. You shall submit a written request for approval which shall be accompanied by written analysis results from a written report of a testing agency. The testing agency shall be registered by the State for agricultural soil evaluation which indicates compliance stating that the tested material proposed source complies with these specifications.

212-4.2.1 BSM Agricultural Suitability. The BSM shall be suitable to sustain the growth of the plants specified and shall conform to the following requirements:

- a) pH shall be between 6.0-7.5.
- b) Salinity shall be less than 3.0 millimho/cm (as measured by electrical conductivity).
- c) Sodium adsorption ration (SAR) shall be less than 3.0.
- d) Chloride shall be less than 150 ppm.

The test results shall show the following information:

- a) Date of testing
- b) Project name
- c) The Contractor's name
- d) Source of materials and supplier's name
- e) pH
- f) Ec
- g) Total and plant available elements (mg/kg particle concentration): phosphorus, potassium, iron, manganese, zinc, copper, boron, calcium, magnesium, sodium, sulfur, molybdenum, nickel, aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, mercury, selenium, silver, strontium, tin, and vanadium. Plant available concentration shall be assessed based on weak acid extraction(ammonium Bicarbonate/DTPA soil analysis or similar)
- h) Soil adsorption ratio
- i) Carbon/nitrogen ratio
- j) Cation exchange capacity
- k) Moisture content
- l) Organic content
- m) An assessment of agricultural suitability based on test results
- n) Recommendations for adding amendments, chemical corrections, or both.

BSM which requires amending to comply with these specifications shall be uniformly blended and tested in its blended state prior to testing and delivery

212-4.2.2 BSM Chemical Suitability. For systems with underdrains, the BSM shall exhibit limited potential for leaching of pollutants that are at levels of concern. Potential for pollutant leaching shall be assessed using either the

Saturated Media Extract Method (aka, Saturation Extract) that is commonly performed by agricultural laboratories or the Synthetic Precipitation Leaching Procedure (SPLP) (EPA SW-846, Method 1312). The referenced tests express the criteria in terms of the pollutant concentration in water that is in contact with the media. In areas in which a pollutant or pollutants are associated with a water quality impairment or a TMDL, BSM in systems with underdrains shall conform to the following Saturation Extract or SPLP criteria for applicable pollutant(s):

1. Nitrate < 3 mg/L
2. Phosphorus < 1 mg/L*
3. Zinc < 0.1 mg/L
4. Copper < 0.025 mg/L
5. Lead < 0.025 mg/L
6. Arsenic < 0.02 mg/L
7. Cadmium < 0.01 mg/L
8. Mercury < 0.01 mg/L
9. Selenium < 0.01 mg/L

Criteria shall be met as stated where a pollutant is associated with a water quality impairment or Total Maximum Daily Load (TMDL) in any downstream receiving water. Criteria may be waived or modified, at the discretion of the City Engineer, where a pollutant does not have a nexus to a water quality impairment or TMDL of downstream receiving water(s). Criteria may also be modified at the discretion of the City Engineer if the you demonstrate that suitable BSM materials cannot be feasibly sourced within a 50 mile radius of the project site and a good faith effort has been undertaken to investigate available materials.

Note that Saturation Extract and SPLP tests are expected to result in somewhat more leaching than would be experienced with real stormwater; therefore a direct comparison to water quality standards or effluent limitations is not relevant.

*Note: Alternative BSM mixtures should be considered for systems with underdrains in areas where phosphorus is associated with a water quality impairment or a TMDL or where the BSM does not achieve the Saturation Extract or SPLP criteria of < 1 mg/L total phosphorus as specified. Details regarding alternative mixtures requirements and potential components are included in 212-4.1.3.

The chemical suitability criteria listed in this section do not apply to systems without underdrains, unless groundwater is impaired or susceptible to nutrient contamination.

212-4.2.3 BSM Hydraulic Suitability.

1. The saturated hydraulic conductivity or infiltration rate of the whole BSM shall be measured by one of the following methods:

- a. Measurement of hydraulic conductivity (USDA Handbook 60, method 34b) (commonly available as part of standard agronomic soil evaluation), or
 - b. ASTM D2434 Permeability of Granular Soils (at approximately 85% relative compaction Standard Proctor, ASTM D698)
2. BSM shall conform to hydraulic criteria associated with the BMP design configuration that best applies to the facility where the BSM will be installed.
- a) **Systems with unrestricted underdrain system (i.e., media control).** For systems with underdrains that are not restricted, the BSM shall have a minimum measured hydraulic conductivity of 8 inches per hour to ensure adequate flow rate through the BMP and longevity of the system. The BSM should have a maximum measured hydraulic conductivity of no more than 20 inches per hour. BSM with higher measured hydraulic conductivity may be accepted at the discretion of the City Engineer. In all cases, an upturned elbow system on the underdrain, measuring 9 to 12 inches above the invert of the underdrain, should be used to control velocities in the underdrain pipe and reduce potential for solid migration through the system.
 - b) **Systems with restricted underdrain system (i.e., outlet control).** For systems in which the flowrate of water through the media is controlled via an outlet control device (e.g., orifice or valve) affixed to the outlet of the underdrain system, the hydraulic conductivity of the media should be at least 15 inches per hour and not more than 40 inches per hour. The outlet control device should control the flowrate to between 5 and 12 inches per hour. This configuration reduces the sensitivity of system performance to the hydraulic conductivity of the material, reduces the likelihood of preferential flow through media, and allows more precise design and control of system flow rates. For these reasons, outlet control should be considered the preferred design option.
 - c) **Systems without underdrains.** For systems without underdrains, the BSM shall have a hydraulic conductivity at least 4 times higher than the underlying soil infiltration rate, but shall not exceed 12 inches per hour.

212-4.3

Delivery, Storage and Handling. You shall not deliver or place soils in frozen, wet, or muddy conditions. You shall protect soils and mixes from absorbing excess water and from erosion at all times. You shall not store materials unprotected during large rainfall events (>0.25 inches). If water is introduced into the material while it is stockpiled, you shall allow the material to drain to the acceptance of the City Engineer before placement.

BSM shall be thoroughly mixed prior to delivery using mechanical mixing methods such as a drum mixer. BSM shall be lightly compacted and placed

in loose lifts approximately 12 inches (300 mm) to ensure reasonable settlement without excessive compaction. Compaction within the BSM area shall not exceed 75 to 85% standard proctor within the designed depth of the BSM. Machinery shall not be used in the bioretention facility to place the BSM. A conveyor or spray system shall be used for media placement in large facilities. Low ground pressure equipment may be authorized for large facilities at the discretion of the City Engineer.

Placement methods and BSM quantities shall account for approximately 10% loss of volume due to settling. Planting methods and timing shall account for settling of media without exposing plant root systems.

The Engineer may request up to three double ring infiltrometer tests (ASTM D3385) or approved alternative tests to confirm that the placed material meets applicable hydraulic suitability criteria (212-4.2.3). In the event that the infiltration rate of placed material does not meet applicable criteria, the City Engineer may require replacement and/or decompaction of materials.

212-4.4

Quality Control and Acceptance. Close adherence to the material quality controls herein are necessary in order to support healthy vegetation, minimize pollutant leaching, and assure sufficient permeability to infiltrate/filter runoff during the life of the facility. Amendments may be included to adjust agronomic properties. Acceptance of the material will be based on test results certified to be representative. Test results shall be conducted no more than 120 Days prior to delivery of the blended BSM to the project site. For projects installing more than 100 cubic yards of BSM, batch-specific tests of the blended mix shall be provided to the City Engineer for every 100 cubic yards of BSM along with a site plan showing the placement locations of each BSM batch within the facility.

212-4.5

Integration with Other Specifications. This specification includes, is related to, and may depend or have dependency on other specifications, including but not limited to:

- Plantings and Hydroseed
- Mulch
- Aggregate (choking stone, drainage stone, energy dissipation)
- Geotextiles
- Underdrains
- Outlet control structures
- Excavation

Execution of this specification requires review and understanding of related specifications. Where conflicts with other specifications exist or appear to exist, you shall consult with the City Engineer to determine which specifications prevail.

212-4.6 Aggregate Materials for BSM Drainage Layers.

212-4.6.1 Drainage of BSM requires the use of specific aggregate materials for filter course (aka choking layer) materials and for an underlying drainage and storage layer.

212-4.6.1.1 Rock and Sand Products for Use in BSM Drainage. Size classifications detailed in Tables 212-4.6.1 (A) and 212-4.6.1 (B) shall apply with respect to BSM drainage materials. All sand and stone products used in BSM drainage layers shall be clean and thoroughly washed.

Table 212-4.6.1 (A) Crushed Rock and Stone Gradation Limits

Sieve Size	Percent Passing Sieves	
	AASHTO No. 57 ⁽¹⁾	ASTM No. 8 ⁽¹⁾
3 in	-	-
2.5 in	-	-
2 in	-	-
1.5 in	100	-
1 in	95 - 100	-
0.75 in	-	-
0.5 in	25 - 60	100
0.375 in	-	85 - 100
No. 4	10 max.	10 - 30
No. 8	5 max.	0 - 10
No. 16		0 - 5
No. 50		-

Table 212-4.6.1 (B) Sand Gradation Limits

Sieve Size	Percent Passing Sieves
	Choker Sand - ASTM C33
0.375 in	100
No. 4	95 - 100
No. 8	80 - 100

No. 16	50 – 85
No. 30	25 – 60
No. 50	5 – 30
No. 100	0 – 10
No. 200	0 – 3

212-4.6.1.2 Graded Aggregate Choker Stone. Graded aggregate choker material is installed as a filter course to separate BSM from the drainage rock reservoir layer. This ensures that no migration of sand or other fines occurs. The filter course consists of two layers of choking material increasing in particle size. The top layer of the filter course shall be constructed of thoroughly washed ASTM C33 fine aggregate sand material conforming to gradation limits contained in Table 212-4.6.1(B). The bottom layer of the filter course shall be constructed of thoroughly washed ASTM No. 8 aggregate material conforming to gradation limits contained in Table 212-4.6.1(A).

SECTION 300 – EARTHWORK

300-1.4 Payment. To the City Supplement, paragraph (2), DELETE in its entirety and SUBSTITUTE with the following:

2. Payment for existing pavement removal and disposal of up to 12” thick, within the excavation e.g., trench limits, shall be included in the Contract Price.

SECTION 302 – ROADWAY SURFACING

302-3 PREPARATORY REPAIR WORK. To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

302-3 PREPARATORY REPAIR WORK.

1. Prior to roadway resurfacing or the application of slurry, the Contractor shall complete all necessary preparation and repair work to the road segment e.g., tree trimming, weed spray, weed abatement, crack sealing, asphalt repair, hump removal, miscellaneous asphalt patching, removal of raised pavement markers, removal of pavement markings, etc. and as specified in the Special Provisions.
2. Preparatory work shall include, but not be limited to, tree trimming, weed spray, weed abatement, crack sealing, asphalt repair i.e., mill

and pave, hump removal, miscellaneous asphalt patching, removal of raised pavement markers, removal of pavement markings, etc.

3. The Contractor shall repair areas of distressed asphalt concrete pavement by milling or removing damaged areas of pavement to a minimum depth of 2" for Residential streets, and a minimum depth of 3" for all others to expose firm and unyielding pavement. The Contractor shall prepare subgrade as needed and install a minimum of 2" for residential streets, and a minimum of 3" for all others, of compacted asphalt concrete pavement over compacted native material as directed by the Engineer.
4. If, in order to achieve the minimum specified depth, the base material is exposed, the material shall be compacted to 95% relative compaction to a depth 10" below the finished grade (dig out). Compaction tests shall be made to ensure compliance with the specifications. The Engineer will determine when and where the test will occur. The City will pay for the soils testing required by the Engineer, which meets the required compaction. The Contractor shall reimburse the City for the cost of retesting failing compaction tests. If additional base material is required, the Contractor shall use Class 2 Aggregate Base in accordance with 200-2.2, "Crushed Aggregate Base."
5. Recycled base material shall conform to Crushed Miscellaneous Base Material in accordance with 200-2.4, "Crushed Miscellaneous Aggregate Base."
6. Prior to replacing asphalt, the area shall be cleaned by removing all loose and damaged material, moisture, dirt, and other foreign matter and shall be tack coated in accordance with 302-5.4 "Tack Coat."
7. The Contractor shall install new asphalt within the repair area or for patches in accordance with 302-5, "ASPHALT CONCRETE PAVEMENT." Asphalt concrete shall be C2-PG 64-10 in compliance with 400-4, "ASPHALT CONCRETE."
8. No preparatory asphalt work shall be done when the atmospheric temperature is below 50 °F or during unsuitable weather.
9. Following the asphalt placement, the Contractor shall roll the entire area of new asphalt in both directions at least twice. The finished patch shall be level and smooth in compliance with 302-5.6.2 "Density and Smoothness." After placement and compaction of the asphalt patch, the Contractor shall seal all finished edges with a 4" wide continuous band of SS-1H.
10. The minimum dimension for each individual repair shall be 4' x 4' and shall be subject to the following conditions:

- a) If the base material is exposed to achieve the required minimum removal thickness, the base material shall be prepared conforming to 301-1, "SUBGRADE PREPARATION."
- b) When additional base material is required, then the contractor shall use Class 2 Aggregate Base in accordance with 200-2.2, "Crushed Aggregate Base." Recycled base material shall conform to Crushed Miscellaneous Base Material in accordance with 200-2.4, "Crushed Miscellaneous Base."
- c) The Contractor may use grinding as a method for removal of deteriorated pavement when the areas indicated for removal are large enough (a minimum of the machine drum width) and when approved by the Engineer.
- d) For both scheduled and unscheduled base repairs, failed areas may be removed by milling or by excavation provided that the edges are cut cleanly with a saw. The areas shall be cleaned and tack coated in accordance with 302-5.4, "Tack Coat" before replacing the asphalt. The areas for scheduled repairs have been marked on the street.

302-3.1 Asphalt Patching.

- 1. Asphalt patching shall consist of patching potholes, gutter-line erosion, and other low spots in the pavement that are deeper than 1/2" per 302-5.6.2, "Density and Smoothness." These areas are generally smaller and more isolated than those areas in need of mill and pave.
- 2. The areas requiring patching have been identified in the Contract Documents, marked on the streets, or as directed by the Engineer. The Contractor shall identify any new areas that may require patching prior to slurry work to ensure the smoothness and quality of the finished product.
- 3. The Contractor shall identify and repair any areas that may require patching, prior to the placement of slurry seal for smooth finished product.
- 4. Asphalt overlay shall not be applied over deteriorated pavement. Preparatory asphalt work shall be completed and approved by the Engineer before proceeding with asphalt overlay.
- 5. The Contractor shall remove distressed asphalt pavement either by saw cutting or milling, to expose firm and unyielding pavement; prepare subgrade (as needed); and install compacted asphalt concrete pavement over compacted native material as directed by the Engineer.

6. Prior to replacing asphalt, the area shall be cleaned and tack coated per 302-5.4, "Tack Coat".
7. Following the asphalt placement, the Contractor shall roll the entire patch in both directions covering the patch at least twice.
8. After placement and compaction of the asphalt patch, the Contractor shall seal all finished edges with a 4" wide continuous band of SS-1H.
9. Base repairs shall not exceed 15% RAP in content.

302-3.2

Payment.

1. The payment for the replacement of existing pavement when required shall be included in the Contract Unit Price for "Asphalt Pavement Repair" for the total area replaced and no additional payment shall be made regardless of the number and size of replacements completed. No payment shall be made for areas of over-excavation or outside trench areas in utility Works unless previously approved by the Engineer. No payment for pavement replacement will be made when the damage is due to your failure to protect existing improvements. You shall reimburse the City for the cost of retesting all failing compaction tests.
2. The areas and quantities shown on the road segments and in the appendices are given only for your aid in planning the Work and preparing Bids. The Engineer will designate the limits to be removed and these designated areas shall be considered to take precedence over the area shown in an Appendix to the Contract Documents. The quantities shown in the appendices are based on a street assessment survey and may vary.
3. At the end of each day, you shall submit to the Engineer an itemized list of the asphalt pavement repair Work completed. The list shall include the location of the Work and the exact square footage of the repair.
4. The payment for preparatory repair Work and tack coating shall be paid at the Contract Unit Price for "Asphalt Pavement Repair".
5. The payment for milling shall be included in the Bid item for "Asphalt Pavement Repair" unless Bid items for asphalt milling Work has been provided.
6. The payment for miscellaneous asphalt patching shall be included in the Contract Unit Price for the slurry Work and no additional payment shall be made, unless a Bid item for "Miscellaneous Asphalt Patching" has been provided.

302-5.1.1 Damaged AC Pavement Replacement. To the City Supplement, DELETE in its entirety.

SECTION 306 – UNDERGROUND CONDUIT CONSTRUCTION

306-1 OPEN TRENCH OPERATIONS. To the City Supplement, CORRECT certain section numbering as follows:

OLD SECTION NUMBER	TITLE	NEW SECTION NUMBER
306-1.8	House Connection Sewer (Laterals) and Cleanouts	306-1.9
306-1.7.1	Payment	306-1.9.1
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306-1.4.5 Water Pressure Test. To the City Supplement, Paragraph (2), DELETE and SUBSTITUE with:

2. Pressure testing of pipe and fittings at the lowest elevation shall be performed at 150% of the specified test pressure and no less than 100% of the specified test pressure at the highest elevation.

Specified test pressure for Class 235 pipe will be 150 psi

Specified test pressure for Class 305 pipe will be 200 psi

306-1.6 Basis of Payment for Open Trench Installations. ADD the following:

Payment for imported backfill when the Contractor elects to import material from a source outside the project limits and when authorized by the Engineer shall be included in the Contract price. The Contract price shall include the removal and disposal of unsuitable materials.

SECTION 308 – LANDSCAPE AND IRRIGATION INSTALLATION

ADD:

308-2.5 **Bioretention Soil Media.**

308-2.5.1 Spreading. Imported BSM drainage material shall be delivered to the BMP system installation site as uniform mixtures and each layer shall be spread in one operation. Segregation within each aggregate layer shall be avoided and the layers shall be free from pockets of coarse or fine material.

Aggregate shall be deposited on underlying layers at a uniform quantity per linear foot (meter), which quantity will provide the required compacted thickness within the tolerances specified herein without resorting to spotting, picking up, or otherwise shifting the aggregate material.

The thickness of the aggregate storage layer (AASHTO No. 57) will depend on site specific design and shall be detailed in contract documents.

The bottom layer of the filter course (ASTM No.8) shall be installed to a thickness of 3 inches (75 mm). The layer shall be spread in one layer. The top layer of the filter course (ASTM C33) shall be installed to a thickness of 3 inches (75 mm). The layer shall be spread in one layer. Marker stakes should be used to ensure uniform lift thickness.

308-2.5.2 Compacting. Filter course material and aggregate storage material shall be lightly compacted to approximately 80% standard proctor without the use of vibratory compaction.

308-7 GUARANTEE. To the City Supplement, DELETE in its entirety.

308-7 PAYMENT. ADD the following:

1. Work related to tree maintenance shall be included in the Bid items as follows:
 - Tree Trimming (EA)
 - Root Pruning (EA)
 - Root Barrier (EA)
2. Third party independent laboratory tests shall be paid for by you.
3. Quantities of graded aggregate choker material and open-graded aggregate storage material will be measured as shown in the Bid. The volumetric quantities of graded aggregate choker stone material and open-graded storage material shall be those placed within the limits of the dimensions shown on the Plans.
 - a) The weight of material to be paid for will be determined by deducting (from the weight of material delivered to the Work) the weight of water in the material (at the time of weighing) in excess of 1% more than the optimum moisture content. No payment will be made for the weight of water deducted.

308-8 PAYMENT. To the City Supplement, DELETE in its entirety.

SECTION 703 – ENCOUNTERING OR RELEASING HAZARDOUS SUBSTANCES

703-20 PAYMENT. To the City Supplement, Item 1, DELETE in its entirety and SUBSTITUTE with the following:

1. Payment for waste management shall be included in the Contract price.

SECTION 705 – WATER DISCHARGES

705-1 Hydrostatic Discharge Requirements. To the City Supplement, ADD the following:

3. The discharge of hydrostatic test water and/or potable water shall not contain constituents in excess of the following:

Table 705-1 (A) Effluent Limitations

Parameter	Units	Effluent Limitations
Total Residual Chlorine	mg/L	0.1
pH	units	Within the limits of 6.0 and 9.0 at all times

4. Compliance with the effluent limitation shown in Table 705-1 (A) shall be determined based on the 90th percentile of all samples obtained during the discharge event. Non-compliance for each event will be considered separately.
5. The discharge of hydrostatic test and/or potable water to Areas of Special Biological Significance (ASBS) is prohibited. These are ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable and are classified as a subset of State Water Quality Protection Areas. Discharges shall be located outside of the designated areas to assure maintenance of natural water quality conditions in these areas. The areas in the San Diego Region include:
 - a) La Jolla (ASBS #29)
 - b) Scripps (ASBS #31)
 - c) La Jolla Shores watershed boundaries

A map showing these areas are to be included as an **Appendix** in the Contract Documents.

6. If a construction project is in the ASBS, the Contractor may discharge their hydrostatic test and/or potable water into the sewer system by

obtaining a permit as outlined in the Public Utilities – Wastewater Section policy attached to the Contract. The discharge points and flow data for the existing sewer system are attached to the Contract as an Appendix.

- 705-2.6.1 **General.** Paragraph (3), CORRECT reference to Section 803 to read “Section 703.”
- 705-2.6.3 **Community Health and Safety Plan.** To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:
- 705-2.6.3 **Community Health and Safety Plan.** See 703-2, “Community Health and Safety Plan.”

SECTION 707 – RESOURCE DISCOVERIES

ADD:

- 707-1.1 **Environmental Document.** The City of San Diego Environmental Analysis Section (EAS) of the Development Services Department has prepared a “Draft Mitigated Negative Declaration” for **Mission Hills/Hillcrest Library**, PTS No. 98695, WBA No. S-13022.02.02, as referenced in the Contract Appendix A. You must comply with all requirements of the Draft Mitigated Negative Declaration as set forth in the Contract Appendix A.

Compliance with the City’s environmental document is included in the various Bid items, unless a bid item has been provided.

END OF SUPPLEMENTARY SPECIAL PROVISIONS (SSP)

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**SECTION 01 6000
PRODUCT REQUIREMENTS**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- B. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Agrees to provide the same warranty for the substitution as for the specified product.
 - 3. Agrees to coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.

END OF SECTION

**SECTION 01 9113
GENERAL COMMISSIONING REQUIREMENTS**

PART 1 GENERAL

1.01 SUMMARY

- A. Commissioning is intended to achieve the following specific objectives; this section specifies the Contractor's responsibilities for commissioning:
 - 1. Verify that the work is installed in accordance with the Contract Documents and the manufacturer's recommendations and instructions, and that it receives adequate operational checkout prior to startup: Startup reports and Prefunctional Checklists executed by Contractor are utilized to achieve this.
 - 2. Verify and document that functional performance is in accordance with the Contract Documents: Functional Tests executed by Contractor and witnessed by the Commissioning Authority are utilized to achieve this.
 - 3. Verify that operation and maintenance manuals submitted to Owner are complete: Detailed operation and maintenance (O&M) data submittals by Contractor are utilized to achieve this.
 - 4. Verify that the Owner's operating personnel are adequately trained: Formal training conducted by Contractor is utilized to achieve this.
- B. The Commissioning Authority directs and coordinates all commissioning activities; this section describes some but not all of the Commissioning Authority's responsibilities.

1.02 SUBMITTALS

- A. Manufacturers' Instructions: Submit copies of all manufacturer-provided instructions that are shipped with the equipment as soon as the equipment is delivered.
- B. Product Data: If submittals to Architect do not include the following, submit copies as soon as possible:
- C. Startup Plans and Reports.
- D. Completed Prefunctional Checklists.

PART 2 PRODUCTS

2.01 TEST EQUIPMENT

- A. Provide all standard testing equipment required to perform startup and initial checkout and required Functional Testing; unless otherwise noted such testing equipment will NOT become the property of Owner.
- B. Calibration Tolerances: Provide testing equipment of sufficient quality and accuracy to test and/or measure system performance with the tolerances specified. If not otherwise noted, the following minimum requirements apply:
 - 1. Temperature Sensors and Digital Thermometers: Certified calibration within past year to accuracy of 0.5 degree F and resolution of plus/minus 0.1 degree F.
 - 2. Pressure Sensors: Accuracy of plus/minus 2.0 percent of the value range being measured (not full range of meter), calibrated within the last year.
 - 3. Calibration: According to the manufacturer's recommended intervals and when dropped or damaged; affix calibration tags or keep certificates readily available for inspection.
- C. Equipment-Specific Tools: Where special testing equipment, tools and instruments are specific to a piece of equipment, are only available from the vendor, and are required in order to accomplish startup or Functional Testing, provide such equipment, tools, and instruments as part of the work at no extra cost to Owner; such equipment, tools, and instruments are to become the property of Owner.
- D. Dataloggers: Independent equipment and software for monitoring flows, currents, status, pressures, etc. of equipment.

PART 3 EXECUTION

3.01 STARTUP PLANS AND REPORTS

- A. Startup Plans: For each item of equipment and system for which the manufacturer provides a startup plan, submit the plan not less than 8 weeks prior to startup.
- B. Startup Reports: For each item of equipment and system for which the manufacturer provides a startup checklist (or startup plan or field checkout sheet), document compliance by submitting the completed startup checklist prior to startup, signed and dated by responsible entity.
- C. Submit directly to the Commissioning Authority.

3.02 FUNCTIONAL TESTS

- A. A Functional Test is required for each item of equipment, system, or other assembly specified to be commissioned, unless sampling of multiple identical or near-identical units is allowed by the final test procedures.
- B. Contractor is responsible for execution of required Functional Tests, after completion of Prefunctional Checklist and before closeout.
- C. Commissioning Authority is responsible for witnessing and reporting results of Functional Tests, including preparation and completion of forms for that purpose.
- D. Contractor is responsible for correction of deficiencies and re-testing at no extra cost to Owner; if a deficiency is not corrected and re-tested immediately, the Commissioning Authority will document the deficiency and the Contractor's stated intentions regarding correction.
- E. Functional Test Procedures:
 - 1. Some test procedures are included in the Contract Documents; where Functional Test procedures are not included in the Contract Documents, test procedures will be determined by the Commissioning Authority with input by and coordination with Contractor.
- F. Deferred Functional Tests: Some tests may need to be performed later, after substantial completion, due to partial occupancy, equipment, seasonal requirements, design or other site conditions; performance of these tests remains the Contractor's responsibility regardless of timing.

3.03 SENSOR AND ACTUATOR CALIBRATION

- A. Calibrate all field-installed temperature, relative humidity, carbon monoxide, carbon dioxide, and pressure sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. Sensors installed in the unit at the factory with calibration certification provided need not be field calibrated.

3.04 TEST PROCEDURES - GENERAL

- A. Provide skilled technicians to execute starting of equipment and to execute the Functional Tests. Ensure that they are available and present during the agreed upon schedules and for sufficient duration to complete the necessary tests, adjustments and problem-solving.
- B. Provide all necessary materials and system modifications required to produce the flows, pressures, temperatures, and conditions necessary to execute the test according to the specified conditions. At completion of the test, return all affected equipment and systems to their pre-test condition.
- C. Manual Testing: Use hand-held instruments, immediate control system readouts, or direct observation to verify performance (contrasted to analyzing monitored data taken over time to make the "observation").
- D. Simulating Conditions: Artificially create the necessary condition for the purpose of testing the response of a system; for example apply hot air to a space sensor using a hair dryer to see the response in a VAV box.
- E. Simulating Signals: Disconnect the sensor and use a signal generator to send an amperage, resistance or pressure to the transducer and control system to simulate the sensor value.

- F. Over-Writing Values: Change the sensor value known to the control system in the control system to see the response of the system; for example, change the outside air temperature value from 50 degrees F to 75 degrees F to verify economizer operation.
- G. Indirect Indicators: Remote indicators of a response or condition, such as a reading from a control system screen reporting a damper to be 100 percent closed, are considered indirect indicators.
- H. Monitoring: Record parameters (flow, current, status, pressure, etc.) of equipment operation using dataloggers or the trending capabilities of the relevant control systems; where monitoring of specific points is called for in Functional Test Procedures:
 - 1. All points that are monitored by the relevant control system shall be trended by Contractor; at the Commissioning Authority's request, Contractor shall trend up to 20 percent more points than specified at no extra charge.
 - 2. Other points will be monitored by the Commissioning Authority using dataloggers.
 - 3. At the option of the Commissioning Authority, some control system monitoring may be replaced with datalogger monitoring.
 - 4. Provide hard copies of monitored data in columnar format with time down left column and at least 5 columns of point values on same page.

3.05 OPERATION AND MAINTENANCE MANUALS

- A. Add design intent documentation furnished by Architect to manuals prior to submission to Owner.
- B. Submit manuals related to items that were commissioned to Commissioning Authority for review; make changes recommended by Commissioning Authority.

END OF SECTION

SECTION 01 9114
COMMISSIONING AUTHORITY RESPONSIBILITIES

PART 1 GENERAL

1.01 SUMMARY

- A. Commissioning is intended to achieve the following specific objectives; this section covers the Commissioning Authority's responsibilities for commissioning:
 - 1. Verify that the work is installed in accordance with the Contract Documents and the manufacturer's recommendations and instructions, and that it receives adequate operational checkout prior to startup: Startup reports and Prefunctional Checklists are utilized to achieve this.
 - 2. Verify and document that functional performance is in accordance with the Contract Documents: Functional Tests performed by Contractor and witnessed by the Commissioning Authority are utilized to achieve this.
 - 3. Verify that operation and maintenance manuals submitted to Owner are complete: Detailed O&M data submittals are specified.
 - 4. Verify that the Owner's operating personnel are adequately trained: Formal training conducted by Contractor is specified.
- B. Commissioning, including Functional Tests, O&M documentation review, and training, is to occur after startup and initial checkout and be completed before Substantial Completion.
- C. Coordinate and direct all the commissioning activities in a logical, sequential and efficient manner using consistent protocols and forms, centralized documentation, clear and regular communications and consultations with all necessary parties, frequently updated timelines and schedules and technical expertise.

1.02 SUBMITTALS

- A. Commissioning Plan:
 - 1. Submit preliminary draft for review by Owner and Architect within 30 days after commencement of Commissioning Authority contract.
 - 2. Submit revised draft to be included in the construction contract documents, not less than 4 weeks prior to bid date.
- B. Commissioning Record: Submit to Contractor for inclusion with O&M manuals.
- C. Final Commissioning Report: Submit to Owner.
- D. Recommissioning Manual: Submit within 60 days after receipt of Owner's instructions to proceed with preparation.
- E. Sustainable Design Documentation: Submit Final Commissioning Report and Recommissioning Manual in accordance with procedures specified in Section 01 3329 - Sustainable Design Reporting.

PART 3 EXECUTION

2.01 COMMISSIONING PLAN

- A. Prepare and maintain the Commissioning Plan, covering commissioning schedule, Prefunctional Checklist and Functional Test procedures, coordination requirements, and forms to be used, for all parties in the commissioning process.
- B. Basis of Design Documentation: Detailed documentation of the functional requirements of the project; descriptions of the systems, components, and methods chosen to meet the design intent; assumptions underlying the design intent.
- C. Review the construction contract documents for Contractor submittals of draft checklists, draft test procedures, manufacturer startup procedures, and other information intended for the use of the Commissioning Authority in preparing the Commissioning Plan.

2.02 CONSTRUCTION CONTRACT DOCUMENTS

- A. General Commissioning Specifications: Architect has prepared general commissioning specifications for inclusion in the construction contract documents; review and submit comments to Owner.
- B. Prefunctional Checklists: Develop detailed Checklists for each item to be commissioned.
- C. Functional Testing: Develop detailed procedures for each item to be commissioned; submit for review by Owner and Architect.
- D. Develop any other reporting forms Contractor will be required to use; if they are likely to require a substantially different amount of work than the Contractor can reasonably anticipate, they must be included in the construction contract documents.
- E. If any part of the documents described above have not been developed by the bid date, coordinate with Architect the issuance of modifications to the construction contract documents

2.03 PREFUNCTIONAL CHECKLISTS

- A. Prefunctional Checklists - Content: Prepare forms for Contractor's use, in sufficient detail to document that the work has been installed in accordance with the Contract Documents and the manufacturer's recommendations and instructions, and that it receives adequate operational checkout prior to startup.

2.04 FUNCTIONAL TEST PROCEDURES

- A. Develop test procedures in sufficient detail to show that functional performance is in accordance with the Contract Documents and shows proper operation through all modes of operation where there is a different system response, including seasonal, unoccupied, warm-up, cool-down, part- and full-load.

2.05 CONSTRUCTION PHASE

- A. Coordinate the commissioning work with Contractor and Construction Manager, ensure that commissioning activities are being incorporated into the master schedule.
- B. Perform site visits, as necessary, to observe component and system installations. Attend planning and job-site meetings to obtain information on construction progress. Review Contractor's meeting minutes for issues relating to the commissioning process. Assist in resolving discrepancies.
- C. Commissioning Kick-Off Meeting: Plan and conduct a meeting early in the construction phase to review commissioning activities and responsibilities with all parties involved. Require attendance by all members of the Commissioning Team.
- D. Conduct periodic meetings as necessary to coordinate, resolve planning issues, and aid in resolution of deficiencies, minimizing the time spent by Contractor and Owner personnel; hold meetings at least monthly.
- E. Submit periodic progress reports to Owner and Contractor.
- F. HVAC Commissioning:
 - 1. Gather and review the control sequences and interlocks and work with Contractor and design engineers until sufficient clarity has been obtained, in writing, to be able to prepare detailed Functional Test procedures.
 - 2. Witness all or part of HVAC piping test and flushing procedures, sufficient to be confident that proper procedures were followed; document testing and include documentation in O&M manuals.
 - 3. Witness all or part of duct testing and cleaning procedures, sufficient to be confident that proper procedures were followed; document testing and include documentation in O&M manuals.
- G. Witness and document testing of systems and components over which the Commissioning Authority does not have direct control, such as smoke control systems, tests contracted directly by Owner, and tests by manufacturer's personnel; include documentation in O&M manuals.

- H. Maintain a master deficiency and resolution log and a separate testing record. Provide written progress and test reports with recommended actions.

2.06 CLOSEOUT

- A. Commissioning Record: Use the same format and organization as specified for the O&M manuals.
- B. Final Commissioning Report: Include:
 - 1. Executive summary.
 - 2. List of participants and roles.
 - 3. Brief facility description.
 - 4. Overview of commissioning scope and general description of testing and verification methods.
 - 5. List of all outstanding non-compliance items, referenced to the specific functional test, inspection, trend log, etc., where the deficiency is documented.
 - 6. List of unresolved issues, seasonal or deferred testing, and other concerns that could affect facility operation.
- C. Recommissioning Manual: Revise the Commissioning Plan documents, checklists, and Functional Test forms as necessary based on accepted recommendations of the final Commissioning Report. Provide step-by-step instructions for recommissioning, blank forms, and cross-references to O&M data needed during recommissioning.

END OF SECTION

**SECTION 02 4100
DEMOLITION**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Demolition Plan: Submit demolition plan as specified by OSHA and local authorities.
- B. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

1.02 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Company specializing in the type of work required.

PART 2 PRODUCTS

PART 3 EXECUTION

3.01 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Comply with applicable requirements of NFPA 241.
 - 3. Use of explosives is not permitted.
 - 4. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 5. Provide, erect, and maintain temporary barriers and security devices.
- B. Do not begin removal until built elements to be salvaged or relocated have been removed.
- C. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- D. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- E. Hazardous Materials: Comply with 29 CFR 1926 and state and local regulations.
- F. Perform demolition in a manner that maximizes salvage and recycling of materials.

3.02 EXISTING UTILITIES

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.

3.03 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
- B. Remove existing work as indicated and as required to accomplish new work.
- C. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, Telecommunications, and Storm Drainage): Remove existing systems and equipment as indicated.
- D. Protect existing work to remain.

3.04 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.

END OF SECTION

**SECTION 03 2000
CONCRETE REINFORCING**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi).

END OF SECTION

**SECTION 03 3000
CAST-IN-PLACE CONCRETE**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 FORMWORK

- A. Comply with requirements of Section 03 1000.
- B. Formwork Design and Construction: Comply with guidelines of ACI 347 to provide formwork that will produce concrete complying with tolerances of ACI 117.
- C. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.

2.02 REINFORCEMENT

- A. Comply with requirements of Section 03 2000.

2.03 CONCRETE MATERIALS

- A. Cement: ASTM C150, Type I - Normal Portland type.
- B. Fine and Coarse Aggregates: ASTM C 33.
- C. Water: Clean and not detrimental to concrete.

2.04 ACCESSORY MATERIALS

- A. Underslab Waterproofing and Vapor Retarder: Semi-rigid bituminous membrane, seven-ply, complying with ASTM E1993.
- B. Non-Shrink Cementitious Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.

2.05 CURING MATERIALS

- A. Curing Compound, Naturally Dissipating: Clear, water-based, liquid membrane-forming compound; complying with ASTM C309.
- B. Curing Compound, Non-dissipating: Liquid, membrane-forming, clear, non-yellowing acrylic; complying with ASTM C309.
- C. Polyethylene Film: ASTM D2103, 4 mil thick, clear.
- D. Water: Potable, not detrimental to concrete.

2.06 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
 - 1. Replace as much Portland cement as possible with fly ash, ground granulated blast furnace slag, silica fume, or rice hull ash as is consistent with ACI recommendations.
- B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI 301.

PART 3 EXECUTION

3.01 PLACING CONCRETE

- A. Place concrete in accordance with ACI 304R.
- B. Place concrete for floor slabs in accordance with ACI 302.1R.
- C. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

3.02 FLOOR FLATNESS AND LEVELNESS TOLERANCES

- A. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.03 CONCRETE FINISHING

- A. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:

3.04 CURING AND PROTECTION

- A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

END OF SECTION

**SECTION 03 3511
CONCRETE FLOOR FINISHES**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 CONCRETE FLOOR FINISH APPLICATIONS

- A. Unless otherwise indicated, all concrete floors are to be finished using penetrating sealer.
- B. Concrete Stain: As indicated.
- C. Penetrating Clear Sealer: As indicated.

2.02 SURFACE TREATMENTS

- A. Troweling Aid, Densifier and Curing Agent: Liquid reactive colloidal silica-based topical treatment, spray-applied to wet concrete and floated or trowelled into the surface.

2.03 COATINGS

- A. Concrete Stain or Dye: Translucent, penetrating compound for interior or exterior use; must be finished with a topical sealer.

PART 3 EXECUTION

3.01 GENERAL

- A. Apply materials in accordance with manufacturer's instructions.

3.02 COATING APPLICATION

- A. Verify that surface is free of previous coatings, sealers, curing compounds, water repellents, laitance, efflorescence, fats, oils, grease, wax, soluble salts, residues from cleaning agents, and other impediments to adhesion.
- B. Protect adjacent non-coated areas from drips, overflow, and overspray; immediately remove excess material.
- C. Apply coatings in accordance with manufacturer's instructions, matching approved mock-ups for color, special effects, sealing and workmanship.

END OF SECTION

**SECTION 03 3533
STAMPED CONCRETE**

PART 1 GENERAL

1.01 MOCK-UPS

- A. Construct mock-up(s) of stamped concrete to serve as basis for evaluation of workmanship.
 - 1. Number of Mock-Ups to be Prepared: One.
 - 2. Use approved design samples as basis for mock-ups.

PART 2 PRODUCTS

2.01 STAMPED CONCRETE APPLICATIONS

- A. Full Depth Stamped Concrete Slab - Type 1: Patterned new concrete.
 - 1. Application(s): All indicated exterior locations.
 - 2. Pattern: As indicated on the drawings.
 - 3. Color is to be achieved as follows:
 - a. Concrete stain, applied after curing.
 - b. Concrete stain/sealer, applied after curing.
 - 4. As last step, apply clear sealer.

2.02 FULL-DEPTH CONCRETE SLAB MATERIALS

- A. See other section(s) for concrete design mix, mixing, forming, and reinforcement.
- B. Slump: 4.0 inches maximum.
- C. Do not use calcium chloride or admixtures containing calcium chloride.
- D. Aggregates: Use non-reactive fine and coarse aggregates free from deleterious material and complying with ASTM C33.

2.03 STAMPING MATERIALS

- A. Stamping Mats: Mat type imprinting tools for texturing freshly placed concrete, in pattern and texture to achieve required surface profile and design.
 - 1. Mat Composition: Polyurethane.
- B. Release Agent: Bond breaker compound capable of releasing stamping forms from concrete without creating surface defects or leaving any residue; type as recommended by stamping mat manufacturer; compatible with concrete, form materials and specified coloring agents.

2.04 SURFACE TREATMENTS

- A. Concrete Stain: Translucent, penetrating compound for interior or exterior use; must be finished with a topical sealer.
- B. Concrete Stain: Translucent penetrating compound for interior or exterior use, intended to be finished with a sealer.
- C. Concrete Stain/Sealer: Opaque polymer modified penetrating water-based stain for interior and exterior use.
- D. Clear Sealer: Suitable for interior and exterior application.
 - 1. Composition: Acrylic, water-based.

2.05 ACCESSORY MATERIALS

- A. Concrete Cleaner: Biodegradable cleaning and neutralizing agent for removal of curing compounds.

PART 3 EXECUTION

3.01 FULL-DEPTH CONCRETE SLABS INSTALLATION

- A. See other section(s) for concrete forming and placement.

3.02 STAMPING

- A. Match approved mock-ups for pattern, color, texture, and workmanship.

- B. Use stamping mats to create patterns in concrete as indicated on the drawings; comply with manufacturer's recommendations and instructions.

3.03 SURFACE TREATMENTS

- A. Match approved mock-ups for pattern, color, texture, and workmanship.
- B. Wait at least 28 days before applying any surface treatment materials or mechanical finishing.

END OF SECTION

**SECTION 04 2731
REINFORCED UNIT MASONRY**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 UNIT MASONRY - GENERAL

2.02 CONCRETE MASONRY UNITS

- A. Concrete Block: Comply with referenced standards and as follows:
 - 1. Load-Bearing Units: ASTM C90, medium weight.
 - a. Hollow block, as indicated.
 - 2. Pre-Faced Units: ASTM C90, hollow block, with smooth resinous facing complying with ASTM C744.

2.03 MORTAR AND GROUT MATERIALS

- A. Masonry Cement: ASTM C91/C91M Type N.
- B. Portland Cement: ASTM C150/C150M, Type I; color as required to produce approved color sample.
- C. Hydrated Lime: ASTM C207, Type S.
- D. Mortar Aggregate: ASTM C144.
- E. Grout Aggregate: ASTM C404.
- F. Water: Clean and potable.

2.04 ACCESSORIES

- A. Preformed Control Joints: Rubber material. Provide with corner and tee accessories, fused joints.

2.05 MORTAR MIXES

- A. Ready Mixed Mortar: ASTM C1142, Type RS.
- B. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.
- C. Colored Mortar: Proportion selected pigments and other ingredients to match Architect's sample, without exceeding manufacturer's recommended pigment-to-cement ratio.

2.06 GROUT MIXING

- A. Mix grout in accordance with ASTM C94/C94M.
- B. Thoroughly mix grout ingredients in quantities needed for immediate use in accordance with ASTM C476 for coarse grout.

PART 3 EXECUTION

3.01 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Concrete Masonry Units:
 - 1. Bond: Running.

3.02 PLACING AND BONDING

3.03 REINFORCEMENT AND ANCHORAGE

3.04 GROUTING

END OF SECTION

**SECTION 04 4301
STONE MASONRY VENEER**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 STONE

- A. Natural Ledger Set Stone Panels: Slate type, Rusted Iron, Copper "California Gold" by MS International or Equal.
- B. Surface Texture: Split face.

2.02 MORTAR

- A. Flexible Latex Based Mortar System suitable for exterior applications and as recommended by manufacturer.

2.03 ACCESSORIES

2.04 STONE FABRICATION

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install flashings of longest practical length and seal watertight to back-up. Lap end joints minimum 6 inches and seal watertight.
- B. Set stone in full mortar setting bed to fully support stone over bearing surface. Use setting buttons or shims to maintain correct joint width.

3.02 REINFORCEMENT AND ANCHORAGE

END OF SECTION

**SECTION 05 1200
STRUCTURAL STEEL**

PART 1 GENERAL

1.01 QUALITY ASSURANCE

- A. Fabricate structural steel members in accordance with AISC "Steel Construction Manual."

PART 2 PRODUCTS

2.01 MATERIALS

- A. See Structural Drawings for Steel Grades.
- B. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- C. Grout: Non-shrink, non-metallic aggregate type, complying with ASTM C1107/C1107M and capable of developing a minimum compressive strength of 7,000 psi at 28 days.
- D. Shop and Touch-Up Primer: Fabricator's standard, complying with VOC limitations of authorities having jurisdiction.
- E. Touch-Up Primer for Galvanized Surfaces: Fabricator's standard, complying with VOC limitations of authorities having jurisdiction.

END OF SECTION

**SECTION 05 5100
METAL STAIRS**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories.

1.02 QUALITY ASSURANCE

- A. Structural Designer Qualifications: Professional Structural Engineer experienced in design of this work and licensed in California, or personnel under direct supervision of such an engineer.

PART 2 PRODUCTS

2.01 METAL STAIRS - GENERAL

- A. Metal Stairs: Provide stairs of the design specified, complete with landing platforms, vertical and horizontal supports, railings, and guards, fabricated accurately for anchorage to each other and to building structure.
 - 1. Regulatory Requirements: Provide stairs and railings complying with the most stringent requirements of local, state, and federal regulations; where requirements of the contract documents exceed those of regulations, comply with the contract documents.
 - 2. Structural Design: Provide complete stair and railing assemblies complying with the applicable local code.
- B. Metal Jointing and Finish Quality Levels:
 - 1. Architectural: All joints as inconspicuous as possible, whether welded or mechanical.
- C. Fasteners: Same material or compatible with materials being fastened; type consistent with design and specified quality level.
- D. Anchors and Related Components: Same material and finish as item to be anchored, except where specifically indicated otherwise; provide all anchors and fasteners required.

2.02 METAL STAIRS WITH CONCRETE TREADS

- A. Jointing and Finish Quality Level: Architectural, as defined above.

2.03 HANDRAILS AND GUARDS

- A. Wall-Mounted Rails: Round pipe or tube rails unless otherwise indicated.

2.04 MATERIALS

- A. Steel Sections: ASTM A36/A36M.
- B. Steel Tubing: ASTM A500/A500M or ASTM A501/A501M structural tubing, round and shapes as indicated.
- C. Steel Plates: ASTM A6/A6M or ASTM A283/A283M.
- D. Pipe: ASTM A 53/A 53M, Grade B Schedule 40, galvanized finish.
- E. Galvanized Steel Sheet: ASTM A653/A653M, Structural Steel (SS) Grade 33/230 with G40/Z120 coating.
- F. Concrete Fill: Portland cement Type II, 3000 psi 28 day strength, 3" to 4" inch slump.
- G. Concrete Reinforcement: Mesh type as detailed, galvanized.

2.05 ACCESSORIES

- A. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.

2.06 SHOP FINISHING

- A. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- B. Do not prime surfaces in direct contact with concrete or where field welding is required.
- C. Prime Painting: Use specified shop- and touch-up primer.

1. Preparation of Steel: In accordance with SSPC-SP 2, Hand Tool Cleaning.
 2. Number of Coats: One.
- D. Galvanizing: Hot-dip galvanize to minimum requirements of ASTM A123/A123M.
1. Touch up abraded areas after fabrication using specified touch-up primer for galvanized surfaces.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install components plumb and level, accurately fitted, free from distortion or defects.

END OF SECTION

**SECTION 06 1000
ROUGH CARPENTRY**

PART 2 PRODUCTS

1.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. Species: Douglas Fir-Larch, unless otherwise indicated.
 - 2. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
 - 3. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
- B. Lumber fabricated from old growth timber is not permitted.

1.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.
- C. Stud Framing (2 by 2 through 2 by 6):
 - 1. Species: Douglas Fir-Larch.
 - 2. Grade: No. 2.
- D. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16):
 - 1. Species: Douglas Fir-Larch.
 - 2. Grade: No. 1 & Btr.
- E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.
 - 2. Boards: Standard or No. 3.

1.03 TIMBERS FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry (23 percent maximum).
- C. Beams and Posts 5 inches and over in thickness:
 - 1. Species: Douglas Fir-Larch.
 - 2. Grade: Select Structural.

1.04 STRUCTURAL COMPOSITE LUMBER

- A. Structural Composite Lumber: Factory fabricated beams, headers, and columns, of sizes and types indicated on drawings; structural capacity as published by manufacturer.

1.05 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.

PART 3 EXECUTION

2.01 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

2.02 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Install structural members full length without splices unless otherwise specifically detailed.
- C. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AFPA Wood Frame Construction Manual.

END OF SECTION

**SECTION 06 1500
WOOD DECKING**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 WOOD MATERIALS

- A. Wood fabricated from old growth timber is not permitted.
- B. Marking: Mark each piece with producer's stamp indicating compliance with specified requirements; for pieces exposed to view in completed construction, submit manufacturer's certificate certifying that products conform to specified requirements in lieu of grade stamping.
- C. Lumber Decking: Fabricated to AITC 112.
 - 1. Species: Douglas Fir, graded under SPIB rules as AITC Select quality.
 - 2. Size: 2 by 6 inches, nominal.
 - 3. Pattern: AITC standard beveled V-joint with single tongue and groove.
 - 4. Moisture Content: 19 percent, maximum.

PART 3 EXECUTION

3.01 INSTALLATION - BOARD DECKING

- A. Install decking perpendicular to framing members, with ends staggered over firm bearing. On sloped surfaces, lay decking with tongue upward.

END OF SECTION

**SECTION 06 1733
WOOD I-JOISTS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 MATERIALS

- A. Wood I-Joists: Solid lumber top and bottom flanges and oriented strand board (OSB) webs bonded together with structural adhesive, with published span rating to meet project requirements.
 - 1. Span Rating: Established and monitored in accordance with ASTM D5055 by independent inspection agency.
 - 2. Oriented Strand Board: Comply with PS 2.
 - 3. Adhesive: Tested for wet/exterior service in accordance with ASTM D2559.
- B. Wood-Based Components:
 - 1. Wood fabricated from old growth timber is not permitted.

2.02 WOOD TREATMENT

- A. Factory-Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.

PART 3 EXECUTION

END OF SECTION

**SECTION 06 1800
GLUED-LAMINATED CONSTRUCTION**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 MATERIALS

- A. Lumber: Softwood lumber conforming to RIS grading rules with 12 percent maximum moisture content before fabrication.
- B. Steel Connections and Brackets: ASTM A36/A36M weldable quality, galvanize per ASTM A123/A123M.
- C. Hardware: ASTM A325 (ASTM A325M) Type 1 high strength heavy hex bolts and ASTM A563 (ASTM A563M) nuts, hot-dip galvanized to meet requirements of ASTM A153/A153M, matching washers.
- D. Laminating Adhesive: Tested for wet/exterior service in accordance with ASTM D2559.

2.02 WOOD TREATMENT

- A. Factory-Treated Lumber: Comply with requirements of AWPA U1 - Use Category System for pressure impregnated wood treatments determined by use categories, expected service conditions, and specific applications.

2.03 FABRICATION

- A. Fabricate glue laminated structural members in accordance with AITC Industrial grade.

PART 3 EXECUTION

END OF SECTION

**SECTION 06 2000
FINISH CARPENTRY**

PART 1 GENERAL

1.01 QUALITY ASSURANCE

PART 2 PRODUCTS

2.01 FINISH CARPENTRY ITEMS

- A. Quality Grade: Unless otherwise indicated provide products of quality specified by AWI/AWMAC/WI (AWS) for Premium Grade.

2.02 WOOD-BASED COMPONENTS

- A. Wood fabricated from old growth timber is not permitted.

2.03 SHEET MATERIALS

- A. Softwood Plywood Not Exposed to View: Any face species, veneer core; PS 1 Grade A-B; glue type as recommended for application.
- B. Softwood Plywood Exposed to View: Face species as indicated, plain sawn, medium density fiberboard core; PS 1 Grade A-B; glue type as recommended for application.
- C. Hardwood Plywood: Face species as indicated, plain sawn, book matched, medium density fiberboard core; HPVA HP-1, Front Face Grade AA, Back Face Grade 1; glue type as recommended for application.
- D. Particleboard: ANSI A208.1; composed of wood chips, sawdust, or flakes of medium density, made with waterproof resin binders; of grade to suit application; sanded faces.
- E. Hardboard: ANSI A135.4; Pressed wood fiber with resin binder, Class 1 - Tempered, 1/4 inch thick, smooth one side (S1S).
- F. Pegboard: Pressed wood fiber with resin binder, standard grade; 1/8 in thick, with holes spaced at 1 in on center in both directions.

2.04 PLASTIC LAMINATE MATERIALS

- A. Plastic Laminate: NEMA LD 3, HGS; textured, low gloss finish.
- B. Low Pressure Laminate: Melamine; selected color, and gloss surface texture.
- C. Solid Laminate: selected color, and gloss surface texture.

2.05 HARDWARE

- A. Hardware: Comply with BHMA A156.9.

2.06 WOOD TREATMENT

- A. Factory-Treated Lumber: Comply with requirements of AWPA U1 - Use Category System for pressure impregnated wood treatments determined by use categories, expected service conditions, and specific applications.

2.07 FABRICATION

- A. Shop assemble work for delivery to site, permitting passage through building openings.
- B. Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet from sink cut-outs.

END OF SECTION

**SECTION 06 4100
ARCHITECTURAL WOOD CASEWORK**

PART 2 PRODUCTS

1.01 CABINETS

- A. Quality Grade: Unless otherwise indicated provide products of quality specified by AWI//AWMAC/WI (AWS) for Premium Grade.
- B. Plastic Laminate Faced Cabinets: Custom grade.
- C. Cabinets at all locations.:
 - 1. Finish - Exposed Interior Surfaces: Decorative laminate.
 - 2. Finish - Concealed Surfaces: Decorative laminate.
 - 3. Door and Drawer Front Edge Profiles: Square edge with thin applied band.
 - 4. Door and Drawer Front Retention Profiles: Fixed panel.
 - 5. Casework Construction Type: Type A - Frameless.
 - 6. Interface Style for Cabinet and Door: Style 2 - Finish Inset; reveal overlay.
 - 7. Cabinet Style: Flush overlay.
 - 8. Cabinet Doors and Drawer Fronts: Flush style.
 - 9. Drawer Side Construction: Multiple-dovetailed.
 - 10. Drawer Construction Technique: Dovetail joints.

1.02 WOOD-BASED COMPONENTS

- A. Wood fabricated from old growth timber is not permitted.

1.03 LAMINATE MATERIALS

- A. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.

1.04 COUNTERTOPS

- A. Solid surface defined as nonporous, homogeneous material maintaining the same composition throughout the part with a composition of acrylic polymer, aluminum trihydrate filler and pigment.

1.05 FABRICATION

1.06 SHOP FINISHING

- A. Finish work in accordance with AWI/AWMAC/WI (AWS), Section 5 - Finishing for grade specified and as follows:
 - 1. Transparent:
 - a. System - 1, Lacquer, Nitrocellulose.
 - b. Stain: As selected by Architect.
 - c. Sheen: Satin.
 - 2. Opaque:
 - a. System - 1, Lacquer, Nitrocellulose.
 - b. Color: As selected by Architect.
 - c. Sheen: Satin.

END OF SECTION

**SECTION 07 1300
SHEET WATERPROOFING**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 WATERPROOFING APPLICATIONS

- A. Modified Bituminous Membrane Waterproofing: Use at below grade basement walls.
 - 1. Vertical Surfaces: Adhesive bonded to substrate.
 - 2. Horizontal Surfaces: Adhesive bonded to substrate.
 - 3. Cover with protection board.

2.02 MEMBRANE MATERIALS

- A. Modified Bituminous Membrane: Asphalt and polymer modifiers of styrene-butadiene-styrene (SBS) type, reinforced with non-woven polyester; smooth surfaced.

PART 3 EXECUTION

3.01 INSTALLATION - MEMBRANE

- A. Install membrane waterproofing in accordance with manufacturer's instructions.
- B. Overlap edges and ends and seal by method recommended by manufacturer, minimum 3 inches. Seal permanently waterproof. Apply uniform bead of sealant to joint edge.

END OF SECTION

**SECTION 07 1400
FLUID-APPLIED WATERPROOFING**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 WATERPROOFING APPLICATIONS

- A. Cold-Applied Rubberized Asphalt/HDPE Composite Waterproofing: Use at exterior concrete decks over parking garage.
- B. Under-Tile Waterproofing and Anti-Fracture Membrane: Use at Toilet and housekeeping rooms..

2.02 MEMBRANE AND FLASHING MATERIALS

- A. Cold-Applied Rubberized Asphalt/HDPE Composite Waterproofing: Water-based, capable of being applied to green concrete; spray-applied polymer modified asphalt membrane with HDPE core and drainage composite.
 - 1. Film Thickness: 157 mills (6 inch), minimum.
- B. Under-Tile Waterproofing and Anti-Fracture Membrane: Specifically designed for bonding to concrete, backer boards, and plywood under ceramic tile; complying with ANSI A118.10.

END OF SECTION

**SECTION 07 1900
WATER REPELLENTS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 MATERIALS

- A. Water Repellent: Non-glossy, colorless, penetrating, water-vapor-permeable, non-yellowing sealer, that dries invisibly leaving appearance of substrate unchanged.
 - 1. Applications: Vertical surfaces and non-traffic horizontal surfaces.

PART 3 EXECUTION

3.01 APPLICATION

- A. Apply water repellent in accordance with manufacturer's instructions, using procedures and application methods recommended as producing the best results.
- B. Remove water repellent from unintended surfaces immediately by a method instructed by water repellent manufacturer.

END OF SECTION

**SECTION 07 2100
THERMAL INSULATION**

PART 2 PRODUCTS

1.01 FOAM BOARD INSULATION MATERIALS

- A. Polyisocyanurate Board Insulation with Facers Both Sides: Rigid cellular foam, complying with ASTM C1289; Type I, aluminum foil both faces; Class 1, non-reinforced foam core.
 - 1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
 - 2. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.

1.02 BATT INSULATION MATERIALS

- A. Glass Fiber Batt Insulation: Flexible preformed batt or blanket, complying with ASTM C665; friction fit.
 - 1. Combustibility: Non-combustible, when tested in accordance with ASTM E136, except for facing, if any.
 - 2. Facing: Aluminum foil, flame spread 25 rated; one side.
- B. Mineral Fiber Batt Insulation: Flexible or semi-rigid preformed batt or blanket, complying with ASTM C665; friction fit; unfaced flame spread index of 0 (zero) when tested in accordance with ASTM E84.
 - 1. Where indicated, provide foil facing on one side; with flame spread index of 25 or less, when tested in accordance with ASTM E84.
 - 2. Smoke Developed Index: 0 (zero), when tested in accordance with ASTM E84.
- C. Flexible Blanket Insulation: Thin profile insulation that conforms to complex shapes, unfaced; flame spread index of 5 (five) and smoke development index of 10 (ten) when tested in accordance with ASTM E84.

1.03 ACCESSORIES

- A. Tape: Bright aluminum self-adhering type, mesh reinforced, 2 inch wide.
- B. Adhesive: Type recommended by insulation manufacturer for application.

PART 3 EXECUTION

2.01 BATT INSTALLATION

- A. Install insulation and vapor retarder in accordance with manufacturer's instructions.
- B. Install in exterior wall and roof spaces without gaps or voids. Do not compress insulation.

END OF SECTION

**SECTION 07 2500
WEATHER BARRIERS**

PART 2 PRODUCTS

1.01 WEATHER BARRIER ASSEMBLIES

1.02 WATER-RESISTIVE BARRIER MATERIALS (NEITHER AIR BARRIER NOR VAPOR RETARDER)

- A. Asphalt Felt: ASTM D226 Type I felt (No.15).
- B. Plastic Sheet: Polymeric-based sheet complying with requirements of ICC-ES AC38 Grade D with 60-minute water-resistance; do not use polyethylene sheet.

1.03 AIR BARRIER MATERIALS (WATER VAPOR PERMEABLE AND WATER-RESISTIVE)

- A. Air Barrier Sheet, Mechanically Fastened:
 - 1. Air Permeance: 0.004 cubic feet per minute per square foot, maximum, when tested in accordance with ASTM E2178.
 - 2. Water Vapor Permeance: 5 perms, minimum, when tested in accordance with ASTM E96/E96M Procedure A (desiccant procedure).
 - 3. Water Penetration Resistance: Withstand a water head of 21 inches, minimum, for minimum of 5 hours, when tested in accordance with AATCC 127.
 - 4. Ultraviolet and Weathering Resistance: Approved in writing by manufacturer for minimum of 6 months weather exposure.
 - 5. Surface Burning Characteristics: Flame spread index of 25 or less, and smoke developed index of 50 or less, when tested in accordance with ASTM E84.
 - 6. Seam and Perimeter Tape: Polyethylene self adhering type, mesh reinforced, 2 inches wide, compatible with sheet material; unless otherwise specified.

1.04 VAPOR RETARDER MATERIALS (AIR BARRIER AND WATER-RESISTIVE)

- A. Vapor Retarder Sheet : ASTM D4397 polyethylene film reinforced with glass fiber square mesh, clear.
 - 1. Water Vapor Permeance: As required by referenced standard for thickness specified.

PART 3 EXECUTION

2.01 INSTALLATION

- A. Install materials in accordance with manufacturer's instructions.
- B. Water-Resistive Barriers: Install continuous barrier over surfaces indicated, with sheets lapped to shed water but with seams not sealed.
- C. Air Barriers: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.
- D. Vapor Retarders: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.

END OF SECTION

**SECTION 07 4113
METAL ROOF PANELS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 ARCHITECTURAL METAL ROOF PANELS

- A. Architectural Metal Roofing: Provide complete engineered system complying with specified requirements and capable of remaining weathertight while withstanding anticipated movement of substrate and thermally induced movement of roofing system.
- B. Metal Panels: Factory-formed panels with factory-applied finish.
 - 1. Steel Panels:
 - a. Zinc-coated steel conforming to ASTM A653/A653M; minimum G60 galvanizing.
 - b. Aluminum-zinc alloy-coated steel conforming to ASTM A792/A792M; minimum AZ50 coating.
 - c. Aluminum-coated steel conforming to ASTM A463/A463M; minimum Type 2 T2-65 coating.
 - d. Steel Thickness: Minimum 24 gage (0.024 inch).
 - 2. Profile: Standing seam, with minimum 1.0 inch seam height; concealed fastener system for field seaming with special tool.
 - 3. Texture: Smooth.
 - 4. Width: Maximum panel coverage of 24 inches.

2.02 ATTACHMENT SYSTEM

- A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

2.03 ACCESSORIES AND MISCELLANEOUS ITEMS

END OF SECTION

SECTION 07 5400
THERMOPLASTIC MEMBRANE ROOFING

PART 1 GENERAL

1.01 WARRANTY

PART 2 PRODUCTS

2.01 ROOFING - UNBALLASTED APPLICATIONS

- A. Thermoplastic Membrane Roofing: One ply membrane, fully adhered, over insulation.
- B. Acceptable Insulation Types - Constant Thickness Application: Any of the types specified.
 - 1. Minimum 2 layers of cellulose, perlite, molded polystyrene, polyisocyanurate, glass fiber, extruded polystyrene, or composite board.
 - 2. Bottom layer of cellulose, perlite, molded polystyrene, polyisocyanurate, glass fiber, extruded polystyrene, composite, or cellular glass board covered with single layer of cellulose, perlite, molded polystyrene, polyisocyanurate, glass fiber, extruded polystyrene, or composite board.
- C. Acceptable Insulation Types - Tapered Application: Any of the types specified.
 - 1. Tapered polyisocyanurate, perlite, or extruded polystyrene board.
 - 2. Tapered polyisocyanurate, perlite, extruded polystyrene, or cellular glass board covered with uniform thickness cellulose, perlite, molded polystyrene, polyisocyanurate, glass fiber, extruded polystyrene, or composite board.
 - 3. Uniform thickness cellulose, perlite, composite, polyisocyanurate, extruded polystyrene, molded polystyrene, glass fiber, or cellular glass board covered with tapered polyisocyanurate, extruded polystyrene, or perlite board.

2.02 ROOFING MEMBRANE AND ASSOCIATED MATERIALS

- A. Membrane:
 - 1. Material: Polyvinyl chloride complying with ASTM D4434/D4434M.
 - 2. Reinforcing: Internal fabric.
 - 3. Thickness: 0.040 inch, minimum.
 - 4. Sheet Width: Factory fabricated into largest sheets possible.
 - 5. Color: To be selected by Architect from manufacturer's full color range.
- B. Seaming Materials: As recommended by membrane manufacturer.
- C. Vapor Retarder: Material approved by roof manufacturer complying with requirements of fire rating classification; compatible with roofing and insulation materials.
- D. Flexible Flashing Material: Same material as membrane.

2.03 DECK SHEATHING AND COVER BOARDS

- A. Coverboard: Cement roof board, complying with ASTM C1325.
 - 1. Board Size: 48 by 96 inch.
 - 2. Board Thickness: 0.5 inch.

2.04 INSULATION

- A. Polyisocyanurate Board Insulation: Rigid cellular foam, complying with ASTM C1289, Type I, aluminum foil both faces; Class 1, non-reinforced foam core and with the following characteristics:
- B. Glass Fiber Board Insulation: Rigid glass fiber, ASTM C726; top surface coated with asphalt and Kraft paper, with the following characteristics:
- C. Extruded Polystyrene (XPS) Board Insulation: Extruded polystyrene board with natural skin surface, drainage channels one face, and with the following characteristics:
 - 1. Tapered Board: Slope as indicated; minimum thickness 1/2 in; fabricate of fewest layers possible.

- D. Cellular Glass Board Insulation: Cellular glass board, ASTM C552, Type IV, with the following characteristics:
 - 1. Tapered Board: Slope as indicated; minimum thickness 1/2 in; fabricate of fewest layers possible.

2.05 ACCESSORIES

- A. Roofing Expansion Joint Flashing: Sheet butyl.
- B. Stack Boots: Prefabricated flexible boot and collar for pipe stacks through membrane; same material as membrane.
- C. Roofing Nails: Galvanized, hot dipped type, size and configuration as required to suit application.
- D. Walkway Pads: Suitable for maintenance traffic, contrasting color or otherwise visually distinctive from roof membrane.
 - 1. Composition: Asphaltic with mineral granule surface.
 - 2. Surface Color: White or yellow.

END OF SECTION

**SECTION 07 6200
SHEET METAL FLASHING AND TRIM**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 SHEET MATERIALS

- A. Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24 gage (0.0239 inch) thick base metal.
- B. Pre-Finished Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24 gage (0.0239) inch thick base metal, shop pre-coated with PVDF coating.
 - 1. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.

2.02 ACCESSORIES

- A. Fasteners: Galvanized steel, with soft neoprene washers.
- B. Underlayment: ASTM D226/D226M, organic roofing felt, Type I ("No. 15").
- C. Slip Sheet: Rosin sized building paper.
- D. Primer: Zinc chromate type.
- E. Sealant to be Concealed in Completed Work: Non-curing butyl sealant.
- F. Sealant to be Exposed in Completed Work: ASTM C920; elastomeric sealant, 100 percent silicone with minimum movement capability of plus/minus 25 percent and recommended by manufacturer for substrates to be sealed; clear.
- G. Plastic Cement: ASTM D4586, Type I.

2.03 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths.
- C. Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

2.04 GUTTER AND DOWNSPOUT FABRICATION

- A. Gutters: SMACNA (ASMM), Rectangular profile.
- B. Downspouts: Rectangular profile.
- C. Gutters and Downspouts: Size for rainfall intensity determined by a storm occurrence of 1 in 10 years in accordance with SMACNA (ASMM).

PART 3 EXECUTION

3.01 INSTALLATION

- A. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.

END OF SECTION

**SECTION 07 7100
ROOF SPECIALTIES**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 COMPONENTS

- A. Roof Edge Flashings: Factory fabricated to sizes required; mitered, welded corners; concealed fasteners.
 - 1. Configuration: Fascia, cant, and edge securement for roof membrane;
 - 2. Pull-Off Resistance: Tested in accordance with ANSI/SPRI/FM 4435/ES-1 RE-1 and RE-2 to positive and negative design wind pressure as defined by applicable code.
 - 3. Material: Formed steel sheet, galvanized, 24 gage, 0.024 inch thick, minimum.
- B. Copings: Factory fabricated to sizes required; mitered, welded corners; concealed fasteners.
 - 1. Configuration: Concealed continuous hold down cleat at both legs; internal splice piece at joints of same material, thickness and finish as cap; concealed stainless steel fasteners.
 - 2. Pull-Off Resistance: Tested in accordance with ANSI/SPRI/FM 4435/ES-1 RE-3 to positive and negative design wind pressure as defined by applicable code.
 - 3. Material: Formed steel sheet, galvanized, 24 gage, 0.024 inch thick, minimum.
- C. Control and Expansion Joint Covers: Composite construction of 1" inch wide flexible EPDM flashing of white color with closed cell urethane foam backing, each edge seamed to aluminum sheet metal flanges, designed for nominal joint width of 1 inch. Include special formed corners, tees, intersections, and wall flashings, each sealed watertight.
- D. Pipe and Penetration Flashing: Base of rounded aluminum, compatible with sheet metal roof systems, and capable of accomodating pipes sized between 0.375 inches and 12 inches.

2.02 FINISHES

- A. Fluoropolymer Coating: High Performance Organic Finish, AAMA 2604; multiple coat, thermally cured fluoropolymer finish system; color as scheduled.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install components in accordance with manufacturer's instructions.

END OF SECTION

**SECTION 07 7123
MANUFACTURED GUTTERS AND DOWNSPOUTS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 MATERIALS

- A. Copper: ASTM B370, cold rolled 0.22 inch thick; natural finish.

2.02 COMPONENTS

- A. Gutters: CDA rectangular style profile.
- B. Downspouts: CDA Rectangular profile.
- C. Anchors and Supports: Profiled to suit gutters and downspouts.

2.03 FABRICATION

- A. Form gutters and downspouts of profiles and size indicated.
- B. Form sections square, true, and accurate in size, in maximum possible lengths, free of distortion or defects detrimental to appearance or performance. Allow for expansion at joints.
- C. Fabricate gutter and downspout accessories; seal watertight.

2.04 FACTORY FINISHING

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install gutters, downspouts, and accessories in accordance with manufacturer's instructions.

END OF SECTION

**SECTION 07 7200
ROOF ACCESSORIES**

PART 1 GENERAL

1.01 SUBMITTALS

PART 2 PRODUCTS

2.01 MANUFACTURED CURBS

- A. Manufactured Curbs, Equipment Rails, and Other Roof Mounting Assemblies: Factory-assembled hollow sheet metal construction with fully mitered and welded corners, integral counterflashing, internal reinforcing, and top side and edges formed to shed water.
 - 1. Sheet Metal: Hot-dip zinc coated steel sheet complying with ASTM A653/A653M, SS Grade 33 ; G60 coating designation; 18 gage, 0.048 inch thick.
 - 2. Roofing Cants: Provide integral sheet metal roofing cants dimensioned to begin slope at top of roofing insulation; 1:1 slope; minimum cant height 4 inches.
 - 3. Manufacture curb bottom and mounting flanges for installation directly on roof deck, not on insulation; match slope and configuration of roof deck.
- B. Curbs Adjacent to Roof Openings: Provide curb on all sides of opening, with top of curb horizontal for equipment mounting.
- C. Equipment Rails: Two-sided curbs in straight lengths, with top horizontal for equipment mounting.
- D. Pipe, Duct, and Conduit Mounting Pedestals: Vertical posts, minimum 8 inches square unless otherwise indicated.

2.02 ROOF HATCHES, MANUAL AND AUTOMATIC OPERATION

- A. Roof Hatches: Factory-assembled steel frame and cover, complete with operating and release hardware.
 - 1. Style: Provide flat metal covers unless otherwise indicated.
 - 2. Mounting: Provide frames and curbs suitable for mounting on flat roof deck.
- B. Frames/Curbs: One-piece curb and frame with integral cap flashing to receive roof flashings; extended bottom flange to suit mounting.
 - 1. Material: Galvanized steel, 14 gage, 0.0747 inch thick.
 - 2. Finish: Factory prime paint.
 - 3. Insulation: 1 inch rigid glass fiber, located on outside face of curb.
- C. Metal Covers: Flush, insulated, hollow metal construction.
 - 1. Capable of supporting 40 psf live load.
 - 2. Material: Galvanized steel; outer cover 14 gage, 0.0747 inch thick, liner 22 gage, 0.03 inch thick.
 - 3. Finish: Factory prime paint.
 - 4. Insulation: 1 inch rigid glass fiber.
- D. Hardware: Steel, zinc coated and chromate sealed, unless otherwise indicated or required by manufacturer.
 - 1. Lifting Mechanisms: Compression or torsion spring operator with shock absorbers that automatically opens upon release of latch; capable of lifting covers despite 10 psf load.
 - 2. Hinges: Heavy duty pintle type.
 - 3. Hold open arm with vinyl-coated handle for manual release.
 - 4. Latch: Upon closing, engage latch automatically and reset manual release.
 - 5. Locking: Padlock hasp on interior.

2.03 NON-PENETRATING ROOFTOP ASSEMBLIES

- A. Non-Penetrating Rooftop Assemblies: Manufacturer-engineered and factory-fabricated, with pedestal bases that rest on top of roofing membrane, not requiring any attachment to the roof structure and not penetrating the roofing assembly.

1. Design Loadings and Configurations: As required by applicable codes.
 2. Support Spacing and Base Sizes: As required to distribute load sufficiently to prevent indentation of roofing assembly.
- B. Walkways, Stairs, and Platforms: Structural steel frame, walking surfaces, and railings.
1. Walking Surfaces and Stair Treads: Steel grating, either formed plank grating or welded bar grating; serrated surface.
- C. Pipe Supports: Provide attachment fixtures complying with MSS SP-58 and as indicated.

PART 3 EXECUTION

3.01 INSTALLATION

END OF SECTION

**SECTION 07 8400
FIRESTOPPING**

PART 2 PRODUCTS

1.01 FIRESTOPPING SYSTEMS

- A. Firestopping: Any material meeting requirements.
 - 1. Fire Ratings: Use any system listed by UL or that has F Rating equal to fire rating of penetrated assembly and minimum T Rating Equal to F Rating and that meets all other specified requirements.

END OF SECTION

**SECTION 07 9100
PREFORMED JOINT SEALS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 PRECOMPRESSED FOAM SEALS

- A. Precompressed Foam Seal: Urethane foam impregnated with water-repellent, with self-adhesive faces protected prior to installation by release paper.
 - 1. Color: Black.
 - 2. Size as required to provide weathertight seal when installed.

2.02 COMPRESSION GASKETS

- A. Compression Gasket: Extruded hollow polychloroprene (neoprene) gasket complying with ASTM D2628; not requiring blockout recess in substrate; not requiring vacuum to collapse seal for installation.
 - 1. Color: Black.
 - 2. Hardness Range: 55 to 65, Shore A, when tested in accordance with ASTM D2240.
- B. Compression Gasket: Extruded hollow gasket made of closed cell expanded polychloroprene (neoprene) rubber complying with ASTM D1056, with dense surface skin and serrated sidewalls.
 - 1. Hardness Range: 35 to 65, Shore 00, when tested in accordance with ASTM D2240.

PART 3 EXECUTION

END OF SECTION

**SECTION 07 9200
JOINT SEALANTS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 JOINT SEALANT APPLICATIONS

- A. Scope:
1. Exterior Joints: Seal open joints, whether or not the joint is indicated on the drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
 - a. Wall expansion and control joints.
 - b. Joints between door, window, and other frames and adjacent construction.
 - c. Joints between different exposed materials.
 - d. Openings below ledge angles in masonry.
 - e. Other joints indicated below.
 2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
 - a. Joints between door, window, and other frames and adjacent construction.
 - b. In sound-rated wall and ceiling assemblies, gaps at electrical outlets, wiring devices, piping, and other openings; between wall/ceiling and other construction; and other flanking sound paths.
 - 1) Exception: Such gaps and openings in gypsum board and plaster finished stud walls and suspended ceilings.
 - 2) Exception: Through-penetrations in sound-rated assemblies that are also fire-rated assemblies.
 - c. Other joints indicated below.
 3. Do not seal the following types of joints.
 - a. Intentional weepholes in masonry.
 - b. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
 - c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
 - d. Joints where installation of sealant is specified in another section.
 - e. Joints between suspended panel ceilings/grid and walls.
- B. Exterior Joints: Use nonsag non-staining silicone sealant, unless otherwise indicated.
1. Lap Joints in Sheet Metal Fabrications: Butyl rubber, non-curing.
 2. Lap Joints between Manufactured Metal Panels: Butyl rubber, non-curing.
 3. Control and Expansion Joints in Concrete Paving: Self-leveling polyurethane "traffic-grade" sealant.
 4. Wiring Slots in Concrete Paving: Self-leveling epoxy sealant.
- C. Interior Joints: Use nonsag polyurethane sealant, unless otherwise indicated.
1. Wall and Ceiling Joints in Non-Wet Areas: Acrylic emulsion latex sealant.
 2. Wall and Ceiling Joints in Wet Areas: Nonsag polyurethane sealant for continuous liquid immersion.
 3. Floor Joints in Wet Areas: Nonsag polyurethane "nontraffic-grade" sealant suitable for continuous liquid immersion.
 4. Wall, Ceiling, and Floor Joints Where Tamper-Resistance is Required: Nonsag tamper-resistant silyl-terminated polyurethane sealant.
 5. Joints between Fixtures in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; white.
 6. In Sound-Rated Assemblies: Acrylic emulsion latex sealant.
 7. Narrow Control Joints in Interior Concrete Slabs: Self-leveling epoxy sealant.

- D. Interior Wet Areas: Bathrooms, restrooms, and kitchens; fixtures in wet areas include plumbing fixtures, food service equipment, countertops, cabinets, and other similar items.
- E. Sound-Rated Assemblies: Walls and ceilings identified as "STC-rated", "sound-rated", or "acoustical".
- F. Areas Where Tamper-Resistance is Required: As indicated on the drawings.

2.02 JOINT SEALANTS - GENERAL

- A. Sealants and Primers: Provide products with levels of volatile organic compound (VOC) content as indicated in Section 01 6116.
- B. Colors: As indicated on the drawings.

2.03 NONSAG JOINT SEALANTS

- A. Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
 - 1. Movement Capability: Plus and minus 50 percent, minimum.
 - 2. Non-Staining To Porous Stone: Non-staining to light-colored natural stone when tested in accordance with ASTM C1248.
 - 3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
- B. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
 - 1. Color: White.
- C. Tamper-Resistant, Silyl-Terminated Polyurethane (STPU) Sealant: ASTM C920, Grade NS, Uses M and A; single component; not expected to withstand continuous water immersion or traffic.
 - 1. Movement Capability: Plus and minus 12-1/2 percent, minimum
- D. Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multicomponent; not expected to withstand continuous water immersion or traffic.
 - 1. Movement Capability: Plus and minus 25 percent, minimum.
- E. Polyurethane Sealant for Continuous Water Immersion: ASTM C920, Grade NS, Uses M and A; single or multicomponent; explicitly approved by manufacturer for continuous water immersion; suitable for traffic exposure when recessed below traffic surface .
 - 1. Movement Capability: Plus and minus 35 percent, minimum.
- F. Acrylic Emulsion Latex: Water-based; ASTM C834, single component, non-staining, non-bleeding, non-sagging; not intended for exterior use.
- G. Non-Curing Butyl Sealant: Solvent-based; ASTM C1311; single component, nonsag, non-skinning, non-hardening, non-bleeding; vapor-impermeable; intended for fully concealed applications.

2.04 SELF-LEVELING SEALANTS

- A. Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multicomponent; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion .
 - 1. Movement Capability: Plus and minus 25 percent, minimum.
- B. Semi-Rigid Self-Leveling Epoxy Joint Filler: Epoxy or epoxy/polyurethane copolymer; intended for filling cracks and control joints not subject to significant movement; rigid enough to support concrete edges under traffic.
 - 1. Composition: Multicomponent, 100 percent solids by weight.
 - 2. Hardness: Minimum of 85 (Shore A) or 35 (Shore D), when tested in accordance with ASTM D2240 after 7 days.

2.05 ACCESSORIES

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.

PART 3 EXECUTION

END OF SECTION

**SECTION 08 1113
HOLLOW METAL DOORS AND FRAMES**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced standards/guidelines.
- B. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.

1.02 DELIVERY, STORAGE, AND HANDLING

- A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

PART 2 PRODUCTS

2.01 DESIGN CRITERIA

- A. Requirements for Hollow Metal Doors and Frames:
 - 1. Steel used for fabrication of doors and frames shall comply with one or more of the following requirements; Galvannealed steel conforming to ASTM A653/A653M, cold-rolled steel conforming to ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel conforming to ASTM A1011/A1011M, Commercial Steel (CS) Type B for each.
 - 2. Accessibility: Comply with ICC A117.1 and ADA Standards.
- B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.02 HOLLOW METAL DOORS

- A. Exterior Doors: Thermally insulated.
 - 1. Based on NAAMM HMMA Custom Guidelines:
 - a. Comply with guidelines of NAAMM HMMA 860 for Hollow Metal Doors and Frames.
 - b. Performance Level 1 - Light Duty, in accordance with NAAMM HMMA 805.
 - c. Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.
 - d. Door Face Metal Thickness: 20 gage, 0.032 inch, minimum.
 - e. Zinc Coating: G90/Z275 galvanized coating; ASTM A653/A653M.
 - 2. Core Material: Manufacturers standard core material/construction and in compliance with requirements.
 - 3. Door Thickness: 1-3/4 inch, nominal.
- B. Interior Doors, Non-Fire Rated:
 - 1. Based on NAAMM HMMA Custom Guidelines:
 - a. Comply with guidelines of NAAMM HMMA 860 for Hollow Metal Doors and Frames.
 - b. Performance Level 1 - Light Duty, in accordance with NAAMM HMMA 805.
 - c. Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.
 - d. Door Face Metal Thickness: 20 gage, 0.032 inch, minimum.
 - e. Zinc Coating: G90/Z275 galvanized coating; ASTM A653/A653M.
 - 2. Core Material: Manufacturers standard core material/construction and in compliance with requirements.
 - 3. Door Thickness: 1-3/4 inch, nominal.
- C. Fire-Rated Doors:
 - 1. Based on NAAMM HMMA Custom Guidelines: Comply with NAAMM HMMA 850 requirements for fire-rated doors.

- a. Comply with guidelines of NAAMM HMMA 860 for Hollow Metal Doors and Frames.
 - b. Performance Level 1 - Light Duty, in accordance with NAAMM HMMA 805.
 - c. Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.
 - d. Door Face Metal Thickness: 20 gage, 0.032 inch, minimum.
 - e. Zinc Coating: G90/Z275 galvanized coating; ASTM A653/A653M.
- 2. Fire Rating: As indicated on Door Schedule, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").
 - a. Temperature-Rise Rating (TRR) Across Door Thickness: In accordance with local building code and authorities having jurisdiction (AHJ).
 - b. Provide units listed and labeled by UL (Underwriters Laboratories) - UL (BMD) or WH (Warnock Hersey) - ITS (DIR).
 - c. Attach fire rating label to each fire rated unit.
 - 3. Core Material: Manufacturers standard core material/construction in compliance with requirements.
 - 4. Door Thickness: 1-3/4 inch, nominal.

2.03 HOLLOW METAL FRAMES

- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. General:
 - 1. Comply with the requirements of grade specified for corresponding door.
- C. Exterior Door Frames: Knock-down type.
 - 1. Weatherstripping: Separate, see Section 08 7100.
- D. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
- E. Door Frames, Fire-Rated: Knock-down type.
 - 1. Fire Rating: Same as door, labeled.
- F. Frames for Wood Doors: Comply with frame requirements in accordance with corresponding door.
- G. Borrowed Lites Glazing Frames: Construction and face dimensions to match door frames, and as indicated on drawings.
- H. Transom Bars: Fixed, of profile same as jamb and head.

2.04 ACCESSORIES

- A. Louvers: Roll formed steel with overlapping frame; finish same as door components; factory-installed.
 - 1. In Fire-Rated Doors: UL (BMD) or ITS (DIR) listed fusible link louver, same rating as door.
- B. Silencers: Resilient rubber, fitted into drilled hole; 3 on strike side of single door, 3 on center mullion of pairs, and 2 on head of pairs without center mullions.

2.05 FINISHES

- A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.
- B. Factory Finish: Complying with ANSI/SDI A250.3, manufacturer's standard coating.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Install fire rated units in accordance with NFPA 80.
- C. Coordinate frame anchor placement with wall construction.

END OF SECTION

SECTION 08 1116
ALUMINUM DOORS AND FRAMES

PART 2 PRODUCTS

1.01 DOORS AND FRAMES

- A. Glazed Aluminum Doors: Extruded aluminum tube frame, full glazed, with middle rail; factory glazed.
 - 1. Finish: Pigmented coating, manufacturer's standard type.
 - 2. Glazing: Clear, 1/4 inch fully tempered glass.
- B. Door, Sidelight, and Transom Frames: Extruded aluminum hollow or C-shaped sections; no steel components.
 - 1. Finish: Same as doors.
 - 2. Weatherstripping: Replaceable pile type; at jambs and head.
 - 3. Sidelight/Transom Glazing: Clear, 1/4 inch fully tempered glass.
- C. Dimensions and Shapes: As indicated on drawings; dimensions shown are nominal.
 - 1. Provide vision lites where indicated.
 - 2. Provide clearances as follows:
 - a. Hinge and Lock Stiles: 0.125 inch.
 - b. Between Meeting Stiles: 0.25 inch.
 - c. At Top Rail and Bottom Rail: 0.125 inch.

1.02 COMPONENTS

- A. Tubular Doors: Extruded aluminum tubing, 0.125 inch minimum thickness, with heavy-duty plated steel through bolts in rails, glazing stops, and glazing gaskets.
- B. Frames: Extruded aluminum shapes, not less than 0.062 inch thick, reinforced at hinge and strike locations.
 - 1. Corner Brackets: Extruded aluminum, fastened with stainless steel screws.
 - 2. Trim: Extruded aluminum, not less than 0.062 inch thick, removable snap-in type without exposed fasteners.
- C. Vision Lites: Extruded aluminum framed, gasket glazed.

PART 3 EXECUTION

2.01 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and approved shop drawings.
- B. Set frames plumb, square, level, and aligned to receive doors. Anchor frames to adjacent construction in strict accordance with manufacturer's recommendations and within specified tolerances.
- C. Hang doors and adjust hardware to achieve specified clearances and proper door operation.

END OF SECTION

**SECTION 08 1416
FLUSH WOOD DOORS**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.
- B. Samples: Submit two samples of door construction cut from top corner of door.
- C. Samples: Submit two samples of door veneer illustrating wood grain, stain color, and sheen.

1.02 QUALITY ASSURANCE

- A. Installed Fire Rated Door and Transom Panel Assembly: Conform to NFPA 80 for fire rated class as indicated.

1.03 WARRANTY

- A. Interior Doors: Provide manufacturer's warranty for the life of the installation.
- B. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

PART 2 PRODUCTS

2.01 DOORS AND PANELS

- A. All Doors: See drawings for locations and additional requirements.
 - 1. Quality Level: Custom Grade, Standard Duty performance, in accordance with AWI/AWMAC/WI (AWS).
 - 2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.
 - 3. High Pressure Decorative Laminate Faced Doors: 5-ply unless otherwise indicated.
- B. Exterior Doors: Flush solid core construction and water repellent treated.
- C. Interior Doors: 1-3/4 inches thick unless otherwise indicated; flush construction.
 - 1. Fire Rated Doors: Tested to ratings indicated on drawings in accordance with NFPA 252 or UL 10B - Negative (Neutral) Pressure; Underwriters Laboratories Inc. (UL) or Intertek/Warnock Hersey (WHI) labeled without any visible seals when door is open.
 - 2. Smoke and Draft Control Doors (Indicated as "S" on Drawings): In addition to required fire rating, provide door assemblies tested in accordance with UL 1784 with maximum air leakage of 3.0 cfm per sq ft of door opening at 0.10 inch w.g. pressure at both ambient and elevated temperatures for "S" label; if necessary, provide additional gasketing or edge sealing.
 - 3. Wood veneer facing for field transparent finish where indicated on drawings.
 - 4. High pressure decorative laminate finish where indicated on drawings.
 - 5. Hardboard facing with factory opaque finish where indicated on drawings.
- D. Transom Panels: Same construction and finish as door; same performance rating as door.

2.02 DOOR AND PANEL CORES

- A. Non-Rated Solid Core and 20 Minute Rated Doors: Type particleboard core (PC), plies and faces as indicated.
- B. Fire Rated Doors: Mineral core type, with fire resistant composite core (FD), plies and faces as indicated above; with core blocking as required to provide adequate anchorage of hardware without through-bolting.

2.03 DOOR FACINGS

- A. Veneer Facing for Transparent Finish: Red oak, veneer grade in accordance with quality standard indicated, plain sliced (flat cut), with book match between leaves of veneer, running match of spliced veneer leaves assembled on door or panel face.
 - 1. Transoms: Continuous match to doors.

- B. Veneer Facing for Opaque Finish: Medium density overlay (MDO).
- C. Hardboard Facing for Opaque Finish: ANSI A135.4, Class 1 - Tempered, S2S (smooth two sides) hardboard, 1/8 inch thick.

2.04 DOOR CONSTRUCTION

- A. Fabricate doors in accordance with door quality standard specified.
- B. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.
- C. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
 - 1. Exception: Doors to be field finished.

2.05 FACTORY FINISHING - WOOD VENEER DOORS

- A. Finish work in accordance with AWI/AWMAC/WI (AWS), Section 5 - Finishing for grade specified and as follows:
 - 1. Transparent:
 - a. System - 1, Lacquer, Nitrocellulose.
 - b. Sheen: Flat.
 - 2. Opaque:
 - a. System - 1, Lacquer, Nitrocellulose.
 - b. Color: As selected by Architect.
 - c. Sheen: Flat.
- B. Factory finish doors in accordance with approved sample.
- C. Seal door top edge with color sealer to match door facing.

PART 3 EXECUTION

END OF SECTION

SECTION 08 3100
ACCESS DOORS AND PANELS

PART 1 GENERAL

PART 2 PRODUCTS

2.01 ACCESS DOOR AND PANEL APPLICATIONS

- A. Walls, Unless Otherwise Indicated:
 - 1. Material: Steel.
 - 2. Size: 12 by 12 inch, unless otherwise indicated.
 - 3. Standard duty, hinged door.
 - 4. Tool-operated spring or cam lock; no handle.
 - 5. In All Wall Types: Surface mounted face frame and door surface flush with frame surface.
 - 6. In Gypsum Board: Drywall bead frame with door surface flush with wall surface.
- B. Walls in Wet Areas:
 - 1. Material: Steel, hot-dipped zinc or zinc-aluminum-alloy coated.
 - 2. Size: 12 by 12 inch, unless otherwise indicated.
 - 3. Standard duty, hinged door.
 - 4. Tool-operated spring or cam lock; no handle.
 - 5. In All Wall Types: Surface mounted face frame and door surface flush with frame surface.
 - 6. In Gypsum Board: Drywall bead frame with door surface flush with wall surface.
- C. Fire Rated Walls: See drawings for wall fire ratings.
 - 1. Material: Steel.
 - 2. Size: 12 by 12 inch, unless otherwise indicated.
 - 3. Uninsulated, single thickness door panel.
 - 4. Tool-operated spring or cam lock; no handle.
- D. Ceilings, Unless Otherwise Indicated: Same type as for walls.
 - 1. Material: Steel.
 - 2. Size in Lay-in Grid Ceilings: To match grid module.
 - 3. Size in Other Ceilings: 12 by 12 inch, unless otherwise indicated.
 - 4. Standard duty, hinged door.
 - 5. Tool-operated spring or cam lock; no handle.
- E. Removable Access Panels: Where indicated.
 - 1. Material: Steel.
 - 2. Size: 12 by 12 inch, unless otherwise indicated.
 - 3. Tool-operated catches.

2.02 WALL AND CEILING UNITS

- A. Access Doors: Factory fabricated door and frame units, fully assembled units with corner joints welded, filled, and ground flush; square and without rack or warp; coordinate requirements with assemblies that units are to be installed in.
 - 1. Style: As indicated on drawings.
 - 2. Door Style: Single thickness with rolled or turned in edges.
 - 3. Frames: 16 gage, 0.0598 inch, minimum.
 - 4. Heavy Duty Frames: 14 gage, 0.0747 inch, minimum.
 - 5. Single Thickness Steel Door Panels: 1/16 inch, minimum.
 - 6. Heavy Duty Single Thickness Steel Door Panels: 14 gage, 0.0747 inch, minimum.
 - 7. Double-Skinned Hollow Steel Door Panels: 16 gage, 0.059 inch, minimum, on both sides and each edge.
 - 8. Door Panels to Receive Wall/Ceiling Finish: Surface recessed 5/8 inch back from wall face.
 - 9. Units in Fire Rated Assemblies: Fire rating as required by applicable code for the fire rated assembly that access doors are being installed.

10. Steel Finish: Primed.
11. Primed and Factory Finish: Polyester powder coat; color as scheduled.
12. Hardware:
 - a. Hardware for Fire Rated Units: As required for listing.
 - b. Hinges for Non-Fire-Rated Units: Concealed, constant force closure spring type.

END OF SECTION

SECTION 08 3223
SLIDING/FOLDING GLAZED DOORS/WALLS

PART 2 PRODUCTS

1.01 BASIS OF DESIGN - ALUMINUM PANEL FRAME

- A. Floor Mounted; Tested for Air, Water, and Wind Load Performance; Thermally Broken, with Insulating Glazing:
 - 1. Basis of Design: NanaWall Systems, Inc; SL70 Aluminum Framed Folding Panel System: www.nanawall.com.

1.02 PERFORMANCE REQUIREMENTS

- A. Performance Requirements: For units mounted in exterior walls and that require weather performance, provide systems that comply with the following:
 - 1. Structural Performance: Design to withstand design wind loads without damage or permanent set, when tested in accordance with ASTM E330/E330M.
 - 2. Water Penetration Resistance; Static Pressure: No uncontrolled water entry on interior face when tested in accordance with ASTM E331 at differential pressure of 5.25 lbf/sq ft.
 - 3. Air Leakage: Maximum of 0.07 to 0.30 cubic ft/minute/sq ft at 6.24 lbs/sq ft differential pressure, when tested in accordance with ASTM E283.
- B. Acoustical Performance: Provide glass partitions and door assemblies tested by qualified testing agency, calculated in accordance with ASTM E413, tested in accordance with ASTM E90, and rated for not less than Sound Transmission Class (STC) indicated.

1.03 SLIDING/FOLDING GLAZED DOORS/WALLS

- A. Aluminum Sliding/Folding Glazed Doors/Walls: Extruded aluminum sliding/folding and operable panel frames, factory fabricated; complete with sill, flashings, support and anchorage devices, and glazing.
 - 1. Configuration: Exterior, inward opening, right stacking, with locking swing panel door.
 - 2. Support System: Floor mounted.
 - 3. Seals: Rubber, automatically extending from top and bottom rails.
 - 4. Standard Sill: Flush type, with sealant, shims and fasteners at necessary locations.
 - a. Finish: To match the panel frame.
 - 5. Panel Rail Depth: 2-3/4 inch.
 - 6. Top Rail Height: 4-1/8 inch, square edge.
 - 7. Bottom Rail Height: 5-1/16 inch, square edge.
 - 8. Panel Weight: 264 lbs, maximum.
 - 9. Aluminum Frames: Factory finished; manufacturer's standard corner construction; thermally broken.
 - 10. Drainage: Provide drainage to exterior for moisture entering joints and glazing spaces and for condensation occurring within frame construction.
 - 11. Glass Stops: Same material and color as frame.
 - 12. Aluminum Frame Finish: PVDF coating in accordance with AAMA 2605.
 - a. Sheen: Matte.
 - b. Exterior Color: As selected from manufacturer's full range of colors
 - c. Interior Color: As selected from manufacturer's full range of colors

1.04 FACTORY ASSEMBLY

- A. Factory assemble sliding/folding operable panel frames as single unit, including head, jambs, and bottom sections; provide concealed fasteners.
 - 1. Sizes: Allow for tolerances of rough framed openings, clearances, and shims at perimeter of assemblies.
 - 2. Joints and Corners: Flush, hairline and waterproof, accurately fitted and secured; prepared to receive anchors; fasteners and attachments concealed from view; reinforced as required for imposed loads.
 - 3. Glazing: Factory installed.

1.05 ACCESSORIES

- A. Sliding/Folding Hardware: Provide manufacturer's standard hardware including carriages with sealed ball bearing rollers, and top or bottom tracks.
- B. Weatherstripping: Brush seals, continuous and replaceable; provide between exterior doors, panels, frame and track.
- C. Exposed Hardware Finish: Manufacturer's standard.
- D. Hinges: Die-cast zinc.
- E. Locking Mechanisms: Minimum 2-point deadbolt locking of each panel; manufacturer's standard type.
- F. Swing Door Locking: Lever handle lockset with deadbolt into jamb strike; manufacturer's standard type.
- G. Anchors: Hot-dipped galvanized or stainless steel in accordance with project and manufacturer's installation requirements.
- H. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M, Type I.

END OF SECTION

**SECTION 08 3326
OVERHEAD COILING GRILLES**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 GRILLE AND COMPONENTS

- A. Grille: Stainless steel; horizontal bar curtain, coiling on overhead counterbalanced shaft.
 - 1. Finish: No. 4 - Brushed.
 - 2. Lock Devices: Lock and latch handle on outside.
 - 3. Electric operation.
 - 4. Mounting: Within framed opening.
- B. Curtain: Round horizontal bars connected with vertical links.
 - 1. Horizontal bars: 5/16 inch diameter.
 - 2. Bar spacing: 1-1/2 inch on center.
 - 3. Tube spacers: 1/2 inch diameter.
 - 4. Spacer spacing: 3-1/4 inch on center.
 - 5. Link spacing: 6 inch on center.
 - 6. Bottom Bar: Back-to-back angles with tubular resilient cushion.
- C. Guides: Stainless steel angles, of profile to retain grille in place with snap-on trim, mounting brackets of same metal.
- D. Hood Enclosure: Sheet metal; completely covering operating mechanisms; internally reinforced to maintain rigidity and shape.
 - 1. Material: Same metal as grille.
- E. Lock Hardware:
 - 1. Cylindrical Locking Mechanism: Latchset lock cylinder, specified in Section 08 7100.
 - 2. For motor operated units, additional lock or latching mechanisms are not required.
 - 3. Latching Mechanism: Inside mounted, adjustable keeper, spring activated latch bar feature to keep in locked or retracted position.
 - 4. Latch Handle: Manufacturer's standard.

2.02 MATERIALS

- A. Stainless Steel: ASTM A 666, Type 304, rollable temper.

2.03 ELECTRIC OPERATION

- A. Electric Operators:
 - 1. Mounting: Side mounted.
 - 2. Motor Rating: 1/3 hp; continuous duty.
 - 3. Motor Controller: NEMA ICS 2, full voltage, reversing magnetic motor starter.
 - 4. Controller Enclosure: NEMA 250 Type 1.
 - 5. Opening Speed: 12 inches per second.
 - 6. Brake: Adjustable friction clutch type, activated by motor controller.
 - 7. Manual override in case of power failure.
- B. Control Station: Standard three button (OPEN-STOP-CLOSE) momentary control for each operator.
 - 1. 24 volt circuit.
 - 2. Surface mounted.
- C. Safety Edge: Located at bottom of curtain, full width, electro-mechanical sensitized type, wired to stop operator upon striking object, hollow neoprene covered.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install grille unit assembly in accordance with manufacturer's instructions.

- B. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.
- C. Complete wiring from disconnect to unit components.

END OF SECTION

**SECTION 08 4229
AUTOMATIC ENTRANCES**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 POWER OPERATED DOORS

- A. Power Operated Doors: Provide products that comply with the requirements of the authorities having jurisdiction; unless otherwise indicated, provide equipment selected for the actual weight of the doors and for light pedestrian traffic.
 - 1. Swinging Door Operators: Fully adjustable for opening and closing speeds, checking speeds, and hold-open time; in the event of power failure, disengage operator allowing door to function as a door with a spring closer.
 - 2. Packaged Door Assemblies: Provide all components by single manufacturer, factory-assembled, including doors, frames, operators, actuators, and safeties.
- B. Swinging Doors with Full Power Operators: Comply with BHMA A156.10; safeties required.

2.02 PACKAGED AUTOMATIC ENTRANCE DOOR ASSEMBLIES

- A. Swinging Automatic Door: Double-acting hinged, electric operation, extruded aluminum glazed door, with extruded tubular frame, and operator concealed overhead.
 - 1. Operation: Full-power open, power close operation.
 - 2. Door and Frame Finish: Same as adjacent framing system.

END OF SECTION

SECTION 08 4313
ALUMINUM-FRAMED STOREFRONTS

PART 2 PRODUCTS

1.01 BASIS OF DESIGN -- FRAMING FOR INSULATING GLAZING

- A. Center-Set Style, Thermally-Broken:
 - 1. Basis of Design: Kawneer Trifab VG 451T Thermal Framing System.
 - 2. Vertical Mullion Dimensions: 2 inches wide by 4-1/2 inches deep.

1.02 BASIS OF DESIGN -- SWINGING DOORS

- A. Medium Stile, Insulating Glazing, Thermally-Broken:
 - 1. Basis of Design: Kawneer Insulclad 360 Thermal Entrance.
 - 2. Thickness: 2-1/4 inches.

1.03 STOREFRONT

- A. Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.
 - 1. Glazing Rabbet: For 1 inch insulating glazing.
 - 2. Finish: High performance organic coatings.
 - a. Factory finish all surfaces that will be exposed in completed assemblies.
 - b. Touch-up surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.
 - 3. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors and hardware; fasteners and attachments concealed from view; reinforced as required for imposed loads.
 - 4. Construction: Eliminate noises caused by wind and thermal movement, prevent vibration harmonics, and prevent "stack effect" in internal spaces.
 - 5. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
- B. Performance Requirements:
 - 1. Wind Loads: Design and size components to withstand the specified load requirements without damage or permanent set, when tested in accordance with ASTM E330/E330M, using loads 1.5 times the design wind loads and 10 second duration of maximum load.
 - a. Design Wind Loads: Comply with requirements of ASCE 7.
 - b. Member Deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials.
 - 2. Water Penetration Resistance: No uncontrolled water on interior face, when tested in accordance with ASTM E331 at pressure differential of 8 psf.
 - 3. Air Leakage: Maximum of 0.06 cu ft/min sq ft of wall area, when tested in accordance with ASTM E283 at 6.27 psf pressure differential across assembly.
 - 4. Condensation Resistance Factor of Framing: 50, minimum, measured in accordance with AAMA 1503.

1.04 COMPONENTS

- A. Aluminum Framing Members: Tubular aluminum sections, drainage holes and internal weep drainage system.
 - 1. Glazing Stops: Flush.
- B. Swing Doors: Glazed aluminum.
 - 1. Thickness: 1-3/4 inches.

1.05 MATERIALS

- A. Extruded Aluminum: ASTM B221 (ASTM B221M).
- B. Fasteners: Stainless steel.

1.06 HARDWARE

- A. Weatherstripping: Wool pile, continuous and replaceable; provide on all doors.
- B. Sill Sweep Strips: Resilient seal type, retracting, of neoprene; provide on all doors.

END OF SECTION

**SECTION 08 4500
TRANSLUCENT WALL AND ROOF ASSEMBLIES**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 MATERIALS

- A. Extruded Aluminum: ASTM B221 (ASTM B221M).
- B. Sheet Aluminum: ASTM B209 (ASTM B209M).
- C. Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.
- D. Steel Sections: ASTM A36/A36M; shaped to suit mullion sections.
- E. Fasteners: Stainless steel.

2.02 COMPONENTS

- A. Translucent Wall and Roof System: Structurally reinforced translucent panels, with self supporting framing, shop fabricated, factory prefinished, battens, cap strips, related flashings, anchorage and attachment devices.
- B. Panels: Bonded to both sides of structural extruded aluminum grid of indicated pattern; exposed surfaces of exterior sheet chemically and permanently treated to protect against surface erosion and extreme weather conditions; polyvinyl fluoride film coated:
- C. Infill Panel: Internally reinforced, glazing edge sealed permitting internal air movement to glazing space, outside air barrier line, structurally sufficient to support wall fin radiation saddles:

2.03 FABRICATION

- A. Fabricate system components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
- B. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof.

2.04 FINISHES

- A. Finish Coatings: Conform to AAMA 611.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install translucent panel system in accordance with manufacturer instructions. Install cellular panels with cells vertical.
- B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- C. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances and align with adjacent work.

END OF SECTION

**SECTION 08 5113
ALUMINUM WINDOWS**

PART 2 PRODUCTS

1.01 WINDOWS

- A. Aluminum Windows: Extruded aluminum frame and sash, factory fabricated, factory finished, with operating hardware, related flashings, and anchorage and attachment devices.
 - 1. Frame Depth: 4 inches.
 - 2. Provide units factory glazed.
 - 3. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors; fasteners and attachments concealed from view; reinforced as required for operating hardware and imposed loads.
 - 4. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.
 - 5. Movement: Accommodate movement between window and perimeter framing and deflection of lintel, without damage to components or deterioration of seals.
 - 6. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
- B. Performance Requirements: Provide products that comply with the following:
 - 1. Grade: AAMA/WDMA/CSA 101/I.S.2/A440 requirements for specific window type:
 - a. Performance Class (PC): R.
 - b. Performance Grade (PG): 15, with minimum design pressure (DP) of 15.04 psf.
 - 2. Water Leakage: No uncontrolled leakage on interior face when tested in accordance with ASTM E331 at differential pressure of 12.11 psf.
 - 3. Air Leakage: Maximum of 0.1 cu ft/min sq ft per unit area of outside frame dimension, with 6.27 psf differential pressure when tested in accordance with ASTM E283.
 - 4. Condensation Resistance Factor of Frame: 50, measured in accordance with AAMA 1503.
 - 5. Overall U-value, Including Glazing: 0.35, maximum, measured on the window size required for this project.
 - 6. Forced Entry Resistance: Tested to comply with ASTM F588 requirements for performance level of Grade 10 for specific window style required.
- C. Fixed, Non-Operable Type:
 - 1. Construction: Thermally broken.
 - 2. Glazing: Double; Tinted; low-e.
 - 3. Exterior Finish: High performance organic coatings.
 - 4. Interior Finish: High performance organic coatings.

1.02 COMPONENTS

- A. Frames: Thermally broken with interior portion of frame insulated from exterior portion; flush glass stops of snap-on type.

1.03 MATERIALS

- A. Extruded Aluminum: ASTM B221 (ASTM B221M), 6063 alloy, T6 temper.
- B. Concealed Steel Items: Profiled to suit mullion sections; galvanized in accordance with ASTM A123/A123M.

1.04 FINISHES

- A. High Performance Organic Coatings: AAMA 2604; multiple coats, thermally cured fluoropolymer system; color as scheduled.

END OF SECTION

**SECTION 08 6223
TUBULAR SKYLIGHTS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 TUBULAR SKYLIGHTS

- A. Tubular Skylights: Transparent roof-mounted skylight dome and curb, reflective tube, and ceiling level diffuser assembly, transferring sunlight to interior spaces.
- B. Performance Requirements: Provide products that comply with the following:
 - 1. Grade: AAMA/WDMA/CSA 101/I.S.2/A440 requirements for specific tubular skylight:
 - a. Product Type: Tubular Daylighting Device, Closed Ceiling (TDDCC).
- C. Roof Assemblies: Transparent, UV and impact resistant dome with flashing base supporting dome and top of tube.
 - 1. Glazing: Acrylic plastic, 1/8 inch minimum thickness.
- D. Reflective Tube: ASTM B209 (ASTM B209M) aluminum sheet, thickness between 0.015 inch and 0.020 inch.
 - 1. Interior Finish: Exposed interior surfaces of high reflectance specular finish; specular reflectance 92, total reflectance 95 percent.
 - 2. Tube Diameter: 10 inches.
- E. Diffuser Assemblies: Supporting light transmitting surface at bottom termination of tube, with compression seal to minimize condensation and bug or dirt infiltration.
 - 1. Ceiling Ring: Edge trim for ceiling opening; injection molded high impact ABS.
 - 2. Diffuser Trim: Edge and attachment trim for diffuser lens; injection molded high impact ABS.
 - 3. Lens: Flush frosted lens.
 - 4. Lens Material: Acrylic plastic
 - 5. Visible Light Transmission: 90 percent, minimum.
 - 6. Seal: Closed cell EPDM foam rubber

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's written instructions.
- B. Conduct field test for water tightness; conduct water test in presence of Architect. Correct defective work and re-test until satisfactory.

END OF SECTION

**SECTION 08 6300
METAL-FRAMED SKYLIGHTS**

PART 2 PRODUCTS

1.01 METAL-FRAMED SKYLIGHTS

- A. Metal Framed Skylights: Factory-fabricated, glazed.
 - 1. Frame: Extruded aluminum structural members with integral condensation collection and guttering system thermally separated from exterior pressure bar.
 - 2. Glazing System: Pressure glazing bar system for sloped joints and two (2)-sided structural sealant glazing (SSG) for horizontal joints.
 - 3. Glazing: Insulating glass.
 - 4. Aluminum Finish: High performance organic coatings.
 - 5. Fabricate to prevent harmonic vibration, wind whistles, noises caused by thermal movement, thermal movement transmitted to other building elements, loosening, weakening, or fracturing of attachments or components of system.
- B. Performance Requirements: Provide products that comply with the following:
 - 1. Structural Design: Design and size components to withstand dead loads and specified live loads without damage or permanent set.
 - 2. Wind Loads: Test in accordance with ASTM E330/E330M, using loads 1.5 times the specified design pressures and 10 second duration of maximum load.
 - 3. Glazing Support Member Deflection Under Wind Load: 1/180 of span, maximum.
 - 4. Thermal Movement: Design system to accommodate thermal expansion and contraction over ambient temperature range of 100 degrees F, dynamic loading and release of loads, creep of concrete structural members, and deflection of structural support framing without damage to skylight system components or loss of weathertightness.
 - 5. Air Leakage: Limit air infiltration through assembly to 0.06 cu ft/min/sq ft for glazed area, measured at a reference differential pressure across assembly of 1.57 psf in accordance with ASTM E283.

1.02 MATERIALS

- A. Aluminum Extrusions: Alloy 6063-T5, 6063-T6, or 6061-T6 members complying with ASTM B221 (ASTM B221M), with minimum thickness 1/8 inch for structural members and 1/16 inch for non-structural members.
- B. Formed Aluminum: Sheet material of alloy 5052, 5005, or 6061-T651 members complying with ASTM B209 (ASTM B209M), with minimum thickness 1/8 inch for structural members and 1/16 inch for non-structural members.
- C. Internal Reinforcement: ASTM A36/A36M; steel shapes as required for strength and mullion size limitations, hot-dip galvanized after fabrication in accordance with ASTM A123/A123M.
- D. Weatherseal Sealant: Silicone, with adhesion in compliance with ASTM C794; compatible with glazing accessories.
- E. Touch-Up Primer for Galvanized Steel Surfaces: Zinc rich type.

END OF SECTION

**SECTION 08 7100
DOOR HARDWARE**

PART 1 GENERAL

1.01 ADMINISTRATIVE REQUIREMENTS

1.02 QUALITY ASSURANCE

PART 2 PRODUCTS

2.01 DOOR HARDWARE - GENERAL

- A. Provide hardware specified or required to make doors fully functional, compliant with applicable codes, and secure to the extent indicated.
- B. Provide products that comply with the following:
 - 1. Applicable provisions of federal, state, and local codes.
 - 2. Fire-Rated Doors: NFPA 80.
 - 3. Hardware on Fire-Rated Doors, Except Hinges: Listed and classified by UL as suitable for the purpose specified and indicated.
 - 4. Hardware for Smoke and Draft Control Doors (Indicated as "S" on Drawings): Provide hardware that enables door assembly to comply with air leakage requirements of the applicable code.
- C. Finishes: Provide door hardware of the same finish unless otherwise indicated.
 - 1. Primary Finish: Satin oxidized bronze, oil rubbed, on bronze base metal, 613 (approx US10B).
 - 2. Finish Definitions: BHMA A156.18.
 - 3. Exceptions:
 - a. Where base metal is specified to be different, provide finish that is an appearance equivalent according to BHMA A156.18.
 - b. Hinges for Fire-Rated Doors: Steel base metal with painted finish.

2.02 LOCKS AND LATCHES

- A. Locks: Provide a lock for every door, unless specifically indicated as not requiring locking.
 - 1. If no hardware set is indicated for a swinging door provide an office lockset.
 - 2. Trim: Provide lever handle or pull trim on outside of all locks unless specifically stated to have no outside trim.
 - 3. Lock Cylinders: Provide key access on outside of all locks unless specifically stated to have no locking or no outside trim.
 - 4. In door sections, where a lock cylinder referenced to this Section is specified, furnish and install a mortise lock cylinder keyed to the building keying system.
- B. Lock Cylinders: Manufacturer's standard tumbler type, six-pin standard core.
- C. Keying: Grand master keyed.
- D. Latches: Provide a latch for every door that is not required to lock, unless specifically indicated "push/pull" or "not required to latch".

2.03 HINGES

- A. Hinges: Provide hinges on every swinging door.
 - 1. Provide five-knuckle full mortise butt hinges unless otherwise indicated.
 - 2. Provide ball-bearing hinges at all doors.
 - 3. Provide hinges in the quantities indicated.
 - 4. Provide non-removable pins on exterior outswinging doors.
 - 5. Where electrified hardware is mounted in door leaf, provide power transfer hinges.

2.04 PUSH/PULLS

- A. Push/Pulls: Comply with BHMA A156.6.

1. Provide push and pull on doors not specified to have lockset, latchset, exit device, or auxiliary lock.
2. On solid doors, provide matching push plate and pull plate on opposite faces.
3. On glazed storefront doors, provide matching push/pull bars on both faces.

2.05 FLUSHBOLTS AND COORDINATORS

- A. Flushbolts: Lever extension bolts in leading edge of door, one bolt into floor, one bolt into top of frame.
 1. Pairs of Swing Doors: At inactive leaves, provide flush bolts of type as required to comply with code.
 2. Floor Bolts: Provide dustproof strike except at metal thresholds.

2.06 CLOSERS

- A. Closers: Complying with BHMA A156.4.
 1. Provide a door closer on every exterior door.
 2. Provide a door closer on every fire- and smoke-rated door. Spring hinges are not an acceptable self-closing device unless specifically so indicated.
 3. On pairs of swinging doors, if an overlapping astragal is present, provide coordinator to ensure the leaves close in proper order.

2.07 STOPS AND HOLDERS

- A. Stops: Complying with BHMA A156.8; provide a stop for every swinging door, unless otherwise indicated.
 1. Provide wall stops, unless otherwise indicated.
 2. If wall stops are not practical, due to configuration of room or furnishings, provide overhead stop.
 3. Stop is not required if positive stop feature is specified for door closer; positive stop feature of door closer is not an acceptable substitute for a stop unless specifically so stated.

2.08 GASKETING AND THRESHOLDS

- A. Gaskets: Complying with BHMA A156.22.
 1. On each door in smoke partition, provide smoke gaskets; top, sides, and meeting stile of pairs. If fire/smoke partitions are not indicated on drawings, provide smoke gaskets on each door identified as a "smoke door" and 20-minute rated fire doors.
 2. On wood doors with fire rating more than 20-minutes, provide frame-applied intumescent gaskets.
 3. On each exterior door, provide weatherstripping gaskets, unless otherwise indicated; top, sides, and meeting stiles of pairs.
 - a. Where exterior door is also required to have fire or smoke rating, provide gaskets functioning as both smoke and weather seals.
 4. On each exterior door, provide door bottom sweep, unless otherwise indicated.
- B. Thresholds: Complying with BHMA A156.21.
 1. At each exterior door, provide a threshold unless otherwise indicated.

2.09 PROTECTION PLATES AND ARCHITECTURAL TRIM

- A. Protection Plates:
 1. Kickplate: Provide on push side of every door with closer, except aluminum storefront and glass entry doors.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Use templates provided by hardware item manufacturer.
- C. Install hardware on fire-rated doors and frames in accordance with code and NFPA 80.

3.02 ADJUSTING

- A. Adjust hardware for smooth operation.

END OF SECTION

**SECTION 08 8000
GLAZING**

PART 2 PRODUCTS

1.01 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES

- A. Select type and thickness of exterior glazing assemblies to withstand dead and live loads caused by positive and negative wind pressure acting normal to plane of glass.
 - 1. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.
 - 2. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
 - 3. Glass thicknesses listed are minimum.
- B. Vapor Retarder and Air Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure vapor retarder and air barrier.
 - 1. In conjunction with vapor retarder and joint sealer materials described in other sections.
- C. Thermal and Optical Performance: Provide glass products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
 - 1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 5.2/6.3 computer program.
 - 2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 5.2/6.3 computer program.
 - 3. Solar Optical Properties: Comply with NFRC 300 test method.

1.02 GLASS MATERIALS

- A. Float Glass: Provide float glass based glazing unless noted otherwise.
 - 1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality-Q3.
 - 2. Heat-Strengthened and Fully Tempered Types: ASTM C1048, Kind HS and FT.
 - 3. Tinted Type: ASTM C1036, Class 2 - Tinted, Quality-Q3, color and performance characteristics as indicated.
 - 4. Thicknesses: As indicated; provide greater thickness as required for exterior glazing wind load design.

1.03 INSULATING GLASS UNITS

- A. Insulating Glass Units: Types as indicated.
 - 1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
 - 2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
 - 3. Metal Edge Spacers: Aluminum, bent and soldered corners.
 - 4. Spacer Color: Black.
 - 5. Edge Seal:
 - 6. Color: Black.
 - 7. Purge interpane space with dry air, hermetically sealed.
- B. Insulating Glass Units: Vision glass, double glazed.
 - 1. Applications: Exterior glazing unless otherwise indicated.
 - 2. Space between lites filled with air.
 - 3. Outboard Lite: Annealed float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - 4. Inboard Lite: Annealed float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - 5. Total Thickness: 1 inch.

6. Thermal Transmittance (U-Value), Summer - Center of Glass: nominal.

END OF SECTION

**SECTION 08 9100
LOUVERS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 LOUVERS

- A. Louvers: Factory fabricated and assembled, complete with frame, mullions, and accessories; AMCA Certified in accordance with AMCA 511.
 - 1. Drainable Blades: Continuous rain stop at front or rear of blade aligned with vertical gutter recessed into both jambs of frame.
 - 2. Screens: Provide insect screens at intake louvers and bird screens at exhaust louvers.
- B. Stationary Louvers: Horizontal blade, formed galvanized steel sheet construction, with intermediate mullions matching frame.
 - 1. Free Area: 50 percent, minimum.
 - 2. Blades: V-shaped, sight-proof.
 - 3. Frame: 4 inches deep, channel profile; corner joints mitered and, with continuous recessed caulking channel each side.
 - 4. Steel Thickness, Galvanized: Frame 16 gage, 0.0598 inch minimum base metal; blades 16 gage, 0.0598 inch minimum base metal.
 - 5. Steel Finish: Superior performing organic coatings, finished after fabrication.

END OF SECTION

**SECTION 08 9200
LOUVERED EQUIPMENT ENCLOSURES**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 ROOFTOP EQUIPMENT SCREENS - GENERAL

2.02 EXTRUDED HORIZONTAL LOUVERS

- A. Construction: Individual extruded aluminum louvers in inverted overlapping configuration, with blade supports attached to and supported by custom superstructure.
- B. Louver Blades: Alloy 6063-T5 or T6 temper, or equivalent in accordance with ASTM B221 (ASTM B221M), 13/16 inch thick, 4 inch deep, spaced at 5 inch on center, and configured to totally block sightlines from grade.
- C. Aluminum Finish: Factory finish louvers and accessories with a high-performance organic coating, as follows:
 - 1. Organic Coating: Clean and prime exposed aluminum surfaces and apply a fluoropolymer 2-coat finish conforming to AAMA 2605, with a minimum dry film thickness of 1.2 mil.
 - 2. Color: As selected from manufacturer's standard colors.
- D. Overall Screen Configuration: Dimensions, details, and layout as indicated on the drawings.

END OF SECTION

**SECTION 09 0561
COMMON WORK RESULTS FOR FLOORING PREPARATION**

PART 1 GENERAL

1.01 QUALITY ASSURANCE

- A. Moisture and alkalinity (pH) testing shall be performed by an independent testing agency employed and paid by Contractor.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Patching Compound: Floor covering manufacturer's recommended product, suitable for conditions, and compatible with adhesive and floor covering. In the absence of any recommendation from flooring manufacturer, provide a product with the following characteristics:
 - 1. Cementitious moisture-, mildew-, and alkali-resistant compound, compatible with floor, floor covering, and floor covering adhesive, and capable of being feathered to nothing at edges.
 - 2. Compressive Strength: 3000 psi, minimum, after 28 days, when tested in accordance with ASTM C109/C109M or ASTM C472, whichever is appropriate.
- B. Alternate Flooring Adhesive: Floor covering manufacturer's recommended product, suitable for the moisture and pH conditions present; low-VOC. In the absence of any recommendation from flooring manufacturer, provide a product recommended by adhesive manufacturer as suitable for substrate and floor covering and for conditions present.
- C. Remedial Floor Coating: Single- or multi-layer coating or coating/overlay combination intended by its manufacturer to resist water vapor transmission to degree sufficient to meet flooring manufacturer's emission limits, resistant to the level of alkalinity (pH) found, and suitable for adhesion of flooring without further treatment.

PART 3 EXECUTION

3.01 CONCRETE SLAB PREPARATION

- A. Perform following operations in the order indicated:
 - 1. Preliminary cleaning.
 - 2. Moisture vapor emission tests; 3 tests in the first 1000 square feet and one test in each additional 1000 square feet, unless otherwise indicated or required by flooring manufacturer.
 - 3. Internal relative humidity tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
 - 4. Alkalinity (pH) tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
 - 5. Specified remediation, if required.
 - 6. Patching, smoothing, and leveling, as required.
 - 7. Other preparation specified.
 - 8. Adhesive bond and compatibility test.
 - 9. Protection.
- B. Remediations:
 - 1. Active Water Leaks or Continuing Moisture Migration to Surface of Slab: Correct this condition before doing any other remediation; re-test after correction.
 - 2. Excessive Moisture Emission or Relative Humidity: If an adhesive that is resistant to the level of moisture present is available and acceptable to flooring manufacturer, use that adhesive for installation of the flooring; if not, apply remedial floor coating over entire suspect floor area.
 - 3. Excessive Alkalinity (pH): If remedial floor coating is necessary to address excessive moisture, no additional remediation is required; if not, if an adhesive that is resistant to the

level present is available and acceptable to the flooring manufacturer, use that adhesive for installation of the flooring; otherwise, apply a skim coat of specified patching compound over entire suspect floor area.

3.02 MOISTURE VAPOR EMISSION TESTING

- A. Test in accordance with ASTM F1869 and as follows.
- B. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if test values exceed 3 pounds per 1000 square feet per 24 hours.

3.03 ALKALINITY TESTING

- A. Use a wide range alkalinity (pH) test paper, its associated chart, and distilled or deionized water.
- B. Place several drops of water on a clean surface of concrete, forming a puddle approximately 1 inch in diameter. Allow the puddle to set for approximately 60 seconds, then dip the alkalinity (pH) test paper into the water, remove it, and compare immediately to chart to determine alkalinity (pH) reading.
- C. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if alkalinity (pH) test value is over 10.

3.04 ADHESIVE BOND AND COMPATIBILITY TESTING

- A. Comply with requirements and recommendations of floor covering manufacturer.

END OF SECTION

**SECTION 09 2116
GYPSUM BOARD ASSEMBLIES**

PART 2 PRODUCTS

1.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.

1.02 BOARD MATERIALS

- A. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
 2. Thickness:
 - a. Vertical Surfaces: 1/2 inch.
- B. Impact Resistant Wallboard:
1. Application: High-traffic areas indicated.
 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 3. Type: Fire resistance rated Type X, UL or WH listed.
 4. Thickness: 5/8 inch.
 5. Edges: Tapered.
- C. Backing Board For Wet Areas: One of the following products:
1. Application: Surfaces behind tile in wet areas including tub and shower surrounds and shower ceilings.
 2. ANSI Cement-Based Board: Non-gypsum-based; aggregated Portland cement panels with glass fiber mesh embedded in front and back surfaces complying with ANSI A118.9 or ASTM C1325.
 3. ASTM Cement-Based Board: Non-gypsum-based, cementitious board complying with ASTM C1288.
 4. Glass Mat Faced Board: Coated glass mat water-resistant gypsum backing panel as defined in ASTM C1178/C1178M.
- D. Backing Board For Non-Wet Areas: Water-resistant gypsum backing board as defined in ASTM C1396/C1396M; sizes to minimum joints in place; ends square cut.
1. Application: Vertical surfaces behind thinset tile, except in wet areas.
 2. Edges: Tapered.
- E. Ceiling Board: Special sag resistant gypsum ceiling board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
1. Application: Ceilings, unless otherwise indicated.
 2. Thickness: 1/2 inch.
 3. Edges: Tapered.
- F. Exterior Soffit Board: Exterior gypsum soffit board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
1. Application: Ceilings and soffits in protected exterior areas, unless otherwise indicated.
 2. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X.
 3. Types: Regular and Type X, in locations indicated.
 4. Type X Thickness: 5/8 inch.
 5. Regular Type Thickness: 1/2 inch.
 6. Edges: Tapered.

1.03 ACCESSORIES

- A. Acoustic Insulation: As specified in Section 07 2100.
- B. Finishing Accessories: ASTM C1047, galvanized steel or rolled zinc, unless noted otherwise.
1. Types: As detailed or required for finished appearance.

- C. Joint Materials: ASTM C475 and as recommended by gypsum board manufacturer for project conditions.

END OF SECTION

SECTION 09 2236.23

METAL LATH

PART 2 PRODUCTS

1.01 FRAMING MATERIALS

- A. Furring Channels: Formed steel, minimum 0.020 inch thick, 3/8 inch deep by 7/8 inch high, splicing permitted; galvanized.
- B. Main Ceiling Channels: Formed steel, minimum 0.05 inch thick, 3/4 inch deep by 1-1/2 inch high, single piece, no splicing; galvanized.
- C. Hangers: Steel wire, of size and type to suit application, to support ceiling components in place to deflection limits as indicated.
- D. Ceiling Hangers: Rolled steel sections, of size and type to suit application, to rigidly support ceiling components in place to deflection limits as indicated; galvanized.
- E. Lateral Bracing: Formed steel, minimum 0.060 inch thick, size and length as required; galvanized.

1.02 LATH

- A. Diamond Mesh Metal Lath: ASTM C847, galvanized; self-furring.
- B. Flat Rib Metal Lath: ASTM C847, galvanized; 1/8 inch thick.
- C. Ribbed Metal Lath: ASTM C847, galvanized; 3/8 inch thick.
- D. Welded Wire Lath: ASTM C933; galvanized; with 2 inch square openings, paper strips woven into lath, of weight to suit application, comply with deflection criteria, and as specified in ASTM C841 for framing spacing.
- E. Corner Mesh: Formed sheet steel, minimum 0.018 inch thick, perforated flanges shaped to permit complete embedding in plaster, minimum 2 inch size; same finish as lath.
- F. Strip Mesh: Expanded metal lath, same weight as lath, 2 inch wide by 24 inch long; same finish as lath.
- G. Beads, Screeds, Joint Accessories, and Other Trim: Depth governed by plaster thickness, maximum possible lengths.
 - 1. Material: Formed sheet steel with rust inhibitive primer, expanded metal flanges.
 - 2. Expansion Joints: Accordion profile with factory-installed protective tape, 2 inch wide flanges.
 - 3. Control Joints: Accordion profile with protective tape, 2 inch flanges.

END OF SECTION

**SECTION 09 2400
PORTLAND CEMENT PLASTERING**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 PLASTER MATERIALS

- A. Portland Cement, Aggregates, and Other Materials: In accordance with ASTM C926.
- B. Portland Cement: ASTM C150, Type I.
- C. Masonry Cement: ASTM C91 Type N.
- D. Water: Clean, fresh, potable and free of mineral or organic matter that could adversely affect plaster.

2.02 METAL LATH

- A. Metal Lath and Accessories: As specified in Section 09 2236.23.

2.03 PLASTER MIXES

- A. Over Solid Bases: Two-coat application, mixed and proportioned in accordance with ASTM C926.
- B. Over Metal Lath: Three-coat application, mixed and proportioned in accordance with ASTM C926.
- C. Premixed Plaster Materials: Mix in accordance with manufacturer's instructions.
- D. Mix only as much plaster as can be used prior to initial set.
- E. Mix materials dry, to uniform color and consistency, before adding water.

END OF SECTION

SECTION 09 3000

TILING

PART 1 GENERAL

PART 2 PRODUCTS

2.01 TILE

- A. Manufacturers: Basis of Design is Daltile.
- B. Glazed Wall Tile: ANSI A137.1, and as follows:
 - 1. Size and Shape: As Indicated.
 - 2. Surface Finish: Mottle glaze.
- C. Quarry Tile: ANSI A137.1, and as follows:
 - 1. Surface Finish: Non-slip.
- D. Paver Tile, ANSI A137.1, and as follows:

2.02 TRIM AND ACCESSORIES

- A. Ceramic Accessories: Glazed finish, same color and finish as adjacent field tile; same manufacturer as tile.
- B. Ceramic Trim: Matching bullnose, double bullnose, cove base, and cove ceramic shapes in sizes coordinated with field tile.
- C. Thresholds: Marble, white or gray, honed finish; 2 inches wide by full width of wall or frame opening; 1/2 inch thick; beveled one long edge with radiused corners on top side; without holes, cracks, or open seams.

2.03 SETTING MATERIALS

- A. Latex-Portland Cement Mortar Bond Coat: ANSI A118.4 or ANSI A118.15.
 - 1. Applications: Use this type of bond coat where indicated and where no other type of bond coat is indicated.
- B. Dry-Set Portland Cement Mortar Bond Coat: ANSI A118.1.

2.04 GROUTS

- A. Polymer Modified Grout: ANSI A118.7 polymer modified cement grout.
 - 1. Applications: Use this type of grout where indicated and where no other type of grout is indicated.
 - 2. Use sanded grout for joints 1/8 inch wide and larger; use unsanded grout for joints less than 1/8 inch wide.
- B. Epoxy Grout: ANSI A118.3 chemical resistant and water-cleanable epoxy grout.
 - 1. Applications: Where indicated.
- C. Stain Resistant Grout Additive: Liquid admixture for sanded and unsanded cement-based grouts; mix with dry grout material in place of water.
 - 1. Applications: Where indicated.

2.05 MAINTENANCE MATERIALS

- A. Tile Sealant: Gunnable, silicone, siliconized acrylic, or urethane sealant; moisture and mildew resistant type.
 - 1. Applications: Between tile and plumbing fixtures.
- B. Grout Sealer: Liquid-applied, moisture and stain protection for existing or new Portland cement grout.
 - 1. Composition: Water-based colorless silicone.
- C. Tile Sealer: Stain protection for natural stone.
- D. Grout Release: Temporary, water-soluble pre-grout coating.

2.06 ACCESSORY MATERIALS

- A. Concrete Floor Slab Crack Isolation Membrane: Material complying with ANSI A118.12; not intended as waterproofing.
 - 1. Type: Fluid-applied.
 - 2. Thickness: 20 mils, maximum.
 - 3. Crack Resistance: No failure at 1/16 inch gap, minimum.
- B. Waterproofing Membrane at Floors: Specifically designed for bonding to cementitious substrate under thick mortar bed or thin-set tile; complying with ANSI A118.10.
- C. Waterproofing Membrane at Showers and Tiled Tubs: Specifically designed for bonding to cementitious substrate under thick mortar bed or thin-set tile; complying with ANSI A118.10.
- D. Waterproofing Membrane Under Thick Mortar Bed at Showers and Tiled Tubs:
 - 1. Material: Chlorinated polyethylene sheet, 40 mils thick, minimum; complying with ASTM D4068.
- E. Backer Board: Cementitious type complying with ANSI A118.9; high density, glass fiber reinforced, 1/2 inch thick; 2 inch wide coated glass fiber tape for joints and corners.
- F. Backer Board: Coated glass mat type complying with ASTM C1178/C1178M; inorganic fiberglass mat on both surfaces and integral acrylic coating vapor retarder.
- G. Backer Board: High density polystyrene with reinforced cementitious coating on both sides; with compatible alkaline resistant joint tape; to be covered with waterproofing prior to installation of tile.
- H. Mesh Tape: 2-inch wide self-adhesive fiberglass mesh tape.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Install tile, thresholds, and stair treads and grout in accordance with applicable requirements of ANSI A108.1A thru A108.13, manufacturer's instructions, and TCNA (HB) recommendations.
- B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.

END OF SECTION

**SECTION 09 5100
SUSPENDED ACOUSTICAL CEILINGS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 ACOUSTICAL UNITS

- A. Acoustical Units - General: ASTM E1264, Class A.
- B. Glass Fiber Acoustical Panels: Painted Scrim faced glass fiber, ASTM E1264 Type XII, with the following characteristics:
 - 1. Size: 24 by 24 inches.
 - 2. Thickness: 3/4 inches.
 - 3. Surface Color: White.
 - 4. Surface Pattern: Scrim.
 - 5. Suspension System: Exposed grid.

2.02 SUSPENSION SYSTEM(S)

- A. Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.
- B. Exposed Steel Suspension System: Formed steel, commercial quality cold rolled; heavy-duty.
 - 1. Profile: Tee; 15/16 inch wide face.
 - 2. Construction: Double web.
 - 3. Finish: White painted.

END OF SECTION

**SECTION 09 6519
RESILIENT TILE FLOORING**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 RESILIENT TILE FLOORING

- A. Luxury Vinyl Plank and Tile:
 - 1. Physical Properties:
 - a. Construction: Solid plank and tile made from 100 percent virgin vinyl.
 - 2. Manufacturing, Performance, and Safety Standards:
 - a. NSF 332 Certified: Platinum level.
 - b. VOC Content Limits: As specified in Section 01 6116.
 - c. ASTM F1700, Classification: Class III, Type B.
 - d. ASTM F386, Thickness: Passed requirements.
 - e. ASTM F410, Wear Layer Thickness: Passed requirements for commercial classification.
 - f. ASTM F2421/F2055, Size and Squareness: Passed requirements.
 - g. ASTM F1914, Residual Indentation: Exceeds requirements.
 - h. ASTM F137, Flexibility: Exceeds requirements.
 - i. ASTM F2199, Dimensional Stability: Exceeds requirements.
 - j. ASTM F925, Chemical Resistance: Exceeds requirements.
 - k. ASTM F1514, Resistance to Heat: Exceeds requirements.
 - l. ASTM F1515, Resistance to Light: Exceeds requirements.
 - m. ASTM E648/NFPA 253, Critical Radiant Flux: Class I.
 - n. ASTM E662, Smoke Density (Flaming and Non-Flaming): Passed requirements.
 - o. ASTM F963, Sec. 4.3.5.2(2)(B), Heavy Metals: Passed requirements.
 - p. ASTM D6329 and UL 2824, Mold and Microbial Resistance: Highly resistant.
 - q. ASTM D2047, Coefficient of Friction (Dry): Exceeds requirements.
 - r. ASTM F970, Static Load Limit: Greater than or equal to 1,000 pounds (exceeds requirements).
 - s. ASTM D4060, Abrasion Resistance: Average of 30,000 cycles (results vary with emboss).

2.02 ACCESSORIES

- A. Moldings, Transition and Edge Strips: Same material as flooring.
- B. Adhesive and Adhesive Encapsulators:
 - 1. VOC Content Limits: As specified in Section 01 6116.
- C. Finishes and Cleaners:
 - 1. VOC Content Limits: As specified in Section 01 6116.

PART 3 EXECUTION

END OF SECTION

**SECTION 09 6813
TILE CARPETING**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 MATERIALS

- A. Tile Carpeting: Patterned Loop, manufactured in one color dye lot.
 - 1. Tile Size: 24" x 24" inch, nominal.
 - 2. Thickness: .187 inch.
 - 3. Primary Backing Material: Non Woven Synthetic Fiber.
 - 4. Total Weight: 20 oz/sq yd.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Blend carpet from different cartons to ensure minimal variation in color match.
- B. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.
- C. Lay carpet tile in square pattern, with pile direction parallel to next unit, set parallel to building lines.

END OF SECTION

**SECTION 09 9000
PAINTING AND COATING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Scope: Finish all interior and exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
 2. Elevator pit ladders.
 3. Exposed surfaces of steel lintels and ledge angles.
 4. Surfaces inside cabinets.
 5. Prime surfaces to receive wall coverings.
 6. Mechanical and Electrical:
 - a. In finished areas, paint all insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.
 - b. In finished areas, paint shop-primed items.
 - c. On the roof and outdoors, paint all equipment that is exposed to weather or to view, including that which is factory-finished.
 - d. Paint interior surfaces of air ducts and convector and baseboard heating cabinets that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.
 - e. Paint dampers exposed behind louvers, grilles, and convector and baseboard cabinets to match face panels.
- B. Do Not Paint or Finish the Following Items:
1. Items fully factory-finished unless specifically so indicated; materials and products having factory-applied primers are not considered factory finished.
 2. Items indicated to receive other finishes.
 3. Items indicated to remain unfinished.
 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
 5. Stainless steel, anodized aluminum, bronze, terne, and lead items.
 6. Marble, granite, slate, and other natural stones.
 7. Floors, unless specifically so indicated.
 8. Ceramic and other tiles.
 9. Brick, architectural concrete, cast stone, integrally colored plaster and stucco.
 10. Glass.
 11. Acoustical materials, unless specifically so indicated.
 12. Concealed pipes, ducts, and conduits.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
1. Base Manufacturer: Sherwin-Williams.
- C. Transparent Finishes:
1. Base Manufacturer: Sherwin-Williams.
- D. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PAINTS AND COATINGS - GENERAL

- A. Paints and Coatings: Ready mixed, unless intended to be a field-catalyzed coating.

1. Supply each coating material in quantity required to complete entire project's work from a single production run.
 2. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content:
1. Provide coatings that comply with the most stringent requirements specified in the following:
 - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - b. Ozone Transport Commission (OTC) Model Rule, Architectural, Industrial, and Maintenance Coatings; www.otcair.org; specifically:
 - 1) Opaque, Flat: 50 g/L, maximum.
 - 2) Opaque, Nonflat: 150 g/L, maximum.
 - 3) Opaque, High Gloss: 250 g/L, maximum.
 - 4) Varnishes: 350 g/L, maximum.
 - c. Architectural coatings VOC limits of California.
 - d. USGBC LEED Rating System, edition as stated in Section 01 3515; for interior wall and ceiling finish (all coats), anti-corrosive paints on interior ferrous metal, clear wood stains and finishes, sanding sealers, other sealers, shellac, and floor coatings.
 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- C. Colors: As indicated on drawings
1. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.

2.03 PAINT SYSTEMS - EXTERIOR

- A. Paint CE-OP-3A - Concrete/Masonry, Opaque, Alkyd, 3 Coat:
 1. One coat of block filler.
- B. Paint GE-OP-3A - Gypsum Board and Plaster, Opaque, Alkyd, 3 Coat:
 1. One coat of alkyd primer sealer.
 2. Flat: Two coats of alkyd enamel.
- C. Paint ME-OP-3A - Ferrous Metals, Unprimed, Alkyd, 3 Coat:
 1. One coat of alkyd primer.
- D. Paint ME-OP-2A - Ferrous Metals, Primed, Alkyd, 2 Coat:
 1. Touch-up with rust-inhibitive primer recommended by top coat manufacturer.
- E. Paint MgE-OP-3A - Galvanized Metals, Alkyd, 3 Coat:
 1. One coat galvanize primer.
- F. Paint Copper-Ox - Copper, Natural Oxidized Finish:
 1. Rub on oxidizing solution of copper acetate and ammonium chloride in acetic acid, until required effect is achieved.
 2. Rinse surfaces with clear water and allow to dry.
- G. Paint E-Pav - Pavement Marking Paint:

2.04 PAINT SYSTEMS - INTERIOR

- A. Paint WI-OP-3L - Wood, Opaque, Latex, 3 Coat:
 1. One coat of latex primer sealer.
- B. Paint WI-TR-VS - Wood, Transparent, Varnish, Stain:
 1. One coat of stain.
 2. One coat sealer.
- C. Paint CI-OP-3L - Concrete/Masonry, Opaque, Latex, 3 Coat:
 1. One coat of block filler.

- D. Paint MI-OP-3A - Ferrous Metals, Unprimed, Alkyd, 3 Coat:
 - 1. One coat of alkyd primer.
- E. Paint MI-OP-2A - Ferrous Metals, Primed, Alkyd, 2 Coat:
 - 1. Touch-up with alkyd primer.
- F. Paint MGI-OP-3A - Galvanized Metals, Alkyd, 3 Coat:
 - 1. One coat galvanize primer.
- G. Paint Mal-OP-3A - Aluminum, Unprimed, Alkyd, 3 Coat:
 - 1. One coat etching primer.
- H. Paint GI-OP-3LA - Gypsum Board/Plaster, Latex-Acrylic, 3 Coat:
 - 1. One coat of alkyd primer sealer.

PART 3 EXECUTION

3.01 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to coating application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.02 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply products in accordance with manufacturer's instructions.
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- E. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

END OF SECTION

**SECTION 09 9600
HIGH-PERFORMANCE COATINGS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. High-Performance Coatings:
 - 1. Substitutions: Section 01 6000 - Product Requirements.

2.02 HIGH-PERFORMANCE COATINGS

- A. MPI Standards: Provide products that comply with MPI standards indicated and are listed in "MPI Approved Products List."
- B. Provide coating systems that meet the following minimum performance criteria, unless more stringent criteria are specified:

2.03 TOP COAT MATERIALS

- A. Coatings - General: Provide complete multi-coat systems formulated and recommended by manufacturer for the applications indicated, in the thicknesses indicated; number of coats specified does not include primer or filler coat.
 - 1. Volatile Organic Compound (VOC) Content:
 - a. Provide coatings that comply with the most stringent requirements specified in the following:
 - 1) 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - 2) SCAQMD 1113 Rule.
 - 3) CARB (SCM).
 - 4) Ozone Transport Commission (OTC) Model Rule, Architectural, Industrial, and Maintenance Coatings; www.otcair.org; specifically:
 - (a) Opaque, Flat: 50 g/L, maximum.
 - (b) Opaque, Nonflat: 150 g/L, maximum.
 - (c) Opaque, High Gloss: 250 g/L, maximum.
 - (d) Varnishes: 350 g/L, maximum.
 - 5) Architectural coatings VOC limits of California.
 - b. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

END OF SECTION

**SECTION 10 1101
VISUAL DISPLAY BOARDS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 VISUAL DISPLAY BOARDS

- A. Markerboards: Porcelain enamel on steel, laminated to core.
 - 1. Color: White.
 - 2. Core: Particleboard, manufacturer's standard thickness, laminated to face sheet.
 - 3. Backing: Aluminum foil, laminated to core.
 - 4. Frame: Extruded aluminum, with concealed fasteners.
 - 5. Frame Finish: Baked enamel, color to match board.
 - 6. Accessories: Provide chalk tray and map rail.

- B. Tackboards: Fine-grained, homogeneous natural cork.
 - 1. Cork Thickness: 1/8 inch.
 - 2. Fabric: Vinyl coated fabric.
 - 3. Frame: Extruded aluminum, with concealed fasteners.
 - 4. Frame Profile: As indicated on drawings
 - 5. Frame Finish: Baked enamel, color to match board.
 - 6. Accessories: Provide map rail.

END OF SECTION

SECTION 10 1400
SIGNAGE

PART 1 GENERAL

PART 2 PRODUCTS

2.01 SIGNAGE APPLICATIONS

- A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1 and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.
- B. Room and Door Signs: Provide a sign for every doorway, whether it has a door or not, not including corridors, lobbies, and similar open areas.
 - 1. Sign Type: Flat signs with engraved panel media as specified.
 - 2. Provide "tactile" signage, with letters raised minimum 1/32 inch and Grade II braille.
 - 3. Character Height: 1 inch.
 - 4. Sign Height: 2 inches, unless otherwise indicated.
 - 5. Office Doors: Identify with room numbers to be determined later, not the numbers shown on the drawings; in addition, provide "window" section for replaceable occupant name.
 - 6. Conference and Meeting Rooms: Identify with room numbers to be determined later, not the numbers shown on the drawings; in addition, provide "window" section with sliding "In Use/Vacant" indicator.
 - 7. Service Rooms: Identify with room names and numbers to be determined later, not those shown on the drawings.
 - 8. Rest Rooms: Identify with pictograms, the names "MEN" and "WOMEN", room numbers to be determined later, and braille.
- C. Interior Directional and Informational Signs:
 - 1. Sign Type: Same as room and door signs.
- D. Emergency Evacuation Maps:
 - 1. Allow for one map per elevator lobby.
- E. Recognition/Donor Panels: Engraved panel media; individual name signs attached with magnetic tape to fixed panel.
 - 1. Dimensions and Number of Name Signs: As indicated on the drawings.
 - 2. Provide all name signs whether engraved or not, for uniform overall appearance.
 - 3. Color: Color as selected.
- F. Building Identification Signs:
 - 1. Use individual metal letters.
 - 2. Mount on outside wall in location shown on drawings.
- G. Other Dimensional Letter Signs: Wall-mounted.
 - 1. Exterior: Allow for total of 50 letters, 6 inches high, metal.
 - 2. Interior: Allow for total of 50 letters, 6 inches high, metal.
- H. Plaque: See Allowance for details.

2.02 SIGN TYPES

- A. Flat Signs: Signage media without frame.
 - 1. Edges: Square.
 - 2. Corners: Square.
 - 3. Wall Mounting of One-Sided Signs: Tape adhesive.
- B. Color and Font: Unless otherwise indicated:
 - 1. Character Font: Helvetica, Arial, or other sans serif font.
 - 2. Character Case: Upper case only.
 - 3. Background Color: Clear.
 - 4. Character Color: Contrasting color.

2.03 DIMENSIONAL LETTERS

A. Metal Letters:

1. Mounting: Tape adhesive.

END OF SECTION

**SECTION 10 1500
VIDEO DISPLAY SYSTEMS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 PANELIZED LED VIDEO DISPLAY

- A. Performance Requirements:
 - 1. Comply with performance standards based on tests conducted in accordance with ANSI/InfoComm 10.
 - 2. Provide products that are listed and labeled as complying with UL 879, where applicable.
- B. System Type: Flat.
 - 1. Pixel Pitch: 3.8 mm
 - 2. Refresh Rate: 960 Hz adjustable.
 - 3. Horizontal Viewing Angle: 170 degrees (plus/minus 85 degrees off center).
 - 4. Vertical Viewing Angle: 160 degrees (plus/minus 80 degrees off center).
 - 5. Brightness: 1000 Nits adjustable
 - 6. Mount Type: Free Standing/Self Supporting.
 - 7. Location: Indoor and Outdoor.
 - 8. Total Length: As indicated.
 - 9. Service Access: Front/Rear.
 - 10. Data Connections: Shielded twisted pair CAT 5e/6e (Ethercon) or Fiber Optic.
 - 11. Input Source Compatibility: DVI, HDMI, S-Video, and Composite.

2.02 CONTROLS

- A. Interface Unit:
 - 1. With the following abilities; scale media, rotate media, adjust brightness, loop output and input selection.
 - 2. Working Voltage: 120 VAC / 240 VAC at 60Hz.

END OF SECTION

SECTION 10 2113.19
PLASTIC TOILET COMPARTMENTS

PART 1 GENERAL

PART 2 PRODUCTS

2.01 SOLID PLASTIC TOILET COMPARTMENTS

- A. Toilet Compartments: Factory fabricated doors, pilasters, and divider panels made of solid molded high density polyethylene (HDPE), floor-mounted headrail-braced.
- B. Doors:
 - 1. Thickness: 1 inch.
 - 2. Width: 24 inch.
 - 3. Width for Handicapped Use: 36 inch, out-swinging.
 - 4. Height: 55 inch.
- C. Panels:
 - 1. Thickness: 1 inch.
 - 2. Height: 55 inch.
- D. Pilasters:
 - 1. Thickness: 1 inch.
 - 2. Width: As required to fit space; minimum 3 inch.
- E. Screens: Without doors; to match compartments; mounted to wall with two panel brackets .

2.02 ACCESSORIES

- A. Pilaster Shoes: Formed chromed steel with polished finish, 3 in high, concealing floor fastenings.
- B. Head Rails: Hollow stainless steel, 1 x 1-1/2 inch size, with anti-grip profile and cast socket wall brackets.
- C. Pilaster Brackets: Polished stainless steel.
- D. Wall Brackets: Continuous type, polished stainless steel.
- E. Attachments, Screws, and Bolts: Stainless steel, tamper proof type.
- F. Hardware: Polished stainless steel:
 - 1. Pivot hinges, gravity type, adjustable for door close positioning; two per door.
 - 2. Door Latch: Slide type with exterior emergency access feature.
 - 3. Door strike and keeper with rubber bumper; mounted on pilaster in alignment with door latch.
 - 4. Coat hook with rubber bumper; one per compartment, mounted on door.
 - 5. Provide door pull for outswinging doors.

PART 3 EXECUTION

END OF SECTION

**SECTION 10 2226.13
ACCORDION FOLDING PARTITIONS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 ACCORDION FOLDING PARTITIONS

- A. Partition Construction: Acoustical.
 - 1. Frame: Steel pantograph hinge plates vertical rods, galvanized; limiting mechanism; stacking straps and snaps.
 - 2. Finish: Vinyl coated fabric; color as selected.
 - 3. Internal air release mechanism.
 - 4. Acoustic seals at top, meeting mullions, jambs, and bottom.
- B. Track: Formed steel; 1-1/4 by 1-1/4 inches size; thickness and profile designed to support loads; steel sub-channel.
- C. Carriers: Ball bearing steel wheels on trolley carrier at top center of every second fold, with threaded pendant bolt for vertical adjustment.

2.02 ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A. Electrical Characteristics:
- B. Motor: NEMA MG 1.
- C. Electric Operator: 12 inches per second travelling speed; adjustable friction clutch brake actuated by solenoid controlled motor starter; enclosed limit switch; enclosed magnetic reversing starter.
- D. Control Station: 1 standard keyed three button OPEN-STOP-CLOSE constant pressure type; 24 volt circuit; surface mounted.
- E. Conduit and Outlet Boxes: Surface type in accordance with Section 26 0534.
- F. Disconnect Switch: Factory mount disconnect switch in control panel.
- G. Limit Switches: Automatic type, at both extremes of travel, to prevent over-travel.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install partition in accordance with manufacturer's instructions and ASTM E557.
- B. Install electric operator, wiring, and controls. Locate control station(s) as indicated.
- C. Fit and align partition assembly level and plumb.

END OF SECTION

**SECTION 10 2800
TOILET, BATH, AND LAUNDRY ACCESSORIES**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.
- B. Samples: Submit two samples of each accessory, illustrating color and finish.

PART 2 PRODUCTS

2.01 MANUFACTURERS

2.02 MATERIALS

- A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
- B. Stainless Steel Sheet: ASTM A666, Type 304.
- C. Stainless Steel Tubing: ASTM A269/A269M, Type 304 or 316.
- D. Galvanized Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.
- E. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.
- F. Mirror Glass: Tempered safety glass, ASTM C1048; and ASTM C1036 Type I, Class 1, Quality Q2, with silvering as required.

2.03 FINISHES

- A. Stainless Steel: No. 4 Brushed finish, unless otherwise noted.
- B. Baked Enamel: Pretreat to clean condition, apply one coat primer and minimum two coats epoxy baked enamel.

2.04 TOILET ROOM ACCESSORIES

- A. Toilet Paper Dispenser: Single roll, semi-recessed, stainless steel unit with pivot hinge, tumbler lock.
- B. Paper Towel Dispenser: Folded paper type, stainless steel, semi-recessed, with viewing slots on sides as refill indicator and tumbler lock.
- C. Paper Towel Dispenser: Electric, roll paper type.
- D. Waste Receptacle: Stainless steel, freestanding style with swing top.
- E. Waste Receptacle: Wall-mounted, stainless steel, seamless lower door for access to container, with tumbler lock, reinforced panel full height of door, push-in self-closing top door, continuously welded bottom pan and seamless exposed flanges.
- F. Combination Towel Dispenser/Waste Receptacle: Recessed flush with wall, stainless steel; seamless wall flanges, continuous piano hinges, tumbler locks on upper and lower doors.
- G. Soap Dispenser: Liquid soap dispenser, wall-mounted, surface, with stainless steel cover and horizontal stainless steel tank and working parts; push type soap valve, check valve, and window gage refill indicator, tumbler lock.
- H. Mirrors: Stainless steel framed, 1/4 inch thick annealed float glass; ASTM C1036.
 - 1. Annealed Float Glass: Silvering, protective and physical characteristics in compliance with ASTM C1503.
 - 2. Shelf: Stainless steel; gage and finish to match mirror frame, turned down edges, welded to frame; 5 inches deep, full width of mirror.

- I. Seat Cover Dispenser: Stainless steel, surface-mounted, reloading by concealed opening at base, tumbler lock.
- J. Grab Bars: Stainless steel, nonslip grasping surface finish.
 - 1. Heavy Duty Grab Bars: Floor supports are acceptable if necessary to achieve load rating.
 - a. Push/Pull Point Load: Minimum 1000 pound-force, minimum.
 - b. Dimensions: 1-1/2 inch outside diameter, minimum 0.125 inch wall thickness, exposed flange mounting, 1-1/2 inch clearance between wall and inside of grab bar.
 - c. Length and Configuration: As indicated on drawings.
- K. Purse Shelf: Fold-down, with spring-loaded hinge designed to automatically return shelf to vertical position when not in use; 0.03 inch satin-finished stainless steel, with 1/4 inch rolled or 1/2 inch channel edge at shelf front.
- L. Combination Sanitary Napkin/Tampon Dispenser: Stainless steel, surface-mounted.
- M. Sanitary Napkin Disposal Unit: Stainless steel, surface-mounted, self-closing door, locking bottom panel with full-length stainless steel piano-type hinge, removable receptacle.
- N. Diaper Changing Station: Wall-mounted folding diaper changing station for use in commercial toilet facilities, meeting or exceeding ASTM F2285.
 - 1. Style: Horizontal.
 - 2. Mounting: Surface.

2.05 SHOWER AND TUB ACCESSORIES

- A. Shower Curtain Rod: Stainless steel tube, 1 inch outside diameter, 0.04 inch wall thickness, satin-finished, with 3 inch outside diameter, minimum 0.04 inch thick satin-finished stainless steel flanges, for installation with exposed fasteners.
- B. Shower Curtain:
 - 1. Material: Opaque vinyl, 0.008 inch thick, matte finish, with antibacterial treatment, flameproof and stain-resistant.
- C. Folding Shower Seat: Wall-mounted recessed; welded tubular seat frame, structural support members, hinges and mechanical fasteners of Type 304 stainless steel, L-shaped, right hand seat.
- D. Wall-Mounted Soap Dish: Heavy duty, seamless stainless steel, surface-mounted with drain holes, without grab bar, satin finish; with concealed mechanical fastening suitable for substrate and backplate.
- E. Towel Bar: Stainless steel Type 304, 3/4 inch square tubular bar; rectangular brackets, concealed attachment, satin finish.
- F. Towel Pin: Stainless steel, 3 inch extension from wall; rectangular-shaped bracket and backplate for concealed attachment, satin finish.
- G. Robe Hook: Heavy-duty stainless steel, single-prong, rectangular-shaped bracket and backplate for concealed attachment, satin finish.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install accessories in accordance with manufacturers' instructions in locations indicated on the drawings.
- B. Install plumb and level, securely and rigidly anchored to substrate.
- C. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.

END OF SECTION

**SECTION 10 4400
FIRE PROTECTION SPECIALTIES**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 FIRE EXTINGUISHERS

- A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.

2.02 FIRE EXTINGUISHER CABINETS

- A. Metal: Formed primed steel sheet; 0.036 inch thick base metal.
- B. Cabinet Configuration: Recessed type.
- C. Door: 0.036 inch thick, reinforced for flatness and rigidity; latch. Hinge doors for 180 degree opening with two butt hinge. Provide nylon catch.
- D. Door Glazing: Glass, clear, 1/8 inch thick float. Set in resilient channel gasket glazing.

END OF SECTION

**SECTION 10 5129
PHENOLIC LOCKERS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 LOCKER APPLICATIONS

- A. Wardrobe Lockers: Two tier lockers, wall mounted with matching closed base.
 - 1. Fittings: Hat shelf, 2 coat hooks.
 - 2. Locking: Built-in combination locks.
 - 3. Provide sloped top.
- B. Locker Benches: Stationary type; bench top of laminated birch; painted steel pedestals.

2.02 PHENOLIC LOCKERS

- A. Lockers: Factory assembled, made of phenolic core panels with mortise and tenon joints and stainless steel mechanical joint fasteners; fully finished inside and out; each locker capable of standing alone.
 - 1. Doors: Full overlay, covering full width and height of locker body; square edges.
 - 2. Panel Core Exposed at Edges: Machine polished, without chips or tool marks; square edge unless otherwise indicated.
 - 3. Where locker ends or sides are exposed, finish the same as fronts or provide extra panels to match fronts.
 - 4. Ventilation: By holes drilled in tops, bottoms, and intermediate shelves, and by open space between the back of door and locker body.
 - 5. Door Color: As selected by Architect; allow for 2 different colors.
 - 6. Body Color: Manufacturer's standard white or light color.
 - 7. Fasteners for Accessories and Locking Mechanisms: Tamperproof type.
- B. Component Thicknesses:
 - 1. Doors: 1/2 inch minimum thickness.
 - 2. Locker Body: One of the following combinations:
 - a. Tops, bottoms, and shelves 3/8 inch; sides and backs 5/16 inch; minimum.
 - b. Tops, bottoms, and shelves 1/2 inch; sides 3/8 inch; backs 1/4 inch; minimum.
- C. Phenolic Core Panels: Nonporous phenolic resin and paper core formed under high pressure, with natural colored finished edges, integral melamine surface, matte finish, and uniform surface appearance; glued laminated panels not acceptable.
 - 1. Surface Burning Characteristics: Flame spread index of 75 or less, and smoke developed index of 450 or less; when tested in accordance with ASTM E84.
- D. Hinges: Stainless steel, satin finish; minimum of 90 degree opening; either exposed barrel 5-knuckle hinge attached to back of door and inside of body with tamperproof screws, or completely concealed cabinetwork style hinge attached with tamperproof screws.
- E. Number Plates: Manufacturer's standard, minimum 4-digit, permanently attached with adhesive; may be field installed.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install lockers plumb and square.
- C. Place and secure on prepared base.

END OF SECTION

**SECTION 11 1200
PARKING CONTROL EQUIPMENT**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 PARKING CONTROL EQUIPMENT

- A. Parking Control: Automatic operation at entrance and automatic operation at exit.
 - 1. Entry: Automatic gate electrically operated upon discharge of ticket from dispenser. Activate automatic arm reversing switch if an obstacle is sensed in the down motion.
 - 2. Exit: Automatic gate electrically operated upon detection of vehicle by sensing loop buried in pavement. Activate automatic arm reversing switch if an obstacle is sensed in the down motion.

2.02 GATE ARM AND SUPPORT

- A. Gate Arm: Aluminum, articulating arm with internal counterbalance, with safety rubber bottom edge, automatic arm reversing switch.

2.03 TICKET DISPENSER

- A. Cabinet: 0.075 inch steel, weather tight seams; thermally insulated to permit heater to maintain cabinet temperature to equipment operating minimum, flush access doors and panels, tamper proof hardware, weather tight gaskets, master keyed locks. Conceal mounting bolts inside units.
- B. Operation: Ticket dispenser activated by manual push button. Ticket presented to user without opening car door or touching metal part of dispenser.
- C. Ticket Dispenser: Imprint and punch ticket with dispenser number, "in" time and date. Include illuminated "Please Take Ticket" sign at location visible from vehicle.
- D. Ticket Reader: Magnetically decode ticket for time and date and calculate cost. Include electronic display of calculated cost at location visible from vehicle.

2.04 CARD CONTROL

- A. Control Unit: To activate gate arm by insertion of coded card.
- B. Cabinet: 0.075 inch steel, weather tight seams; thermally insulated to permit heater to maintain cabinet temperature to equipment operating minimum, flush access doors and panels, tamper proof hardware, weather tight gaskets, master keyed locks. Conceal mounting bolts inside units.

2.05 VEHICLE DETECTION

- A. Vehicle Detection: For use in temperature range of minus 40 to 160 degrees F; to consist of detector unit in conjunction with sensing loop to activate ticket dispenser when vehicle enters or exits.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install parking control system and components in accordance with manufacturer's instructions.
- B. Install internal electrical wiring, conduit, junction boxes, transformers, circuit breakers, and auxiliary components required.

END OF SECTION

**SECTION 11 5213
PROJECTION SCREENS**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Manufacturer's catalog cuts and descriptive information on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.

PART 2 PRODUCTS

2.01 FRONT PROJECTION SCREENS

- A. Front Projection Screens: Factory assembled unless otherwise indicated.
 - 1. In community room: Motorized, matte light diffusing fabric screen, horizontally tensioned, wall mounted.
- B. Matte Light Diffusing Fabric: Light diffusing screen fabric; washable, flame retardant and mildew resistant.
- C. Glass Beaded Light Refracting Fabric: Glass beads on textile backing; flame retardant and mildew resistant.
- D. Reflective Screen Fabric: Angularly reflective surface; flame retardant and mildew resistant.
 - 1. Material: Silver finished vinyl on fiberglass backing, with nominal gain of 1.3 on axis, not less than 0.65 at 30 degrees from axis.
 - 2. Seams: No seams permitted in fabric up to 96 inch high by 72 inch wide.
- E. Exposed Screen Cases: Steel; integral roller brackets.
 - 1. Finish: Baked enamel.
 - 2. Color: White.
 - 3. End Caps: Steel; finished to match case.
 - 4. Mounting: Wall.
- F. Concealed-in-Ceiling Screen Cases: Steel; integral roller brackets.
 - 1. Door Slat: Self trim; self-closing and -opening.
 - 2. Case Finish: Baked enamel.
 - 3. Case Color: White.
 - 4. End Caps: Steel; finished to match case.
 - 5. Electrically-Operated Screens: 1-1/2 inch aluminum door roller.
- G. Electrically-Operated Screens:
 - 1. Roller: 2 inch aluminum, with locking device.
 - 2. Vertical Tensioning: Screen fabric weighted at bottom with steel bar with plastic end caps.
 - 3. Horizontal Tensioning: Tab-guided cable system.
- H. Provide mounting hardware, brackets, supports, fasteners, and other mounting accessories required for a complete installation, in accordance with manufacturer's recommendations for specified substrates and mountings.

2.02 ELECTRICAL COMPONENTS

- A. Electrical Components: Listed and classified by UL as suitable for the purpose specified and indicated.
- B. Motors: Direct drive, 110 V, 60 Hz.
 - 1. Screen Motor: Mounted inside roller; three wire with ground; quick reverse type, lifetime lubricated; equipped with thermal overload cut-off, internal junction box, electric brake, pre-set accessible limit switches.
 - 2. Door, Adjustable Masking, and Motor: Mounted inside roller; three wire with ground; quick reverse type; equipped with thermal overload cut-off.

- C. Controls: Three (3) position control switch with plate.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions, using manufacturer's recommended hardware for relevant substrates.
- B. Do not field cut screens.
- C. Install screens in mountings as specified and as indicated on drawings.
- D. Install electrically operated screens ready for connection to power and control systems by others.

END OF SECTION

**SECTION 12 2400
WINDOW SHADES**

PART 1 GENERAL

1.01 PART 2 PRODUCTS

1.02 WINDOW SHADE APPLICATIONS

- A. Shades: Sheer shades.
 - 1. Type: Roller shades.
 - 2. Color: As selected by Architect from manufacturer's full range of colors.
 - 3. Mounting: Inside (between jambs).
 - 4. Operation: Manual and motorized, in locations indicated.

1.03 ROLLER SHADES

- A. Roller Shades: Fabric roller shades complete with mounting brackets, roller tubes, hembars, hardware and accessories; fully factory-assembled.
 - 1. Drop: Regular roll.
 - 2. Size: As indicated on drawings.
- B. Fabric: Non-flammable, color-fast, impervious to heat and moisture, and able to retain its shape under normal operation; PVC-free; 100 percent recycled.
 - 1. Sheer Shades: Reduce glare yet still reveal considerable details to the outside; no privacy; Openness Factor greater than 1 percent.
 - 2. Flammability: Pass NFPA 701 large and small tests.
- C. Roller Tube: As required for type of operation, extruded aluminum with end caps.
 - 1. Fabric Attachment: Utilize extruded channel in tube to accept vinyl spline welded to fabric edge.
- D. Hembars and Hembar Pockets: Wall thickness designed for weight requirements and adaptation to uneven surfaces, to maintain bottom of shade straight and flat.
- E. Manual Operation: Clutch operated continuous loop; beaded ball chain.
- F. Motor Operation: Motor system housed inside roller tube, controlling shade movement via motor controls indicated; listed to UL 325.
 - 1. Audible Noise: Maximum 39 dBA measured 3 feet from the motor unit; no audible clicks when motor starts and stops.
 - 2. Motors: Size and configuration as recommended by manufacturer for the type, size, and arrangement of shades to be operated; integrated into shade operating components and concealed from view.
 - 3. Motor Type: Both AC and DC motors are acceptable; provide required transformers for DC motors.
 - 4. Coupling of Multiple Shades: Where possible, minimize number of motors by coupling adjacent shades.
 - 5. Control Compatibility: Fully compatible with the controls to be installed.

1.04 MOTOR CONTROLS

- A. Control Requirements:
 - 1. Unless specifically indicated to be excluded, provide all required equipment, conduit, boxes, wiring, connectors, hardware, supports, accessories, software, system programming, etc. as necessary for a complete operating system that provides the control intent indicated.
- B. Wall-Mounted Controls: UV stabilized visible parts meeting ASTM D4674; furnished with backlit buttons; provided by shade manufacturer.
 - 1. Control Functions:
 - a. Open: Automatically open controlled shade(s) to fully open position when button is pressed.

- b. Close: Automatically close controlled shade(s) to fully closed position when button is pressed.
 - c. Raise: Raise controlled shade(s) only while button is pressed.
 - d. Lower: Lower controlled shade(s) only while button is pressed.
 - e. Stop shade(s) in motion by tap on any button.
- 2. Finish: As specified in Section 26 2726.
 - 3. Button Engraving: Manufacturer's standard engraving, unless otherwise indicated.

1.05 ACCESSORIES

- A. Fascias: Size as required to conceal shade mounting.
- B. Brackets and Mounting Hardware: As recommended by manufacturer for mounting configuration and span indicated.
- C. Fasteners: Non-corrosive, and as recommended by shade manufacturer.

END OF SECTION

**SECTION 12 3600
COUNTERTOPS**

PART 2 PRODUCTS

1.01 COUNTERTOP ASSEMBLIES

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS).
- B. Solid Surfacing Countertops: Solid surfacing sheet or plastic resin casting over continuous substrate.
 - 1. Flat Sheet Thickness: 3/4 inch, minimum.
 - 2. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01 and NEMA LD 3; acrylic or polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
 - a. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
 - b. Sinks and Bowls: Integral castings; minimum 3/4 inch wall thickness; comply with ANSI Z124.3.
 - c. Finish on Exposed Surfaces: Matte, gloss rating of 5 to 20.
 - 3. Other Components Thickness: 1/2 inch, minimum.
 - 4. Exposed Edge Treatment: Built up to minimum 1-1/4 inch thick; square edge; use marine edge at sinks.
 - 5. Back and End Splashes: Same sheet material, square top; minimum 4 inches high.

PART 3 EXECUTION

2.01 INSTALLATION

- A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.
- B. Seal joint between back/end splashes and vertical surfaces.

END OF SECTION

**SECTION 12 4813
ENTRANCE FLOOR MATS AND FRAMES**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 ENTRANCE FLOOR GRILLES AND GRATINGS

- A. Entrance Floor Grilles: Recessed extruded aluminum grille assembly with nominal 1 inch wide tread strips running perpendicular to traffic flow, slots between treads, and perimeter frame forming sides of recess; grille hinged for access to recess.
 - 1. Recess Depth: 3/4 inches.
 - 2. Tread Surfaces: Alternating serrated anodized aluminum and nylon carpet.
 - 3. Length in Direction of Traffic Flow: 72 inches.
 - 4. Width Perpendicular to Traffic Flow: Full width of entrance door opening.
 - 5. Frame: Anodized aluminum for embedding in concrete; minimal exposed trim; stud or hook concrete anchors.
- B. Mounting: Top of non-resilient members level with adjacent floor.
- C. Structural Capacity: Capable of supporting a rolling load of 500 pounds without permanent deformation or noticeable deflection.
- D. Vibration Resistant Fabrication: All members welded, riveted, or bolted; no snap or friction connections.

2.02 MATS

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install walk-off surface in floor recess flush with finish floor after cleaning of finish flooring.

END OF SECTION

**SECTION 12 9300
SITE FURNISHINGS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 METAL FURNISHINGS

- A. Metal Furnishings, General:
 - 1. Cast iron components: Ductile iron castings complying with ASTM A536; cleaned, treated, and powder-coated.
 - 2. Steel components: Plates, bars, and shapes complying with ASTM A36/A36M and tubing complying with ASTM A500/A500M; cleaned, treated, and powder-coated.
 - 3. Wood components: Teak with eased edges, and clear wood preservative coating.
 - 4. Hardware: Stainless steel.

2.02 PRECAST CONCRETE FURNISHINGS

- A. Precast Concrete Furnishings, General:
 - 1. Precast Concrete Components: Mixture of cement, aggregates, water, and mineral colors; molded to shape, and reinforced with steel bars.
 - 2. Hardware: Stainless steel.
- B. Waste Receptacles: Precast concrete waste receptacle with removable lid.
 - 1. Capacity: 20 gallons.

2.03 WOOD BENCHES

- A. Materials:
 - 1. Wood: Solid, A -Grade Teak.
 - 2. Factory Finish: Natural.
- B. Benches: Solid wood supports and seat section with back.

2.04 BOLLARDS

- A. Cast Iron Bollards:
 - 1. Shape: Round.
 - 2. Materials:
 - a. Steel Pipe: ASTM A53/A53M, standard weight.
 - b. Cast Iron: ASTM A536 ductile iron castings.

2.05 SKATE DETERRENTS

- A. Skate Deterrents:
 - 1. Material: Stainless Steel; ASTM A666 Type 316, No. 4 finish.
 - 2. Attachment: Surface mounted to benches, planters, tables, and table seating.
 - 3. Anchoring: Tamper-resistant screws, pins or bolts as recommended by manufacturer.
 - 4. Shape: Fixed radius curve.
 - 5. Spacing: As shown on drawings.

PART 3 EXECUTION

3.01 INSTALLATION

END OF SECTION

**SECTION 12 9313
BICYCLE RACKS**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Installation methods.
- B. Shop Drawings: Indicate size, shape, and dimensions, including clearances from adjacent walls, doors, and obstructions.

PART 3 EXECUTION

2.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install bicycle racks level, plumb, square, and correctly located as indicated on the drawings.

END OF SECTION

**SECTION 14 2400
HYDRAULIC ELEVATORS**

PART 2 PRODUCTS

1.01 HYDRAULIC ELEVATORS

- A. Hydraulic Passenger Elevator:
 - 1. Hydraulic Elevator Equipment:
 - a. Holeless hydraulic with cylinder mounted within hoistway.
 - 2. Drive System:
 - a. Variable voltage variable frequency (VVVF) to modulate motor speed.
 - 3. Operation Control Type:
 - 4. Interior Car Height: 96 inch.
 - 5. Rated Net Capacity: 3000 lbs.
 - 6. Rated Speed: 100 ft per minute.
 - 7. Hoistway Size: 88 inch wide by 72 inch deep.
 - 8. Interior Car Platform Size: 68 inch wide by 51-1/2 inch deep.
 - 9. Elevator Pit Depth: 48 inch.
 - 10. Overhead Clearance at Top Floor: 144 inch.
 - 11. Travel Distance: As indicated on drawings.
 - 12. Number of Stops: 3.
 - 13. Number of Openings: 1 Front.

1.02 COMPONENTS

1.03 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with ASME A17.1, applicable local codes, and authorities having jurisdiction (AHJ).
- B. Accessibility Requirements: Comply with ADA Standards.
- C. Perform structural steel design, fabrication, and installation in accordance with AISC 360.
- D. Perform welding of steel in accordance with AWS D1.1/D1.1M.
- E. Fabricate and install door and frame assemblies in accordance with NFPA 80 and in compliance with requirements of authorities having jurisdiction.
- F. Perform electrical work in accordance with NFPA 70.

1.04 MATERIALS

- A. Cylinder Casing: ASTM A139/139M, Grade A steel.
- B. Rolled Steel Sections, Shapes, Rods: ASTM A36/A36M.
- C. Steel Sheet: ASTM A1008/A1008M, Designation CS (commercial steel), with matte finish.
- D. Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.
- E. Stainless Steel Sheet: ASTM A666, Type 304; No. 4 Brushed finish unless otherwise indicated.
- F. Seamless Brass Tube: ASTM B135, Copper Alloy UNS No. C22000, 90 percent copper, polished finish.
- G. Extruded Aluminum: ASTM B221 and ASTM B221M, natural anodized finish unless otherwise indicated.
- H. Plywood: PS 1, Structural I, Grade C-D or better, sanded.

1.05 OPERATION CONTROLS

- A. Elevator Controls: Provide landing operating panels and landing indicator panels.
 - 1. Landing Operating Panels: Metallic type, one for originating "Up" and one for originating "Down" calls, one button only at terminating landings; with illuminating indicators.
 - 2. Landing Indicator Panels: Illuminating.

3. Comply with ADA Standards for elevator controls.
- B. Interconnect elevator control system with building security, fire alarm, card access, smoke alarm, and building management control systems.
- C. Door Operation Controls:
 1. Program door control to open doors automatically when car arrives at floor landing.
 2. Render "Door Close" button inoperative when car is standing at dispatch landing with doors open.
 3. Door Safety Devices: Moveable, retractable safety edges, quiet in operation; equipped with photo-electric light rays.

1.06 OPERATION CONTROL TYPE

- A. Selective Collective Automatic Operation Control: Applies to car in single elevator shaft.
 1. Refer to description provided in ASME A17.1.
 2. Automatic operation by means of one button in the car for each landing served and by "UP" and "DOWN" buttons at the landings.
 3. Stops are registered by momentary actuation of landing car buttons without consideration of the number of buttons actuated or the sequence buttons are actuated, but the stops are made in the order that landings are reached in each direction of travel.
 4. All "UP" landing calls are made when car is traveling in the up direction.
 5. All "DOWN" landing calls are made when car is traveling in the down direction.
 6. The uppermost and lowermost calls are answered as soon as they are reached without consideration of the car travel direction.

1.07 SERVICE CONTROL TYPE

- A. Restricted Access Service Control:
 1. Program down traveling cars to stop at main floor landing prior to proceeding to a designated lower dispatch landing.
 2. Program up traveling cars to stop at main floor landing prior to proceeding to a designated higher dispatch landing.
 3. Keyed Lobby Lock-out: Provide a key operated switch in car operating panel that performs the following when activated:
 - a. Cancels registered car calls.
 - b. When activated, no new car calls will be registered, except at landing where lock-out feature is located.
 - c. Restricts car calls registered to specific floors only, except the main access floor and those floors enabled by lock-out switches.
 - d. Landing calls are answered in normal manner.
 4. Car Call Lock-out: Provide a key operated switch with key removable from "On" or "Off" position in car operating panel that performs the following when activated:
 - a. Restricts or permits registration of a specific landing button.
 - b. Landing calls are answered in normal manner.
 5. Car Call Security Lock-out: Provide a security card activated switch in car operating panel that performs the following when activated:
 - a. Restricts or permits registration of each landing button.
 - b. Landing calls are answered in normal manner.
 6. Landing Call Lock-out: Provide a key operated switch with key removable from "On" or "Off" position in landing control station that performs the following when activated:
 - a. Restricts or permits landing call registration for that landing.
 - b. Causes the elevator to not respond to that landing.

1.08 HOISTWAY ENTRANCES

- A. Hoistway Entrances; Main Floor Elevator Lobby:
 1. Framed Opening Material and Finish: Bronze.
 2. Door Material and Finish: Bronze.
 3. Hoistway Fire Rating: 2 Hours.

4. Door Fire Rating: 1-1/2 Hours.
 5. Sills: Bronze.
- B. Hoistway Entrances; Lower Floor Elevator Landings:
1. Framed Opening Material and Finish: Bronze.
 2. Door Material and Finish: Bronze.
 3. Hoistway Fire Rating: 2 Hours.
 4. Door Fire Rating: 1-1/2 Hours.
 5. Sills: Extruded aluminum.
- C. Car Doors:
1. Door Fire Rating: 1-1/2 Hours.
 2. Sills: Bronze.
- D. Hoistway Entrances and Car Doors:
1. Width: As indicated on drawings.
 2. Height: As indicated on drawings.
 3. Door Type: Double leaf.
 4. Door Operation: Center opening, single speed.

1.09 CAR FINISH MATERIALS

- A. Car Operating Panel: Provide main and auxiliary; flush-mounted applied face plate, with illuminated call buttons corresponding to floors served, alarm button, and "Door Open" button.
1. Position alarm button where it is unlikely to be accidentally actuated; not more than 54 inch above car finished floor.
- B. Position Indicator: Above door with illuminating position indicators.
- C. Comply with ADA Standards for operating panel and interior layout of car.
- D. Bronze Hand Rail: Round, 1-1/2 inch diameter, with natural lacquered finish.
- E. Rails: Provide 1-1/2 inch clearance space from wall.

END OF SECTION

**SECTION 21 1300
FIRE SUPPRESSION SPRINKLERS**

PART 2 PRODUCTS

1.01 SPRINKLER SYSTEM

- A. Sprinkler System: Provide coverage for entire building.
- B. Occupancy: A-3 (Assembly).
- C. Water Supply: Determine volume and pressure from water flow test data.
- D. Interface system with building control system.
- E. Provide fire department connections where indicated.
- F. Storage Cabinet for Spare Sprinklers and Tools: Steel, located adjacent to alarm valve.
- G. Pipe Hanger Fasteners: Attach hangers to structure using appropriate fasteners, as follows:
 - 1. Concrete Wedge Expansion Anchors: Complying with ICC-ES AC193.
 - 2. Masonry Wedge Expansion Anchors: Complying with ICC-ES AC01.
 - 3. Other Types: As required.

1.02 SPRINKLERS

- A. Suspended Ceiling Type: Semi-recessed pendant type with matching push on cover plate.
 - 1. Response Type: Quick.
 - 2. Coverage Type: Standard.
 - 3. Fusible Link: Fusible solder link type temperature rated for specific area hazard.
- B. Exposed Area Type: Pendant type with guard.
 - 1. Response Type: Quick.
 - 2. Coverage Type: Standard.
 - 3. Fusible Link: Fusible solder link type temperature rated for specific area hazard.

1.03 PREACTION VALVE CONTROL PANEL

- A. Provide a modular type control panel for electrically operated detection and extinguishing systems for each preaction valve.

1.04 PRESSURE MAINTENANCE PUMP

- A. Type: Close coupled motor and positive displacement pump unit.
- B. Construction: Bronze with stainless steel shafts, carbon bearings.
- C. Motor: Open drip proof, permanently lubricated.
- D. Accessories: Include flexible hose connections.

1.05 AIR COMPRESSOR

- A. Compressor: Single unit, electric motor driven, motor, motor starter, safety valves, check valves, air maintenance device incorporating electric pressure switch and unloader valve.

PART 3 EXECUTION

2.01 INSTALLATION

- A. Install in accordance with referenced NFPA design and installation standard.
- B. Install equipment in accordance with manufacturer's instructions.
- C. Flush entire piping system of foreign matter.
- D. Hydrostatically test entire system.
- E. Require test be witnessed by Fire Marshal.

END OF SECTION

SECTION 22 0519
METERS AND GAGES FOR PLUMBING PIPING

PART 1 GENERAL

PART 2 PRODUCTS

2.01 POSITIVE DISPLACEMENT METERS (LIQUID)

- A. AWWA C700, positive displacement disc type suitable for fluid with bronze case and cast iron bottom cap, hermetically sealed register.
- B. Meter: Brass body turbine meter with magnetic drive register.

2.02 HEAT CONSUMPTION METERS

- A. Meter: Brass body turbine meter with magnetic drive register, platinum temperature sensors.

2.03 LIQUID FLOW METERS

- A. Calibrated ASME MFC-3M venturi orifice plate and flanges with valved taps, chart for conversion of differential pressure readings to flow rate, with pressure gage in case.
- B. Annular element flow stations with meter set.
 - 1. Portable Meter Set: Dry single diaphragm type pressure gage with 6 inch dial pointer, stainless steel wetted metal parts, variable pulsation damper, equalizing valve, two bleed valves, and master chart for direct conversion of meter readings to flow rate, mounted in rust-proof carrying case with two ten foot long rubber test hoses with brass valves or quick connections for measuring stations.

2.04 PRESSURE GAGES

- A. Pressure Gages: ASME B40.100, UL 393 drawn steel case, phosphor bronze bourdon tube, rotary brass movement, brass socket, with front recalibration adjustment, black scale on white background.
 - 1. Case: Steel with brass bourdon tube.
 - 2. Size: 4-1/2 inch diameter.
 - 3. Mid-Scale Accuracy: One percent.
 - 4. Scale: Psi and kPa.

2.05 PRESSURE GAGE TAPPINGS

- A. Gage Cock: Tee or lever handle, brass for maximum 150 psi.
- B. Needle Valve: Brass, 1/4 inch NPT for minimum 150 psi.
- C. Pulsation Damper: Pressure snubber, brass with 1/4 inch connections.
- D. Syphon: Steel, Schedule 40, 1/4 inch angle or straight pattern.

2.06 STEM TYPE THERMOMETERS

- A. Thermometers - Fixed Mounting: Red- or blue-appearing non-toxic liquid in glass; ASTM E1; lens front tube, cast aluminum case with enamel finish.
 - 1. Size: 9 inch scale.
 - 2. Window: Clear Lexan.
 - 3. Accuracy: 2 percent, per ASTM E77.
 - 4. Calibration: Degrees F.
- B. Thermometers - Adjustable Angle: Red- or blue-appearing non-toxic liquid in glass; ASTM E1; lens front tube, cast aluminum case with enamel finish, cast aluminum adjustable joint with positive locking device; adjustable 360 degrees in horizontal plane, 180 degrees in vertical plane.
 - 1. Size: 9 inch scale.
 - 2. Window: Clear Lexan.
 - 3. Accuracy: 2 percent, per ASTM E77.
 - 4. Calibration: Degrees F.

2.07 DIAL THERMOMETERS

- A. Thermometers - Fixed Mounting: Dial type bimetallic actuated; ASTM E1; stainless steel case, silicone fluid damping, white with black markings and black pointer, hermetically sealed lens, stainless steel stem.
 - 1. Size: 5 inch diameter dial.
 - 2. Lens: Clear glass.
 - 3. Accuracy: 1 percent.
 - 4. Calibration: Degrees F.
- B. Thermometers - Adjustable Angle: Dial type bimetallic actuated; ASTM E1; stainless steel case, adjustable angle with front recalibration, silicone fluid damping, white with black markings and black pointer, hermetically sealed lens, stainless steel stem.
 - 1. Size: 5 inch diameter dial.
 - 2. Accuracy: 1 percent.
 - 3. Calibration: Degrees F.
- C. Thermometers: Dial type vapor or liquid actuated; ASTM E1; stainless steel case, with brass or copper bulb, copper or bronze braided capillary, white with black markings and black pointer, glass lens.
 - 1. Size: 4-1/2 inch diameter dial.
 - 2. Length of Capillary: Minimum 5 feet.
 - 3. Accuracy: 2 percent.
 - 4. Calibration: Degrees F.

2.08 THERMOMETER SUPPORTS

- A. Socket: Brass separable sockets for thermometer stems with or without extensions as required, and with cap and chain.
- B. Flange: 3 inch outside diameter reversible flange, designed to fasten to sheet metal air ducts, with brass perforated stem.

2.09 TEST PLUGS

- A. Test Plug: 1/4 inch or 1/2 inch brass fitting and cap for receiving 1/8 inch outside diameter pressure or temperature probe with neoprene core for temperatures up to 200 degrees F.
- B. Test Plug: 1/4 inch or 1/2 inch brass fitting and cap for receiving 1/8 inch outside diameter pressure or temperature probe with Nordel core for temperatures up to 350 degrees F.
- C. Test Plug: 1/4 inch or 1/2 inch brass fitting and cap for receiving 1/8 inch outside diameter pressure or temperature probe with Viton core for temperatures up to 400 degrees F.
- D. Test Kit: Carrying case, internally padded and fitted containing one 2-1/2 inch diameter pressure gages, one gage adapters with 1/8 inch probes, two 1 inch dial thermometers.

2.10 STATIC PRESSURE GAGES

- A. 3-1/2 inch diameter dial in metal case, diaphragm actuated, black figures on white background, front recalibration adjustment, 2 percent of full scale accuracy.
- B. Inclined manometer, red liquid on white background with black figures, front recalibration adjustment, 3 percent of full scale accuracy.

PART 3 EXECUTION

3.01 INSTALLATION

END OF SECTION

SECTION 22 0548

VIBRATION AND SEISMIC CONTROLS FOR PLUMBING PIPING AND EQUIPMENT

PART 1 GENERAL

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. General:
 - 1. All vibration isolators, base frames and inertia bases to conform to all uniform deflection and stability requirements under all operating loads.
 - 2. Steel springs to function without undue stress or overloading.
 - 3. Steel springs to operate in the linear portion of the load versus deflection curve over deflection range of not less than 50 percent above specified deflection.
 - 4. Lateral to vertical stiffness ratio to not exceed 0.08 with spring deflection at minimum 75 percent of specified deflection.
 - 5. All equipment mounted on vibration isolated bases to have minimum operating clearance of 2 inches between the base and floor or support beneath unless noted otherwise.

2.02 EQUIPMENT SUPPORT BASES

- A. Structural Bases:
 - 1. Construction: Engineered, structural steel frames with welded brackets for side mounting of the isolators.
 - 2. Frames: Square, rectangular or T-shaped.
 - 3. Design: Sufficiently rigid to prevent misalignment or undue stress on machine, and to transmit design loads to isolators and snubbers.
- B. Concrete Inertia Bases:
 - 1. Construction: Engineered, steel forms, with integrated isolator brackets and anchor bolts, welded or tied reinforcing bars running both ways in a single layer.
 - 2. Size: 6 inches minimum depth and sized to accommodate elbow supports.
 - 3. Mass: Minimum of 1.5 times weight of isolated equipment.
 - 4. Connecting Point: Reinforced to connect isolators and snubbers to base including template and fastening devices for equipment.
 - 5. Concrete: Filled on site with minimum 3000 psi concrete. See Section 03 3000 for additional requirements.

2.03 VIBRATION ISOLATORS

- A. Non-Seismic Type:
 - 1. All Elastomeric-Fiber Glass Pads:
 - a. Configuration: Flat or molded.
 - b. Thickness: 0.25 inch minimum.
 - c. Assembly: Single or multiple layers using bonded, galvanized sheet metal separation plate between each layer with load plate providing evenly distributed load over pad surface.
 - 2. Elastomeric Mounts:
 - a. Material: Oil, ozone, and oxidant resistant compounds.
 - b. Assembly: Encapsulated load transfer plate bolted to equipment and base plate with anchor hole bolted to supporting structure.
 - 3. Steel Springs:
 - a. Assembly: Freestanding, laterally stable without housing.
 - b. Leveling Device: Rigidly connected to equipment or frame.
 - 4. Restrained Steel Springs:
 - a. Housing: Rigid blocking during rigging prevents equipment installed and operating height from changing during temporary weight reduction.
 - b. Equipment Wind Loading: Adequate means for fastening isolator top to equipment and isolator base plate to supporting structure.

5. Elastomeric Hangers:
 - a. Housing: Steel construction containing elastomeric isolation element to prevent rod contact with housing and short-circuiting of isolating function.
 - b. Incorporate steel load distribution plate sandwiching elastomeric element to housing.
 6. Spring Hanger:
 - a. Housing: Steel construction containing stable steel spring and integral elastomeric element preventing metal to metal contact.
 - b. Bottom Opening: Sized to allow plus/minus 15 degrees rod misalignment.
 7. Combination Elastomeric-Spring Hanger:
 - a. Housing: Steel construction containing stable steel spring with elastomeric element in series isolating upper connection of hanger box to building structure.
 - b. Bottom Opening: Sized to allow plus/minus 15 degrees rod misalignment.
 8. Thrust Restraints:
 - a. Housing: Steel construction containing stable steel spring and integral elastomeric element installed in pairs to resist air pressure thrusts.
 - b. Bottom Openings: Sized to allow plus/minus 15 degrees rod misalignment.
- B. Seismic Type:
1. Coil Springs Consisting of Single Elements:
 - a. Housing: Manufactured from cast iron material.
 - b. Ductile Material: Designed and rated for seismic applications.
 - c. Spring: Restrained by housing without significant degradation of vibration isolation capabilities during normal equipment operating conditions.
 - d. Resilient Snubbing Grommet System: Incorporated and designed with clearances of no more than 0.25 inch in any direction preventing direct metal-to-metal contact between supported member and fixed restraint housing.
 - e. Resilient Pad: Located in series with spring.
 - f. Coil Springs: Color coded elements to have a lateral stiffness greater than 0.8 times the rated vertical stiffness with 50 percent overload capacity.
 - g. Finish: Suitable for the application.
 2. All Directional Elastomeric:
 - a. Material: Molded from oil, ozone, and oxidant resistant compounds.
 - b. Operating Parameters: Designed to operate within the isolator strain limits providing maximum performance and service life.
 - c. Attachment Method: Encapsulated load transfer plate bolted to equipment and base plate with anchor hole bolted to supporting structure.
 - d. Rating: Cast iron and aluminum housings rated for seismic restraint applications.
 - e. Minimum Operating Static Deflections: Deflections indicated in project documents are not to exceed published load capacities.

2.04 SEISMIC SNUBBER ASSEMBLIES

- A. Comply with:
 1. ASHRAE Handbook - HVAC Applications.
 2. FEMA 412.
 3. FEMA 413.
 4. FEMA 414.
 5. FEMA E-74.
 6. SMACNA (SRM).
- B. All Directional External:
 1. Application: Minimum three (3) snubbers are required for each equipment installation, oriented properly to restrain isolated equipment in all directions.
 2. Construction: Interlocking steel construction attached to the building structure and equipment in a manner consistent with anticipated design loads.

3. Performance: Equipment movement at each snubber location limited to a maximum of 0.25 inches in any direction without significantly degrading the vibration isolation capability of the isolator during normal operating conditions.
 4. Resilient Pad: Minimum 0.25 inch thick cushions any impact and prevents metal-to-metal contact.
- C. Lateral External:
1. Application: Minimum three (3) snubbers are required for each stable equipment installation, oriented properly to restrain isolated equipment in all lateral directions where uplift forces are zero or addressed by other restraints.
 2. Construction: Steel construction attached to the building structure and equipment in a manner consistent with anticipated design loads.
 3. Performance: Equipment movement at each snubber location limited to a maximum of 0.25 inches in any direction without significantly degrading the vibration isolation capability of the isolator during normal operating conditions.
 4. Resilient Pad: Minimum 0.25 inch thick cushions any impact and prevents metal-to-metal contact.
- D. Omni Directional External:
1. Application: Minimum four (4) snubbers are required for each stable equipment installation, oriented properly to restrain isolated equipment in all lateral directions.
 2. Construction: Steel construction attached to the building structure and equipment in a manner consistent with anticipated design loads.
 3. Performance: Equipment movement at each snubber location limited to a maximum of 0.25 inches in any direction without significantly degrading the vibration isolation capability of the isolator during normal operating conditions.
 4. Resilient Pad: Minimum 0.25 inch thick cushions any impact and prevents metal-to-metal contact.
- E. Horizontal Single Axis External:
1. Application: Minimum four (4) snubbers are required for each stable equipment installation, oriented properly to restrain isolated equipment in all lateral directions where uplift forces are zero or addressed by other restraints.
 2. Construction: Steel construction attached to the building structure and equipment in a manner consistent with anticipated design loads.
 3. Performance: Equipment movement at each snubber location limited to a maximum of 0.25 inches in any direction without significantly degrading the vibration isolation capability of the isolator during normal operating conditions.
 4. Resilient Pad: Minimum 0.25 inch thick cushions any impact and prevents metal-to-metal contact.

2.05 SEISMIC RESTRAINTS FOR SUSPENDED COMPONENTS AND EQUIPMENT

- A. Comply with:
1. ASHRAE Handbook - HVAC Applications.
 2. FEMA 412.
 3. FEMA 413.
 4. FEMA 414.
 5. FEMA E-74.
 6. SMACNA (SRM).
- B. Cable Restraints:
1. Wire Rope: Steel wire strand cables sized to resist seismic loads in all lateral directions.
 2. Protective Thimbles: Eliminates potential for dynamic cable wear and strand breakage.
 3. Size: Based on the lesser of cable capacity or anchor load taking into account bracket geometry.
 4. Connections:
 - a. Use overlapping wire rope U clips, cable clamping bolts, swaged sleeves or seismically rated tool-less wedge insert lock connectors.

- b. Internally brace clevis hanger bracket cross bolt to prevent deformation.
- 5. Vertical Suspension Rods: Attach required bracing of sufficient strength to prevent rod buckling from vertical compression forces utilizing series of attachment clips.
- C. Rigid Restraints:
 - 1. Structural Element: Sized to resist seismic loads in all lateral directions and carry both compressive and tensile loading.
 - 2. Size: Based on the lesser of cable capacity or anchor load taking into account bracket geometry.
 - 3. Connections: Internally brace clevis hanger bracket cross bolt to prevent deformation.
 - 4. Static Support System: Anchorage capable of carrying additional tension loads generated by the vertical component of the rigid brace compression which is additive to any static load requirements on the system.
 - 5. Vertical Suspension Rods: Attached required bracing of sufficient strength to prevent rod buckling from vertical compression forces utilizing series of attachment clips.

2.06 ROOF CURBS

- A. Vibration Isolation Curbs:
 - 1. Non-Seismic Curb Rail:
 - a. Location: Between existing roof curb and rooftop equipment.
 - b. Construction: Aluminum.
 - c. Integral vibration isolation to conform to requirements of this section.
 - d. Weather exposed components consist of corrosion resistant materials.
 - 2. Non-Seismic Curb:
 - a. Location: Between structure and rooftop equipment.
 - b. Construction: Aluminum.
 - c. Integral vibration isolation to conform to requirements of this section.
 - d. Weather exposed components consist of corrosion resistant materials.
 - 3. Seismic Curb:
 - a. Location: Between structure and rooftop equipment.
 - b. Construction: Steel.
 - c. Integral vibration isolation to conform to requirements of this section.
 - d. Snubbers consist of minimum 0.25 inch thick resilient pads to avoid metal-to-metal contact without compromising vibration isolating capabilities.
 - e. Weather exposed components consist of corrosion resistant materials.
- B. Seismic Type Non-Isolated Curb and Fabricated Equipment Piers:
 - 1. Location: Between structure and rooftop equipment.
 - 2. Construction: Steel.
 - 3. Weather exposed components consist of corrosion resistant materials.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Install in accordance with manufacturer's instructions.

END OF SECTION

SECTION 22 0553

IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

PART 1 GENERAL

PART 2 PRODUCTS

2.01 IDENTIFICATION APPLICATIONS

- A. Air Handling Units: Nameplates.
- B. Air Terminal Units: Tags.
- C. Automatic Controls: Tags. Key to control schematic.
- D. Control Panels: Nameplates.
- E. Dampers: Ceiling tacks, where located above lay-in ceiling.
- F. Ductwork: Nameplates.
- G. Heat Transfer Equipment: Nameplates.
- H. Instrumentation: Tags.
- I. Major Control Components: Nameplates.
- J. Piping: Tags.
- K. Pumps: Nameplates.
- L. Relays: Tags.
- M. Small-sized Equipment: Tags.
- N. Tanks: Nameplates.
- O. Thermostats: Nameplates.
- P. Valves: Tags and ceiling tacks where located above lay-in ceiling.
- Q. Water Treatment Devices: Nameplates.

2.02 NAMEPLATES

- A. Description: Laminated three-layer plastic with engraved letters.

2.03 TAGS

2.04 CEILING TACKS

- A. Description: Steel with 3/4 inch diameter color coded head.

END OF SECTION

**SECTION 22 0719
PLUMBING PIPING INSULATION**

PART 2 PRODUCTS

1.01 REGULATORY REQUIREMENTS

- A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84 or UL 723.

1.02 GLASS FIBER

- A. Insulation: ASTM C547 and ASTM C795; rigid molded, noncombustible.
1. 'K' Value: ASTM C177, 0.24 at 75 degrees F.
 2. Maximum Service Temperature: 850 degrees F.
 3. Maximum Moisture Absorption: 0.2 percent by volume.
- B. Insulation: ASTM C547 and ASTM C795; rigid molded, noncombustible, with wicking material to transport condensed water to the outside of the system for evaporation to the atmosphere.
1. 'K' Value: ASTM C177, 0.23 at 75 degrees F.
 2. Maximum Service Temperature: 220 degrees F.
 3. Maximum Moisture Absorption: 0.2 percent by volume.
- C. Insulation: ASTM C547 and ASTM C795; semi-rigid, noncombustible, end grain adhered to jacket.
1. 'K' Value: ASTM C177, 0.24 at 75 degrees F.
 2. Maximum Service Temperature: 650 degrees F.
 3. Maximum Moisture Absorption: 0.2 percent by volume.
- D. Vapor Barrier Jacket: White Kraft paper with glass fiber yarn, bonded to aluminized film; moisture vapor transmission when tested in accordance with ASTM E96/E96M of 0.02 perm-inches.
- E. Tie Wire: 0.048 inch stainless steel with twisted ends on maximum 12 inch centers.
- F. Vapor Barrier Lap Adhesive: Compatible with insulation.
- G. Insulating Cement/Mastic: ASTM C195; hydraulic setting on mineral wool.
- H. Fibrous Glass Fabric:
1. Cloth: Untreated; 9 oz/sq yd weight.
 2. Blanket: 1.0 lb/cu ft density.
 3. Weave: 5x5.
- I. Indoor Vapor Barrier Finish:
1. Cloth: Untreated; 9 oz/sq yd weight.
 2. Vinyl emulsion type acrylic, compatible with insulation, black color.
- J. Outdoor Vapor Barrier Mastic: Vinyl emulsion type acrylic or mastic, compatible with insulation, black color.
- K. Outdoor Breather Mastic: Vinyl emulsion type acrylic or mastic, compatible with insulation, black color.
- L. Insulating Cement: ASTM C449.

1.03 CELLULAR GLASS

- A. Insulation: ASTM C552, Type II.
1. Apparent Thermal Conductivity; 'K' value: Grade 6, 0.35 at 100 degrees F.
 2. Service Temperature: Up to 800 degrees F.
 3. Water Vapor Permeability: 0.005 perm inch.
 4. Water Absorption: 0.5 percent by volume, maximum.

1.04 EXPANDED POLYSTYRENE

- A. Insulation: ASTM C578; rigid closed cell.

1. 'K' Value: 0.23 at 75 degrees F.
2. Maximum Service Temperature: 165 degrees F.
3. Maximum Water Vapor Permeance: 5.0 perms

1.05 EXPANDED PERLITE

- A. Insulation: ASTM C610, molded.
1. Maximum Service Temperature: 1200 degrees F.
 2. Maximum Water Vapor Transmission: 0.1 perm.

1.06 HYDROUS CALCIUM SILICATE

- A. Insulation: ASTM C533 and ASTM C795; rigid molded, asbestos free, gold color.
1. 'K' Value: ASTM C177 and C518; 0.40 at 300 degrees F, when tested in accordance with ASTM C177 or ASTM C518.
 2. Maximum Service Temperature: 1200 degrees F.
 3. Density: 15 lb/cu ft.
- B. Tie Wire: 0.048 inch stainless steel with twisted ends on maximum 12 inch centers.
- C. Insulating Cement: ASTM C449.

1.07 POLYISOCYANURATE CELLULAR PLASTIC

- A. Insulation Material: ASTM C591, rigid molded modified polyisocyanurate cellular plastic.
1. Dimension: Comply with requirements of ASTM C585.
 2. 'K' Value: 0.18 at 75 degrees F, when tested in accordance with ASTM C518.
 3. Water Absorption: 0.5 percent by volume, maximum, when tested in accordance with ASTM D2842.
 4. Moisture Vapor Transmission: 4.0 perm in.
 5. Connection: Waterproof vapor barrier adhesive.

1.08 POLYETHYLENE

- A. Insulation: Flexible closed-cell polyethylene tubing, slit lengthwise for installation, complying with applicable requirements of ASTM D1056.
1. 'K' Value: ASTM C177; 0.25 at 75 degrees F.
 2. Maximum Service Temperature: 200 degrees F.
 3. Density: 2 lb/cu ft.
 4. Maximum Moisture Absorption: 1.0 percent by volume.
 5. Moisture Vapor Permeability: 0.05 perm inch, when tested in accordance with ASTM E96/E96M.
 6. Connection: Contact adhesive.

1.09 FLEXIBLE ELASTOMERIC CELLULAR INSULATION

- A. Insulation: Preformed flexible elastomeric cellular rubber insulation complying with ASTM C534/C534M Grade 3; use molded tubular material wherever possible.
1. Minimum Service Temperature: Minus 40 degrees F.
- B. Elastomeric Foam Adhesive: Air dried, contact adhesive, compatible with insulation.

1.10 JACKETS

- A. PVC Plastic.
1. Jacket: One piece molded type fitting covers and sheet material, off-white color.
 - a. Minimum Service Temperature: 0 degrees F.
 - b. Maximum Service Temperature: 150 degrees F.
 - c. Moisture Vapor Permeability: 0.002 perm inch, maximum, when tested in accordance with ASTM E96/E96M.
 - d. Thickness: 10 mil.
 - e. Connections: Brush on welding adhesive.
 2. Covering Adhesive Mastic: Compatible with insulation.
- B. ABS Plastic:

1. Jacket: One piece molded type fitting covers and sheet material, off-white color.
 - a. Minimum Service Temperature: Minus 40 degrees F.
 - b. Maximum Service Temperature: 180 degrees F.
 - c. Moisture Vapor Permeability: 0.012 perm inch, when tested in accordance with ASTM E96/E96M.
 - d. Thickness: 30 mil.
 - e. Connections: Brush on welding adhesive.
- C. Canvas Jacket: UL listed 6 oz/sq yd plain weave cotton fabric treated with dilute fire retardant lagging adhesive.
- D. Aluminum Jacket: ASTM B209 (ASTM B209M) formed aluminum sheet.
 1. Thickness: 0.016 inch sheet.
 2. Finish: Smooth.
 3. Joining: Longitudinal slip joints and 2 inch laps.
 4. Fittings: 0.016 inch thick die shaped fitting covers with factory attached protective liner.
- E. Stainless Steel Jacket: ASTM A666, Type 304 stainless steel.
 1. Thickness: 0.010 inch.
 2. Finish: Smooth.
 3. Metal Jacket Bands: 3/8 inch wide; 0.010 inch thick stainless steel.

END OF SECTION

**SECTION 22 1005
PLUMBING PIPING**

PART 2 PRODUCTS

1.01 GENERAL REQUIREMENTS

- A. Potable Water Supply Systems: Provide piping, pipe fittings, and solder and flux (if used), that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.

1.02 SANITARY SEWER PIPING, BURIED WITHIN 5 FEET OF BUILDING

- A. Cast Iron Pipe: ASTM A74 extra heavy weight.
 - 1. Fittings: Cast iron.
 - 2. Joints: Hub-and-spigot, CISPI HSN compression type with ASTM C564 neoprene gaskets or lead and oakum.
- B. Cast Iron Pipe: CISPI 301, hubless.
 - 1. Fittings: Cast iron.
 - 2. Joints: CISPI 310, neoprene gasket and stainless steel clamp and shield assemblies.
- C. Copper Tube: ASTM B306, DWV.
 - 1. Fittings: ASME B16.23, cast bronze, or ASME B16.29, wrought copper.
 - 2. Joints: ASTM B32, alloy Sn50 solder.
- D. PVC Pipe: ASTM D2665 or ASTM D3034.
 - 1. Fittings: PVC.
 - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

1.03 SANITARY SEWER PIPING, ABOVE GRADE

- A. Cast Iron Pipe: ASTM A74, service weight.
 - 1. Fittings: Cast iron.
 - 2. Joint Seals: ASTM C564 neoprene gaskets, or lead and oakum.
- B. Cast Iron Pipe: CISPI 301, hubless, service weight.
 - 1. Fittings: Cast iron.
 - 2. Joints: CISPI 310, neoprene gaskets and stainless steel clamp-and-shield assemblies.
- C. Copper Tube: ASTM B306, DWV.
 - 1. Fittings: ASME B16.29, wrought copper, or ASME B16.23, sovent.
 - 2. Joints: ASTM B32, alloy Sn50 solder.
- D. Copper Pipe: ASTM B42.
 - 1. Fittings: ASME B16.23, cast bronze, or ASME B16.29, wrought copper.
 - 2. Joints: ASTM B32, alloy Sn50 solder.
- E. Aluminum DWV Pipe:
 - 1. Fittings: Cast iron.
 - 2. Joints: ASTM C564, thermoplastic rubber coupling and stainless steel clamps.
- F. Brass Pipe: ASTM B43, chrome plated.
 - 1. Fittings: ASME B16.23, cast bronze, chrome plated.
 - 2. Joints: Mechanical compression.
- G. Steel Pipe: ASTM A53/A53M Schedule 40, galvanized, using one of the following joint types:
 - 1. Threaded Joints: ASME B16.4 cast iron fittings.
 - 2. Grooved Joints: AWWA C606 grooved pipe, fittings of same material, and mechanical couplings.
- H. ABS Pipe: ASTM F628.
 - 1. Fittings: ABS.
 - 2. Joints: Solvent welded with ASTM D2235 cement.
- I. PVC Pipe: ASTM D2729.
 - 1. Fittings: PVC.

- 2. Joints: Solvent welded, with ASTM D2564 solvent cement.
- J. Fiberglass Pipe: ASTM D3262.
 - 1. Fittings: ASTM D3840.
 - 2. Joints: Epoxy.

1.04 DOMESTIC WATER PIPING, BURIED WITHIN 5 FEET OF BUILDING

- A. Copper Pipe: ASTM B42, hard drawn.
 - 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22 wrought copper and bronze.
- B. Ductile Iron Pipe: AWWA C151/A21.51.
 - 1. Fittings: Ductile or gray iron, standard thickness.
 - 2. Joints: AWWA C111/A21.11, rubber gasket with 3/4 inch diameter rods.
- C. PE Pipe: ASTM D2239.
 - 1. Fittings: ASTM D2609, PE.
 - 2. Joints: Mechanical with stainless steel clamp.
- D. Polyethylene/Aluminum Composite Pipe: ASTM F1281 or ASTM F1282, tested for potable water and residual chlorine use.
 - 1. Fittings and Joints: Brass compression type.

1.05 DOMESTIC WATER PIPING, ABOVE GRADE

- A. Copper Tube: ASTM B88 (ASTM B88M), Type K (A), Drawn (H).
- B. Steel Pipe: ASTM A53/A53M Schedule 40, galvanized, using one of the following joint types:
- C. CPVC Pipe: ASTM D2846/D2846M, ASTM F441/F441M, or ASTM F442/F442M.
 - 1. Fittings: CPVC; ASTM D2846/D2846M, ASTM F437, ASTM F438, or ASTM F439.
 - 2. Joints: ASTM D2846/D2846M, solvent weld with ASTM F493 solvent cement.
- D. PVC Pipe: ASTM D1785 or ASTM D2241.
 - 1. Fittings: ASTM D2665, PVC.
 - 2. Joints: ASTM D2846/D2846M, solvent weld with ASTM F493 solvent cement.
- E. Polyethylene/Aluminum Composite Pipe: ASTM F1281 or ASTM F1282, tested for potable water and residual chlorine use.
 - 1. Fittings and Joints: Brass compression type.
- F. Cross-Linked Polyethylene Pipe: ASTM F876 or ASTM F877.
 - 1. PPI TR-4 Pressure Design Basis:
 - 2. Fittings: Brass and copper.
 - 3. Joints: Mechanical compression fittings.
- G. Stainless Steel Pipe: ASTM A269/A269M, Type 304 alloy.

1.06 STORM WATER PIPING, BURIED WITHIN 5 FEET OF BUILDING

- A. Cast Iron Pipe: ASTM A74 extra heavy weight.
 - 1. Fittings: Cast iron.
 - 2. Joint Seals: ASTM C564 neoprene gaskets, or lead and oakum.
- B. Cast Iron Pipe: CISPI 301, hubless, service weight.
 - 1. Fittings: Cast iron.
 - 2. Joints: Neoprene gaskets and stainless steel clamp-and-shield assemblies.
- C. Copper Tube: ASTM B306, DWV.
 - 1. Fittings: ASME B16.23, cast bronze, or ASME B16.29, wrought copper.
 - 2. Joints: ASTM B32, alloy Sn50 solder.
- D. PVC Pipe: ASTM D2665 or ASTM D3034.
 - 1. Fittings: PVC.
 - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

1.07 STORM WATER PIPING, ABOVE GRADE

- A. Cast Iron Pipe: ASTM A74 extra heavy weight.

1. Fittings: Cast iron.
 2. Joint Seals: ASTM C564 neoprene gaskets, or lead and oakum.
- B. Cast Iron Pipe: CISPI 301, hubless, service weight.
1. Fittings: Cast iron.
 2. Joints: Neoprene gaskets and stainless steel clamp-and-shield assemblies.
- C. Copper Tube: ASTM B306, DWV.
1. Fittings: ASME B16.23, cast bronze, or ASME B16.29, wrought copper.
 2. Joints: ASTM B32, alloy Sn50 solder.
- D. Aluminum DWV Pipe:
1. Fittings: Cast iron.
 2. Joints: ASTM C564, thermoplastic rubber coupling and stainless steel clamps.
- E. ABS Pipe: ASTM D2680.
1. Fittings: ABS.
 2. Joints: Solvent welded with ASTM D2235 cement.
- F. PVC Pipe: ASTM D2665 or ASTM D3034.
1. Fittings: PVC.
 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

1.08 NATURAL GAS PIPING, BURIED WITHIN 5 FEET OF BUILDING

- A. Steel Pipe: ASTM A53/A53M Schedule 40 black.
1. Fittings: ASTM A234/A234M, wrought steel welding type.
 2. Joints: ASME B31.1, welded.
 3. Jacket: AWWA C105/A21.5 polyethylene jacket or double layer, half-lapped 10 mil polyethylene tape.

1.09 NATURAL GAS PIPING, ABOVE GRADE

- A. Steel Pipe: ASTM A53/A53M Schedule 40 black.
1. Fittings: ASME B16.3, malleable iron, or ASTM A234/A234M, wrought steel welding type.
 2. Joints: Threaded or welded to ASME B31.1.
- B. Copper Tube: ASTM B88 (ASTM B88M), Type K (A) or L (B) annealed.
1. Fittings: ASME B16.26, cast bronze.
 2. Joints: Flared.

1.10 FLANGES, UNIONS, AND COUPLINGS

- A. Unions for Pipe Sizes 3 Inches and Under:
- B. Flanges for Pipe Size Over 1 Inch:
- C. Mechanical Couplings for Grooved and Shouldered Joints: Two or more curved housing segments with continuous key to engage pipe groove, circular C-profile gasket, and bolts to secure and compress gasket.
1. Dimensions and Testing: In accordance with AWWA C606.
 2. Housing Material: Provide ASTM A47/A47M malleable iron, ductile iron, or galvanized.
- D. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.

END OF SECTION

**SECTION 22 1006
PLUMBING PIPING SPECIALTIES**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Specialties in Potable Water Supply Systems: Provide products that comply with NSF 61 and NSF 372 for maximum lead content.

2.02 DRAINS

- A. Roof Drains:
1. Assembly: ASME A112.6.4.
 2. Body: Lacquered cast iron with sump.
 3. Strainer: Removable cast bronze dome with vandal proof screws.
- B. Parapet Drains:
1. Lacquered cast iron body with aluminum flashing clamp collar and nickel bronze sloping grate.
- C. Canopy and Cornice Drains:
1. Lacquered cast iron body with aluminum flashing clamp collar and nickel bronze flat strainer.
- D. Roof Overflow Drains:
1. Lacquered cast iron body and clamp collar and bottom clamp ring; pipe extended to 6 inches above flood elevation.
- E. Downspout Nozzles:
1. Bronze round with straight bottom section.
- F. Area Drains:
1. Assembly: ASME A112.6.4.
 2. Body: Lacquered cast iron with sump.
 3. Strainer: Round nickel-bronze.
- G. Linear Drains:
1. Body: Provide PVC or stainless-steel with sloped channel to vertical waste pipe.
 2. Clamping Ring: Stainless steel mechanism to clamp waterproof membrane to linear drain body.
 3. Strainer: Removable brushed stainless steel strainer furnished by manufacturer.
 4. Grate: Cross-Hatch.
 5. Additional Components: Manufacturer's standard membrane, sealant, fasteners, and anchors.
- H. Floor Drain (FD-1):
1. ASME A112.6.3; lacquered cast iron or stainless steel, two piece body with double drainage flange, weep holes, reversible clamping collar, and round, adjustable nickel-bronze strainer.
- I. Floor Drain (FD-2):
1. ASME A112.6.3; lacquered cast iron or stainless steel, two piece body with double drainage flange, weep holes, reversible clamping collar, and round, adjustable round nickel bronze strainer with removable perforated sediment bucket.
- J. Floor Drain (FD-3):
1. ASME A112.6.3; lacquered cast iron or stainless steel, two piece body with double drainage flange, weep holes, reversible clamping collar, and round, adjustable nickel-bronze strainer with polished bronze funnel or anti-splash rim.
- K. Floor Drain (FD-4):

1. ASME A112.6.3; lacquered cast iron or stainless steel, two piece body with double drainage flange, weep holes, reversible clamping collar, and round, adjustable nickel-bronze extra heavy duty strainer.
- L. Floor Drain (FD-5):
 1. ASME A112.6.3; lacquered cast iron or stainless steel, two piece body with double drainage flange, weep holes, reversible clamping collar, and round, adjustable nickel-bronze extra heavy duty strainer with hinged grate and sediment bucket.
- M. Floor Drain (FD-6):
 1. Lacquered cast iron or stainless steel, two piece body with drainage flange, heavy duty grate 6 inches wide, 12 inches long, dome strainer, end plates with gaskets.
- N. Shower Channel Drain (SCD-1): Factory fabricated channel and grate with built in outlet pipe.
- O. Prefabricated Trench Drain (TD-1): Trench drain system assembled from factory fabricated, polymer concrete castings in standard lengths and variable depths, with integral joint flanges and integral grating support rails; includes joint gaskets and grating.
- P. Floor Sink (FS-1):
 1. Lacquered cast iron body with dome strainer and seepage flange.
- Q. Floor Sink (FS-2):
 1. Round lacquered cast iron body with integral seepage pan, epoxy coated interior, aluminum dome strainer, nickel bronze frame, full grate.
- R. Planter Drains:
 1. ASME A112.6.4; lacquered cast iron body with sump.
 2. Strainer: Removable polyethylene dome with stainless steel screen.

2.03 CLEANOUTS

- A. Cleanouts at Exterior Surfaced Areas (CO-1):
 1. Round cast nickel bronze access frame and non-skid cover.
- B. Cleanouts at Exterior Unsurfaced Areas (CO-2):
 1. Line type with lacquered cast iron body and round epoxy coated gasketed cover.
- C. Cleanouts at Interior Finished Floor Areas (CO-3):
 1. Lacquered cast iron body with anchor flange, reversible clamping collar, threaded top assembly, and round gasketed scored cover in service areas and round gasketed depressed cover to accept floor finish in finished floor areas.
- D. Cleanouts at Interior Finished Wall Areas (CO-4):
 1. Line type with lacquered cast iron body and round epoxy coated gasketed cover, and round stainless steel access cover secured with machine screw.
- E. Cleanouts at Interior Unfinished Accessible Areas (CO-5): Calked or threaded type. Provide bolted stack cleanouts on vertical rainwater leaders.

2.04 HOSE BIBBS

- A. Interior Hose Bibbs:
 1. Bronze or brass with integral mounting flange, replaceable hexagonal disc, hose thread spout, chrome plated where exposed with handwheel, integral vacuum breaker in conformance with ASSE 1011.
- B. Interior Mixing Type Hose Bibbs:
 1. Bronze or brass, wall mounted, double service faucet with hose thread spout, integral stops, chrome plated where exposed with handwheels, and vacuum breaker in conformance with ASSE 1011.

2.05 HYDRANTS

- A. Wall Hydrants:
 1. ASSE 1019; freeze resistant, self-draining type with chrome plated wall plate hose thread spout, handwheel, and integral vacuum breaker.

- B. Floor Hydrants:
 - 1. ASSE 1019; chrome plated lockable recessed box, hose thread spout, lockshield and removable key, and vacuum breaker.

2.06 WASHING MACHINE BOXES AND VALVES

- A. Description: Plastic preformed rough-in box with brass long shank valves with wheel handles, socket for 2 inch waste, slip in finishing cover.

2.07 REFRIGERATOR VALVE AND RECESSED BOX

- A. Description: Plastic preformed rough-in box with brass valves with wheel handle, slip in finishing cover.

2.08 BACK WATER VALVES

- A. Cast Iron Back Water Valves: ASME A112.6.4; lacquered cast iron body and cover, brass valve, extension sleeve, and access cover.
- B. Plastic Back Water Valves: ABS body and valve, extension sleeve, and access cover.

2.09 BACKFLOW PREVENTERS

- A. Reduced Pressure Backflow Preventers:

2.10 DOUBLE CHECK VALVE ASSEMBLIES

- A. Double Check Valve Assemblies:
 - 1. ASSE 1012; Bronze body with corrosion resistant internal parts and stainless steel springs; two independently operating check valves with intermediate atmospheric vent.

2.11 WATER HAMMER ARRESTORS

- A. Water Hammer Arrestors:
 - 1. Stainless steel construction, bellows type sized in accordance with PDI-WH 201, precharged suitable for operation in temperature range minus 100 to 300 degrees F and maximum 250 psi working pressure.

2.12 SUMP AND INTERCEPTORS

- A. Sumps:
 - 1. Precast concrete with required openings and drainage fittings.
- B. Oil Interceptors:
 - 1. Construction:
 - a. Material: Epoxy coated fabricated steel.
 - b. Rough-in: On floor.
- C. Sediment Interceptors:
 - 1. Epoxy coated cast iron body and secured cover with removable stainless steel sediment bucket.

2.13 MIXING VALVES

- A. Thermostatic Mixing Valves:
 - 1. Valve: Chrome plated cast brass body, stainless steel or copper alloy bellows, integral temperature adjustment.
 - 2. Cabinet: 16 gage, 0.0598 inch prime coated steel, for recessed mounting with keyed lock.
- B. Pressure Balanced Mixing Valves:
 - 1. Valve: Chrome plated cast brass body, stainless steel cylinder, integral temperature adjustment.

2.14 CATCH BASINS AND MANHOLES

- A. Catch Basins:
 - 1. Inlet Assembly: Two piece heavy duty cast steel or cast iron frame and grate with ground or machined grate and frame bearing surfaces.
 - 2. Curb and gutter style: Rectangular grate and storm back:
 - 3. Standard: Round frame and grate:

4. Manhole frame: Grated top:
- B. Manholes: Formed-bottom type, laid on cast-in-place reinforced concrete foundation pad; concrete as specified in Section 03 3000.
 1. Cover: Standard cast iron with minimum sized pick hole, and frame. Use heavy duty cover and frame in vehicular traffic areas.

END OF SECTION

**SECTION 22 3000
PLUMBING EQUIPMENT**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 COMMERCIAL GAS FIRED WATER HEATERS

- A. Type: Automatic, natural gas-fired, vertical storage.
- B. Performance:
 - 1. Energy Factor: 0.85.
- C. Tank: Glass lined welded steel ASME labeled; multiple flue passages, 4 inch diameter inspection port, thermally insulated with minimum 2 inches glass fiber, encased in corrosion-resistant steel jacket; baked-on enamel finish; floor shield and legs.
- D. Accessories: Provide:
 - 1. Water Connections: Brass.
 - 2. Dip tube: Brass.
 - 3. Drain Valve.
 - 4. Anode: Magnesium.
- E. Controls: Automatic direct immersion thermostat with temperature range adjustable minimum 175 degrees F differential, automatic reset high temperature limiting thermostat factory set at 195 degrees F, gas pressure regulator, multi-ribbon or tubular burner, 100 percent safety shut-off pilot and thermocouple, intermittent electronic ignition monitoring pilot and main flame, trial for re-ignition for momentary loss of flame, shut down of pilot and main burner in 2-4 seconds after loss of flame, and automatic flue damper.

2.02 IN-LINE CIRCULATOR PUMPS

- A. Casing: Bronze, rated for 125 psig working pressure, with stainless steel rotor assembly.
- B. Impeller: Bronze.
- C. Shaft: Alloy steel with integral thrust collar and two oil lubricated bronze sleeve bearings.
- D. Seal: Carbon rotating against a stationary ceramic seat.
- E. Drive: Flexible coupling.

2.03 SUMP PUMPS

- A. Type: Vertical centrifugal, direct connected, simplex arrangement.
- B. Casing: Cast iron volute with radial clearance around impeller, inlet strainer, slide away couplings.
- C. Impeller: Cast iron; open non-clog, keyed to corrosion resistant alloy steel shaft.
- D. Support: Cast iron pedestal motor support on steel floor plate with gas tight gaskets.
- E. Bearings: Forced grease lubricated bronze sleeve spaced maximum 48 inches and grease lubricated ball thrust at floor plate.
- F. Drive: Flexible coupling to vertical, solid shaft ball bearing electric motor.
- G. Sump: Steel cover plate with steel curb frame for grouting into concrete sump with inspection opening and cover, and alarm fittings.
- H. Controls (Simplex): Float switch with float rod, stops, and corrosion resistant float, and separate pressure switch high level alarm with transformer, alarm bell and stand-pipe.

2.04 SUBMERSIBLE SUMP PUMPS

- A. Type: Completely submersible, vertical, centrifugal.
- B. Casing: Cast iron pump body and oil filled motor chamber.
- C. Impeller: Cast iron; open non-clog, stainless steel shaft.

- D. Bearings: Ball bearings.
- E. Sump: Fiberglass basin with steel cover plate.
- F. Accessories: Oil resistant 6 foot cord and plug with three-prong connector for connection to electric wiring system including grounding connector.
- G. Servicing: Slide-away coupling consisting of discharge elbow secure to sump floor, movable bracket, guide pipe system, lifting chain and chain hooks.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install plumbing equipment in accordance with manufacturer's instructions, as required by code, and complying with conditions of certification, if any.
- B. Coordinate with plumbing piping and related fuel piping work to achieve operating system.
- C. Pumps:
 - 1. Ensure pumps operate at specified system fluid temperatures without vapor binding and cavitation, are non-overloading in parallel or individual operation, and operate within 25 percent of midpoint of published maximum efficiency curve.

END OF SECTION

**SECTION 22 4000
PLUMBING FIXTURES**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 GENERAL

- A. Potable Water Systems: Provide plumbing fittings and faucets that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.
- B. Water Efficiency: EPA WaterSense label is required for all water closets, urinals, lavatory faucets, and showerheads.

2.02 FLUSH VALVE WATER CLOSETS

- A. Water Closets: Vitreous china, ASME A112.19.2, floor mounted, siphon jet flush action, china bolt caps.
 - 1. Flush Valve: Exposed (top spud).
 - 2. Flush Operation: Manual, oscillating handle.
- B. Flush Valves: ASME A112.18.1, diaphragm type, complete with vacuum breaker stops and accessories.
 - 1. Sensor-Operated Type: Solenoid operator, low voltage hard-wired, infrared sensor and over-ride push button.
 - 2. Concealed Type: Rough brass, exposed parts chrome plated, wall escutcheon, wheel handle stop.
 - 3. Exposed Type: Chrome plated, escutcheon, integral screwdriver stop.
 - 4. Metering Type: Easily accessible adjustment nut.
- C. Seats:
 - 1. Solid white plastic, open front, extended back, self-sustaining hinge, brass bolts, with cover.
- D. Water Closet Carriers:
 - 1. ASME A112.6.1M; adjustable cast iron frame, integral drain hub and vent, adjustable spud, lugs for floor and wall attachment, threaded fixture studs with nuts and washers.

2.03 DUAL FLUSH WATER CLOSETS

- A. Dual Flush Water Closets: ASME A112.19.14; high efficiency and low consumption, vitreous china, dual flush, tank type.
 - 1. Flush System: Pressure-assisted, wash down with a half-flush consumption of 1.1 GPF.
 - 2. Flush System: Gravity feed, wash down with a half-flush consumption of 0.8 GPF.
 - 3. Bowl: Elongated.
 - 4. Rough in: 12 inch.
 - 5. Seat: Manufacturer's standard or recommended elongated closed front seat with lid.
 - 6. Color: White.

2.04 WALL HUNG URINALS

- A. Urinals: Vitreous china, ASME A112.19.2, wall hung with side shields and concealed carrier.
 - 1. Flush Volume: 0.125 gallon, maximum.
 - 2. Flush Valve: Exposed (top spud).
 - 3. Flush Operation: Sensor operated.
 - 4. Trap: Integral.
- B. Flush Valves: ASME A112.18.1, diaphragm type, complete with vacuum breaker stops and accessories.
 - 1. Sensor-Operated Type: Solenoid operator, low voltage hard-wired, infrared sensor and over-ride push button.
 - 2. Concealed Type: Rough brass, exposed parts chrome plated, wall escutcheon, wheel handle stop.

3. Exposed Type: Chrome plated, escutcheon, integral screwdriver stop.
 4. Metering Type: Easily accessible adjustment nut.
- C. Carriers:
1. ASME A112.6.1M; cast iron and steel frame with tubular legs, lugs for floor and wall attachment, threaded fixture studs for fixture hanger, bearing studs.

2.05 LAVATORIES

- A. Vitreous China Wall Hung Basin: ASME A112.19.2; vitreous china wall hung lavatory, manufacturer's standard size minimum, with 4 inch high back, rectangular basin with splash lip, front overflow, and soap depression.
- B. Cast Iron Wall Hung Basin: ASME A112.19.1; porcelain enamelled cast iron wall-hung lavatory, manufacturer's standard size minimum, with 4 inch high back, drillings on 4 inch centers, rectangular basin with splash lip, front overflow, and soap depression.
- C. Steel Counter Top Basin: ASME A112.19.4M; porcelain on steel self-rimming counter top lavatory, manufacturer's standard size with drillings on 4 inch centers, front overflow, soap depression, seal of putty, calking, or concealed vinyl gasket.
- D. Vitreous China Counter Top Basin: ASME A112.19.2; vitreous china self-rimming counter top lavatory, manufacturer's standard size with drillings on 4 inch centers, front overflow, soap depression, seal of putty, calking, or concealed vinyl gasket.
- E. Pedestal Basin: ASME A112.19.2; vitreous china pedestal lavatory with integral rear splash rim, manufacturer's standard inches in diameter with drillings on 8 inch centers, front overflow, steel hanger.
- F. Supply Faucet: ASME A112.18.1; chrome plated combination supply fitting with pop-up waste, water economy aerator with maximum flow of 2.2 gallons per minute, indexed handles.
- G. Metered Faucet: ASME A112.18.1; chrome plated metered mixing faucet with low voltage operated solenoid operator and infrared sensor, aerator and cover plate, open grid strainer.
- H. Sensor Operated Faucet: Cast brass, chrome plated, deck mounted with sensor located on neck of spout.
 1. Spout Style: Standard.
 2. Mixing Valve: None, single line for tempered water.
 3. Water Supply: 3/8 inch compression connections.
 4. Aerator: Vandal resistant, 0.5 GPM, laminar flow device.
 5. Finish: Polished chrome.

2.06 SINKS

- A. Single Compartment Bowl: ASME A112.19.3; 20 gage, 0.0359 inch thick, Type 302 stainless steel, self rimming and undercoated, with ledge back drilled for trim.
- B. Double Compartment Bowl: ASME A112.19.3; 20 gage, 0.0359 inch thick, Type 302 stainless steel, self rimming and undercoated, with ledge back drilled for trim.
- C. Enamelled Bowl: ASME A112.19.4M; steel, porcelain enamelled, single compartment, self-rimming and undercoated, with 3-1/2 inch diameter crumb cup and chromed brass tailpiece, ledge back drilled for trim.

2.07 SHOWER RECEPTORS

2.08 SHOWERS

- A. Cabinet: ASME A112.19.4M; porcelain enamelled steel, 32 by 32 by 75 inches with stone texture receptor, soap dish, removable chrome plated strainer, tail piece, color as selected.
- B. Cabinet: ANSI Z124.1.2 reinforced glass fiber, 32 by 32 by 75 inches with stone texture, integral receptor, soap dish, integral seat, removable chrome plated strainer, tail piece, color as selected.
- C. Low-Flow Shower Head:

1. ASME A112.18.1; chrome plated vandal-proof institutional head with integral wall bracket, built-in 1.5 gpm flow control.
- D. Ultra-Low-Flow Shower Head:
 1. ASME A112.18.1; chrome plated vandal-proof institutional head with integral wall bracket, built-in 0.8 gpm flow control.

2.09 DRINKING FOUNTAINS

- A. Fountain: Molded white reinforced glass fiber with underside vandal proof cowling, hooded elevated anti-squirt bubbler with stream guard, automatic stream regulator, cross handle, mounting bracket, screwdriver stop.
- B. Fountain: White reinforced glass fiber, semi-recessed, with elevated anti-squirt bubbler with stream guard, automatic stream regulator, cross handle, access cover plate, mounting bracket, screwdriver stop.

2.10 ELECTRIC WATER COOLERS

- A. Water Cooler: Electric, mechanically refrigerated; surface handicapped mounted; stainless steel top, vinyl on steel body, elevated anti-squirt bubbler with stream guard, automatic stream regulator, push button, mounting bracket; integral air cooled condenser and stainless steel grille.

2.11 WASH FOUNTAINS

- A. Freestanding Wash Fountains:
 1. Bowl: Circular, 36 inch diameter, precast stone.

2.12 SERVICE SINKS

- A. Bowl: ASME A112.19.1; 22 by 18 by 12 inch deep, porcelain enamelled (inside only) cast iron roll-rim sink, with 12 inch high back, concealed hanger, chrome plated strainer, stainless steel rim guard, cast iron P-trap with adjustable floor flange.
- B. Bowl: 36 by 24 by 10 inch high white molded stone, floor mounted, with one inch wide shoulders, vinyl bumper guard, stainless steel strainer.
- C. Trim: ASME A112.18.1 exposed wall type supply with cross handles, spout wall brace, vacuum breaker, hose end spout, strainers, eccentric adjustable inlets, integral screwdriver stops with covering caps and adjustable threaded wall flanges.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install components level and plumb.

END OF SECTION

SECTION 23 0513

COMMON MOTOR REQUIREMENTS FOR HVAC EQUIPMENT

PART 1 GENERAL

PART 2 PRODUCTS

2.01 GENERAL CONSTRUCTION AND REQUIREMENTS

- A. Construction:
 - 1. Open drip-proof type except where specifically noted otherwise.
 - 2. Design for continuous operation in 40 degrees C environment.
 - 3. Design for temperature rise in accordance with NEMA MG 1 limits for insulation class, service factor, and motor enclosure type.
- B. Explosion-Proof Motors: UL approved and labelled for hazard classification, with over temperature protection.
- C. Visible Nameplate: Indicating motor horsepower, voltage, phase, cycles, RPM, full load amps, locked rotor amps, frame size, manufacturer's name and model number, service factor, power factor, efficiency.
- D. Wiring Terminations:
 - 1. Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Enclose terminal lugs in terminal box sized to NFPA 70, threaded for conduit.

2.02 SINGLE PHASE POWER - SPLIT PHASE MOTORS

- A. Drip-proof Enclosure: Class A (50 degrees C temperature rise) insulation, NEMA Service Factor, prelubricated sleeve or ball bearings.
- B. Enclosed Motors: Class A (50 degrees C temperature rise) insulation, 1.0 Service Factor, prelubricated ball bearings.

2.03 SINGLE PHASE POWER - PERMANENT-SPLIT CAPACITOR MOTORS

- A. Open Drip-proof or Enclosed Air Over Enclosure: Class A (50 degrees C temperature rise) insulation, minimum 1.0 Service Factor, prelubricated sleeve or ball bearings, automatic reset overload protector.

2.04 SINGLE PHASE POWER - CAPACITOR START MOTORS

- A. Motors: Capacitor in series with starting winding; provide capacitor-start/capacitor-run motors with two capacitors in parallel with run capacitor remaining in circuit at operating speeds.
- B. Drip-proof Enclosure: Class A (50 degrees C temperature rise) insulation, NEMA Service Factor, prelubricated sleeve bearings.
- C. Enclosed Motors: Class A (50 degrees C temperature rise) insulation, 1.0 Service Factor, prelubricated ball bearings.

2.05 THREE PHASE POWER - SQUIRREL CAGE MOTORS

- A. Power Output, Locked Rotor Torque, Breakdown or Pull Out Torque: NEMA Design B characteristics.
- B. Design, Construction, Testing, and Performance: Conform to NEMA MG 1 for Design B motors.
- C. Testing Procedure: In accordance with IEEE 112. Load test motors to determine free from electrical or mechanical defects in compliance with performance data.
- D. Motor Frames: NEMA Standard T-Frames of steel, aluminum, or cast iron with end brackets of cast iron or aluminum with steel inserts.
- E. Thermistor System (Motor Frame Sizes 254T and Larger): Three PTC thermistors embedded in motor windings and epoxy encapsulated solid state control relay for wiring into motor starter; refer to Section 26 2913.

- F. Weatherproof Epoxy Sealed Motors: Epoxy seal windings using vacuum and pressure with rotor and starter surfaces protected with epoxy enamel; bearings double shielded with waterproof non-washing grease.
- G. Nominal Efficiency: As scheduled at full load and rated voltage when tested in accordance with IEEE 112.
- H. Nominal Power Factor: As scheduled at full load and rated voltage when tested in accordance with IEEE 112.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install securely on firm foundation. Mount ball bearing motors with shaft in any position.

END OF SECTION

SECTION 23 0548

VIBRATION AND SEISMIC CONTROLS FOR HVAC PIPING AND EQUIPMENT

PART 2 PRODUCTS

1.01 PERFORMANCE REQUIREMENTS

- A. General:
1. All vibration isolators, base frames and inertia bases to conform to all uniform deflection and stability requirements under all operating loads.
 2. Steel springs to function without undue stress or overloading.
 3. Steel springs to operate in the linear portion of the load versus deflection curve over deflection range of not less than 50 percent above specified deflection.
 4. Lateral to vertical stiffness ratio to not exceed 0.08 with spring deflection at minimum 75 percent of specified deflection.
 5. All equipment mounted on vibration isolated bases to have minimum operating clearance of 2 inches between the base and floor or support beneath unless noted otherwise.

1.02 EQUIPMENT SUPPORT BASES

- A. Structural Bases:
1. Construction: Engineered, structural steel frames with welded brackets for side mounting of the isolators.
 2. Frames: Square, rectangular or T-shaped.
 3. Design: Sufficiently rigid to prevent misalignment or undue stress on machine, and to transmit design loads to isolators and snubbers.
- B. Concrete Inertia Bases:
1. Construction: Engineered, steel forms, with integrated isolator brackets and anchor bolts, welded or tied reinforcing bars running both ways in a single layer.
 2. Size: 6 inches minimum depth and sized to accommodate elbow supports.
 3. Mass: Minimum of 1.5 times weight of isolated equipment.
 4. Connecting Point: Reinforced to connect isolators and snubbers to base including template and fastening devices for equipment.
 5. Concrete: Filled on site with minimum 3000 psi concrete. See Section 03 3000 for additional requirements.

1.03 VIBRATION ISOLATORS

- A. Non-Seismic Type:
1. All Elastomeric-Fiber Glass Pads:
 - a. Configuration: Flat or molded.
 - b. Thickness: 0.25 inch minimum.
 - c. Assembly: Single or multiple layers using bonded, galvanized sheet metal separation plate between each layer with load plate providing evenly distributed load over pad surface.
 2. Elastomeric Mounts:
 - a. Material: Oil, ozone, and oxidant resistant compounds.
 - b. Assembly: Encapsulated load transfer plate bolted to equipment and base plate with anchor hole bolted to supporting structure.
 3. Steel Springs:
 - a. Assembly: Freestanding, laterally stable without housing.
 - b. Leveling Device: Rigidly connected to equipment or frame.
 4. Restrained Steel Springs:
 - a. Housing: Rigid blocking during rigging prevents equipment installed and operating height from changing during temporary weight reduction.
 - b. Equipment Wind Loading: Adequate means for fastening isolator top to equipment and isolator base plate to supporting structure.
 5. Elastomeric Hangers:

- a. Housing: Steel construction containing elastomeric isolation element to prevent rod contact with housing and short-circuiting of isolating function.
- b. Incorporate steel load distribution plate sandwiching elastomeric element to housing.
- 6. Spring Hanger:
 - a. Housing: Steel construction containing stable steel spring and integral elastomeric element preventing metal to metal contact.
 - b. Bottom Opening: Sized to allow plus/minus 15 degrees rod misalignment.
- 7. Combination Elastomeric-Spring Hanger:
 - a. Housing: Steel construction containing stable steel spring with elastomeric element in series isolating upper connection of hanger box to building structure.
 - b. Bottom Opening: Sized to allow plus/minus 15 degrees rod misalignment.
- 8. Thrust Restraints:
 - a. Housing: Steel construction containing stable steel spring and integral elastomeric element installed in pairs to resist air pressure thrusts.
 - b. Bottom Openings: Sized to allow plus/minus 15 degrees rod misalignment.
- B. Seismic Type:
 - 1. Coil Springs Consisting of Single Elements:
 - a. Housing: Manufactured from cast iron material.
 - b. Ductile Material: Designed and rated for seismic applications.
 - c. Spring: Restrained by housing without significant degradation of vibration isolation capabilities during normal equipment operating conditions.
 - d. Resilient Snubbing Grommet System: Incorporated and designed with clearances of no more than 0.25 inch in any direction preventing direct metal-to-metal contact between supported member and fixed restraint housing.
 - e. Resilient Pad: Located in series with spring.
 - f. Coil Springs: Color coded elements to have a lateral stiffness greater than 0.8 times the rated vertical stiffness with 50 percent overload capacity.
 - g. Finish: Suitable for the application.
 - 2. All Directional Elastomeric:
 - a. Material: Molded from oil, ozone, and oxidant resistant compounds.
 - b. Operating Parameters: Designed to operate within the isolator strain limits providing maximum performance and service life.
 - c. Attachment Method: Encapsulated load transfer plate bolted to equipment and base plate with anchor hole bolted to supporting structure.
 - d. Rating: Cast iron and aluminum housings rated for seismic restraint applications.
 - e. Minimum Operating Static Deflections: Deflections indicated in project documents are not to exceed published load capacities.

1.04 SEISMIC SNUBBER ASSEMBLIES

- A. Comply with:
 - 1. ASHRAE Handbook - HVAC Applications
 - 2. FEMA 412.
 - 3. FEMA 413.
 - 4. FEMA 414.
 - 5. FEMA E-74.
 - 6. SMACNA (SRM).
- B. All Directional External:
 - 1. Application: Minimum three (3) snubbers are required for each equipment installation, oriented properly to restrain isolated equipment in all directions.
 - 2. Construction: Interlocking steel construction attached to the building structure and equipment in a manner consistent with anticipated design loads.
 - 3. Performance: Equipment movement at each snubber location limited to a maximum of 0.25 inches in any direction without significantly degrading the vibration isolation capability of the isolator during normal operating conditions.

4. Resilient Pad: Minimum 0.25 inch thick cushions any impact and prevents metal-to-metal contact.
- C. Lateral External:
1. Application: Minimum three (3) snubbers are required for each stable equipment installation, oriented properly to restrain isolated equipment in all lateral directions where uplift forces are zero or addressed by other restraints.
 2. Construction: Steel construction attached to the building structure and equipment in a manner consistent with anticipated design loads.
 3. Performance: Equipment movement at each snubber location limited to a maximum of 0.25 inches in any direction without significantly degrading the vibration isolation capability of the isolator during normal operating conditions.
 4. Resilient Pad: Minimum 0.25 inch thick cushions any impact and prevents metal-to-metal contact.
- D. Omni Directional External:
1. Application: Minimum four (4) snubbers are required for each stable equipment installation, oriented properly to restrain isolated equipment in all lateral directions.
 2. Construction: Steel construction attached to the building structure and equipment in a manner consistent with anticipated design loads.
 3. Performance: Equipment movement at each snubber location limited to a maximum of 0.25 inches in any direction without significantly degrading the vibration isolation capability of the isolator during normal operating conditions.
 4. Resilient Pad: Minimum 0.25 inch thick cushions any impact and prevents metal-to-metal contact.
- E. Horizontal Single Axis External:
1. Application: Minimum four (4) snubbers are required for each stable equipment installation, oriented properly to restrain isolated equipment in all lateral directions where uplift forces are zero or addressed by other restraints.
 2. Construction: Steel construction attached to the building structure and equipment in a manner consistent with anticipated design loads.
 3. Performance: Equipment movement at each snubber location limited to a maximum of 0.25 inches in any direction without significantly degrading the vibration isolation capability of the isolator during normal operating conditions.
 4. Resilient Pad: Minimum 0.25 inch thick cushions any impact and prevents metal-to-metal contact.

1.05 SEISMIC RESTRAINTS FOR SUSPENDED COMPONENTS AND EQUIPMENT

- A. Comply with:
1. ASHRAE Handbook - HVAC Applications
 2. FEMA 412.
 3. FEMA 413.
 4. FEMA 414.
 5. FEMA E-74.
 6. SMACNA (SRM).
- B. Cable Restraints:
1. Wire Rope: Steel wire strand cables sized to resist seismic loads in all lateral directions.
 2. Protective Thimbles: Eliminates potential for dynamic cable wear and strand breakage.
 3. Size: Based on the lesser of cable capacity or anchor load taking into account bracket geometry.
 4. Connections:
 - a. Use overlapping wire rope U clips, cable clamping bolts, swaged sleeves or seismically rated tool-less wedge insert lock connectors.
 - b. Internally brace clevis hanger bracket cross bolt to prevent deformation.
 5. Vertical Suspension Rods: Attach required bracing of sufficient strength to prevent rod buckling from vertical compression forces utilizing series of attachment clips.

- C. Rigid Restraints:
1. Structural Element: Sized to resist seismic loads in all lateral directions and carry both compressive and tensile loading.
 2. Size: Based on the lesser of cable capacity or anchor load taking into account bracket geometry.
 3. Connections: Internally brace clevis hanger bracket cross bolt to prevent deformation.
 4. Static Support System: Anchorage capable of carrying additional tension loads generated by the vertical component of the rigid brace compression which is additive to any static load requirements on the system.
 5. Vertical Suspension Rods: Attached required bracing of sufficient strength to prevent rod buckling from vertical compression forces utilizing series of attachment clips.

1.06 ROOF CURBS

- A. Vibration Isolation Curbs:
1. Non-Seismic Curb Rail:
 - a. Location: Between existing roof curb and rooftop equipment.
 - b. Construction: Aluminum.
 - c. Integral vibration isolation to conform to requirements of this section.
 - d. Weather exposed components consist of corrosion resistant materials.
 2. Non-Seismic Curb:
 - a. Location: Between structure and rooftop equipment.
 - b. Construction: Aluminum.
 - c. Integral vibration isolation to conform to requirements of this section.
 - d. Weather exposed components consist of corrosion resistant materials.
 3. Seismic Curb:
 - a. Location: Between structure and rooftop equipment.
 - b. Construction: Steel.
 - c. Integral vibration isolation to conform to requirements of this section.
 - d. Snubbers consist of minimum 0.25 inch thick resilient pads to avoid metal-to-metal contact without compromising vibration isolating capabilities.
 - e. Weather exposed components consist of corrosion resistant materials.
- B. Seismic Type Non-Isolated Curb and Fabricated Equipment Piers:
1. Location: Between structure and rooftop equipment.
 2. Construction: Steel.
 3. Weather exposed components consist of corrosion resistant materials.

PART 3 EXECUTION

2.01 INSTALLATION - GENERAL

- A. Install in accordance with manufacturer's instructions.

END OF SECTION

SECTION 23 0553
IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT

PART 1 GENERAL

PART 2 PRODUCTS

2.01 IDENTIFICATION APPLICATIONS

- A. Air Handling Units: Nameplates.
- B. Air Terminal Units: Tags.
- C. Automatic Controls: Tags. Key to control schematic.
- D. Control Panels: Nameplates.
- E. Dampers: Ceiling tacks, where located above lay-in ceiling.
- F. Ductwork: Nameplates.
- G. Heat Transfer Equipment: Nameplates.
- H. Instrumentation: Tags.
- I. Major Control Components: Nameplates.
- J. Piping: Tags.
- K. Pumps: Nameplates.
- L. Relays: Tags.
- M. Small-sized Equipment: Tags.
- N. Tanks: Nameplates.
- O. Thermostats: Nameplates.
- P. Valves: Tags and ceiling tacks where located above lay-in ceiling.
- Q. Water Treatment Devices: Nameplates.

2.02 NAMEPLATES

2.03 TAGS

2.04 CEILING TACKS

- A. Description: Steel with 3/4 inch diameter color coded head.

PART 3 EXECUTION

END OF SECTION

SECTION 23 0593

TESTING, ADJUSTING, AND BALANCING FOR HVAC

PART 2 PRODUCTS - NOT USED

- A. See HVAC Drawings.

END OF SECTION

**SECTION 23 0713
DUCT INSULATION**

PART 2 PRODUCTS

1.01 REGULATORY REQUIREMENTS

- A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84 or UL 723.

1.02 GLASS FIBER, FLEXIBLE

1.03 GLASS FIBER, RIGID

- A. Insulation: ASTM C612; rigid, noncombustible blanket.
 - 1. 'K' Value: 0.24 at 75 degrees F, when tested in accordance with ASTM C518.

1.04 JACKETS

- A. Canvas Jacket: UL listed 6 oz/sq yd plain weave cotton fabric treated with dilute fire retardant lagging adhesive.
- B. Mineral Fiber (Outdoor) Jacket: Asphalt impregnated and coated sheet, 50 lb/square.
- C. Aluminum Jacket: ASTM B209 (ASTM B209M).

1.05 DUCT LINER

- A. Insulation: Non-corrosive, incombustible glass fiber complying with ASTM C1071; flexible blanket, rigid board, and preformed round liner board; impregnated surface and edges coated with poly vinyl acetate polymer, acrylic polymer, or black composite.
 - 1. Apparent Thermal Conductivity: Maximum of 0.31 at 75 degrees F.

PART 3 EXECUTION

2.01 INSTALLATION

END OF SECTION

**SECTION 23 0719
HVAC PIPING INSULATION**

PART 2 PRODUCTS

1.01 REGULATORY REQUIREMENTS

- A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84 or UL 723.

1.02 GLASS FIBER

- A. Insulation: ASTM C547 and ASTM C795; rigid molded, noncombustible.
1. 'K' Value: ASTM C177, 0.24 at 75 degrees F.
 2. Maximum Service Temperature: 850 degrees F.
 3. Maximum Moisture Absorption: 0.2 percent by volume.
- B. Insulation: ASTM C547 and ASTM C795; rigid molded, noncombustible, with wicking material to transport condensed water to the outside of the system for evaporation to the atmosphere.
1. 'K' Value: ASTM C177, 0.23 at 75 degrees F.
 2. Maximum Service Temperature: 220 degrees F.
 3. Maximum Moisture Absorption: 0.2 percent by volume.
- C. Insulation: ASTM C547 and ASTM C795; semi-rigid, noncombustible, end grain adhered to jacket.
1. Maximum Service Temperature: 650 degrees F.
 2. Maximum Moisture Absorption: 0.2 percent by volume.

1.03 CELLULAR GLASS

- A. Insulation: ASTM C552, Type II.
1. Apparent Thermal Conductivity; 'K' Value: Grade 6, 0.35 at 100 degrees F.
 2. Service Temperature: Up to 800 degrees F.
 3. Water Vapor Permeability: As indicated .
 4. Water Absorption: 0.5 percent by volume, maximum.

1.04 EXPANDED POLYSTYRENE

- A. Insulation: ASTM C578; rigid closed cell.
1. 'K' Value: 0.23 at 75 degrees F.
 2. Maximum Service Temperature: 165 degrees F.
 3. Maximum Water Vapor Permeance: 5.0 perms

1.05 EXPANDED PERLITE

- A. Insulation: ASTM C610, molded.
1. Maximum Service Temperature: 1200 degrees F.
 2. Maximum Water Vapor Transmission: 0.1 perm.

1.06 HYDROUS CALCIUM SILICATE

- A. Insulation: ASTM C533 and ASTM C795; rigid molded, asbestos free, gold color.
1. 'K' Value: ASTM C177 and C518; 0.40 at 300 degrees F, when tested in accordance with ASTM C177 or ASTM C518.
 2. Maximum Service Temperature: 1200 degrees F.
 3. Density: 15 lb/cu ft.

1.07 POLYISOCYANURATE CELLULAR PLASTIC

- A. Insulation Material: ASTM C591, rigid molded modified polyisocyanurate cellular plastic.
1. Dimension: Comply with requirements of ASTM C585.
 2. 'K' Value: 0.18 at 75 degrees F, when tested in accordance with ASTM C518.
 3. Minimum Service Temperature: Minus 70 degrees F.
 4. Maximum Service Temperature: 300 degrees F.

5. Water Absorption: 0.5 percent by volume, maximum, when tested in accordance with ASTM D2842..
6. Moisture Vapor Transmission: 4.0 perm inch.
7. Connection: Waterproof vapor barrier adhesive.

1.08 POLYETHYLENE

- A. Insulation: Flexible closed-cell polyethylene tubing, slit lengthwise for installation, complying with applicable requirements of ASTM D1056.
 1. 'K' Value: ASTM C177; 0.25 at 75 degrees F.
 2. Maximum Service Temperature: 300 degrees F.
 3. Density: 2 lb/cu ft.
 4. Maximum Moisture Absorption: 1.0 percent by volume.
 5. Moisture Vapor Permeability: 0.05 perm inch, when tested in accordance with ASTM E96/E96M.
 6. Connection: Contact adhesive.

1.09 FLEXIBLE ELASTOMERIC CELLULAR INSULATION

- A. Insulation: Preformed flexible elastomeric cellular rubber insulation complying with ASTM C534/C534M Grade 3; use molded tubular material wherever possible.
 1. Minimum Service Temperature: Minus 40 degrees F.

PART 3 EXECUTION

2.01 INSTALLATION

END OF SECTION

**SECTION 23 0800
COMMISSIONING OF HVAC**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 TEST EQUIPMENT

- A. Provide all standard testing equipment required to perform startup and initial checkout and required functional performance testing; unless otherwise noted such testing equipment will NOT become the property of Owner.
- B. Equipment-Specific Tools: Where special testing equipment, tools and instruments are specific to a piece of equipment, are only available from the vendor, and are required in order to accomplish startup or Functional Testing, provide such equipment, tools, and instruments as part of the work at no extra cost to Owner; such equipment, tools, and instruments are to become the property of Owner.

PART 3 EXECUTION

END OF SECTION

SECTION 23 2300
REFRIGERANT PIPING

PART 1 GENERAL

PART 2 PRODUCTS

2.01 PIPING

- A. Copper Tube: ASTM B280, H58 hard drawn or O60 soft annealed.
 - 1. Fittings: ASME B16.22 wrought copper.
 - 2. Joints: Braze, AWS A5.8M/A5.8 BCuP silver/phosphorus/copper alloy.
- B. Copper Tube to 7/8 inch OD: ASTM B88 (ASTM B88M), Type K (A), annealed.
 - 1. Fittings: ASME B16.26 cast copper.
 - 2. Joints: Flared.
- C. Steel Pipe: ASTM A53/A53M, Schedule 40, black.
 - 1. Fittings: ASTM A234/A234M, wrought steel welding type.
 - 2. Joints: Welded in accordance with AWS D1.1/D1.1M.
- D. Steel Pipe Sizes 12 Inch and Over: ASTM A53/A53M, 0.375 inch wall, black.
 - 1. Fittings: ASTM A234/A234M, wrought steel welding type.
 - 2. Joints: Welded in accordance with AWS D1.1/D1.1M.

2.02 VALVES

- A. Diaphragm Packless Valves:
 - 1. UL listed, globe or angle pattern, forged brass body and bonnet, phosphor bronze and stainless steel diaphragms, rising stem and handwheel, stainless steel spring, nylon seat disc, solder or flared ends, with positive backseating; for maximum working pressure of 500 psi and maximum temperature of 275 degrees F.
- B. Packed Angle Valves:
 - 1. Forged brass or nickel plated forged steel, forged brass seal caps with copper gasket, rising stem and seat with backseating, molded stem packing, solder or flared ends; for maximum working pressure of 500 psi and maximum temperature of 275 degrees F.
- C. Ball Valves:
 - 1. Two piece bolted forged brass body with teflon ball seals and copper tube extensions, brass bonnet and seal cap, chrome plated ball, stem with neoprene ring stem seals; for maximum working pressure of 500 psi and maximum temperature of 300 degrees F.
- D. Service Valves:
 - 1. Forged brass body with copper stubs, brass caps, removable valve core, integral ball check valve, flared or solder ends, for maximum pressure of 500 psi.

2.03 CHECK VALVES

- A. Globe Type:
 - 1. Cast bronze or forged brass body, forged brass cap with neoprene seal, brass guide and disc holder, phosphor-bronze or stainless steel spring, teflon seat disc; for maximum temperature of 300 degrees F and maximum working pressure of 425 psi.
- B. Straight Through Type:
 - 1. Brass body and disc, phosphor-bronze or stainless steel spring, neoprene seat; for maximum working pressure of 500 psi and maximum temperature of 200 degrees F.

2.04 PRESSURE RELIEF VALVES

- A. Straight Through or Angle Type: Brass body and disc, neoprene seat, factory sealed and stamped with ASME UV and National Board Certification NB, selected to ASHRAE Std 15, with standard setting of 235 psi.

2.05 SOLENOID VALVES

- A. Valve: AHRI 760, pilot operated, copper, brass or steel body and internal parts, synthetic seat, stainless steel stem and plunger assembly (permitting manual operation in case of coil failure), integral strainer, with flared, solder, or threaded ends; for maximum working pressure of 500 psi.
- B. Coil Assembly: UL 429, UL listed, replaceable with molded electromagnetic coil, moisture and fungus proof, with surge protector and color coded lead wires, integral junction box with pilot light.

2.06 EXPANSION VALVES

- A. Angle or Straight Through Type: AHRI 750; design suitable for refrigerant, brass body, internal or external equalizer, bleed hole, adjustable superheat setting, replaceable inlet strainer, with non-replaceable capillary tube and remote sensing bulb and remote bulb well.
- B. Selection: Evaluate refrigerant pressure drop through system to determine available pressure drop across valve. Select valve for maximum load at design operating pressure and minimum 10 degrees F superheat. Select to avoid being undersized at full load and excessively oversized at part load.

2.07 ELECTRONIC EXPANSION VALVES

- A. Valve:
 - 1. Brass body with flared or solder connection, needle valve with floating needle and machined seat, stepper motor drive.

2.08 FLEXIBLE CONNECTORS

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.

END OF SECTION

SECTION 23 3100
HVAC DUCTS AND CASINGS

PART 2 PRODUCTS

1.01 DUCT ASSEMBLIES

- A. Low Pressure Supply (Heating Systems): 1/2 inch w.g. pressure class, galvanized steel.
- B. Low Pressure Supply (System with Cooling Coils): 1/2 inch w.g. pressure class, galvanized steel.
- C. Medium and High Pressure Supply: 1/2 inch w.g. pressure class, galvanized steel.
- D. Return and Relief: 1/2 inch w.g. pressure class, galvanized steel.
- E. General Exhaust: 1/2 inch w.g. pressure class, galvanized steel.
- F. Outside Air Intake: 1/2 inch w.g. pressure class, galvanized steel.
- G. Combustion Air: 1/2 inch w.g. pressure class, galvanized steel.

1.02 MATERIALS

- A. Un-Galvanized Steel for Ducts: ASTM A1008/A1008M, Designation CS (commercial steel), cold-rolled.
- B. Aluminum for Ducts: ASTM B209 (ASTM B209M); aluminum sheet, alloy 3003-H14. Aluminum Connectors and Bar Stock: Alloy 6061-T651 or of equivalent strength.
- C. Stainless Steel for Ducts: ASTM A666, Type 304.

1.03 DUCTWORK FABRICATION

- A. Fabricate and support in accordance with SMACNA (DCS) and as indicated.
- B. No variation of duct configuration or size permitted except by written permission. Size round duct installed in place of rectangular ducts in accordance with ASHRAE Handbook - Fundamentals.
- C. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated.
- D. Increase duct sizes gradually, not exceeding 15 degrees divergence wherever possible; maximum 30 degrees divergence upstream of equipment and 45 degrees convergence downstream.
- E. Fabricate continuously welded round and oval duct fittings in accordance with SMACNA (DCS).

1.04 MANUFACTURED DUCTWORK AND FITTINGS

- A. Flat Oval Ducts: Machine made from round spiral lockseam duct.
 - 1. Manufacture in accordance with SMACNA (DCS).
 - 2. Fittings: Manufacture at least two gages heavier metal than duct.
 - 3. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated.
- B. Double Wall Insulated Flat Oval Ducts: Machine made from round spiral lockseam duct.
 - 1. Manufacture in accordance with SMACNA (DCS).
 - 2. Fittings: Manufacture with solid inner wall.
 - 3. Inner wall: Perforated galvanized steel.
- C. Slab Duct Ventilation System: Hot-dipped galvanized steel sheet, ASTM A653/A653M FS, with G90/Z275 coating designed for installation in cast-in-place concrete floor assemblies.
 - 1. Fittings: Elbows, End caps, Connecting couplings, Spin-in-collar, Soffit-discharge head, Support Brackets and Wall discharge head.
- D. Double Wall Insulated Round Ducts: Round spiral lockseam duct with galvanized steel outer wall, perforated galvanized steel inner wall; fitting with solid inner wall.
 - 1. Manufacture in accordance with SMACNA (DCS).

- E. Transverse Duct Connection System: SMACNA "E" rated rigidly class connection, interlocking angle and duct edge connection system with sealant, gasket, cleats, and corner clips in accordance with SMACNA (DCS).

1.05 CASINGS

- A. Fabricate casings in accordance with SMACNA (DCS) and construct for operating pressures indicated.
- B. Mount floor mounted casings on 4 inch high concrete curbs. At floor, rivet panels on 8 inch centers to angles. Where floors are acoustically insulated, provide liner of galvanized 18 gage, 0.0478 inch expanded metal mesh supported at 12 inch centers, turned up 12 inches at sides with sheet metal shields.
- C. Reinforce door frames with steel angles tied to horizontal and vertical plenum supporting angles. Install hinged access doors where indicated or required for access to equipment for cleaning and inspection.
- D. Fabricate acoustic casings with reinforcing turned inward. Provide 16 gage, 0.0598 inch sheet steel back facing and 22 gage, 0.0299 inch perforated sheet steel front facing with 3/32 inch diameter holes on 5/32 inch centers. Construct panels 3 inches thick packed with 4.5 lb/cu ft minimum glass fiber insulation media, on inverted channels of 16 gage, 0.0598 inch sheet steel.

PART 3 EXECUTION

2.01 INSTALLATION

END OF SECTION

SECTION 23 3300
AIR DUCT ACCESSORIES

PART 1 GENERAL

PART 2 PRODUCTS

2.01 AIR TURNING DEVICES/EXTRACTORS

2.02 BACKDRAFT DAMPERS - METAL

- A. Gravity Backdraft Dampers, Size 18 x 18 inches or Smaller, Furnished with Air Moving Equipment: Air moving equipment manufacturer's standard construction.
- B. Multi-Blade, Parallel Action Gravity Balanced Backdraft Dampers: Galvanized steel, with center pivoted blades of maximum 6 inch width, with felt or flexible vinyl sealed edges, linked together in rattle-free manner with 90 degree stop, steel ball bearings, and plated steel pivot pin; adjustment device to permit setting for varying differential static pressure.

2.03 COMBINATION FIRE AND SMOKE DAMPERS

- A. Fabricate in accordance with NFPA 90A, UL 555, UL 555S, and as indicated.
- B. Operators: UL listed and labelled spring return pneumatic type suitable for operation on 0-20 psig instrument air. Provide end switches to indicate damper position. Locate damper operator on interior of duct and link to damper operating shaft.
- C. Normally Closed Smoke Responsive Fire Dampers: Curtain type, opening by gravity upon actuation of electro thermal link, flexible stainless steel blade edge seals to provide constant sealing pressure.
- D. Normally Open Smoke Responsive Fire Dampers: Curtain type, closing upon actuation of electro thermal link, flexible stainless steel blade edge seals to provide constant sealing pressure, stainless steel springs with locking devices to ensure positive closure for units mounted horizontally.

2.04 DUCT ACCESS DOORS

- A. Fabricate in accordance with SMACNA (DCS) and as indicated.

2.05 DUCT TEST HOLES

- A. Temporary Test Holes: Cut or drill in ducts as required. Cap with neat patches, neoprene plugs, threaded plugs, or threaded or twist-on metal caps.
- B. Permanent Test Holes: Factory fabricated, air tight flanged fittings with screw cap. Provide extended neck fittings to clear insulation.

2.06 FIRE DAMPERS

- A. Fabricate in accordance with NFPA 90A and UL 555, and as indicated.
- B. Ceiling Dampers: Galvanized steel, 22 gage, 0.0299 inch frame and 16 gage, 0.0598 inch flap, two layers 0.125 inch ceramic fiber on top side and one layer on bottom side for round flaps, with locking clip.
- C. Horizontal Dampers: Galvanized steel, 22 gage, 0.0299 inch frame, stainless steel closure spring, and lightweight, heat retardant non-asbestos fabric blanket.
- D. Curtain Type Dampers: Galvanized steel with interlocking blades. Provide stainless steel closure springs and latches for horizontal installations. Configure with blades out of air stream except for 1.0 inch pressure class ducts up to 12 inches in height.
- E. Multiple Blade Dampers: 16 gage, 0.0598 inch galvanized steel frame and blades, oil-impregnated bronze or stainless steel sleeve bearings and plated steel axles, 1/8 x 1/2 inch plated steel concealed linkage, stainless steel closure spring, blade stops, and lock.

2.07 FLEXIBLE DUCT CONNECTIONS

- A. Fabricate in accordance with SMACNA (DCS) and as indicated.

- B. Flexible Duct Connections: Fabric crimped into metal edging strip.
- C. Leaded Vinyl Sheet: Minimum 0.55 inch thick, 0.87 lbs per sq ft, 10 dB attenuation in 10 to 10,000 Hz range.

2.08 SMOKE DAMPERS

- A. Fabricate in accordance with NFPA 90A and UL 555S, and as indicated.
- B. Dampers: UL Class 1 airfoil blade type smoke damper, normally open automatically operated by pneumatic actuator.

2.09 VOLUME CONTROL DAMPERS

- A. Fabricate in accordance with SMACNA (DCS) and as indicated.
- B. Single Blade Dampers: Fabricate for duct sizes up to 6 x 30 inch.
 - 1. Fabricate for duct sizes up to 6 x 30 inch.
 - 2. Blade: 24 gage, 0.0239 inch, minimum.
- C. Multi-Blade Damper: Fabricate of opposed blade pattern with maximum blade sizes 8 x 72 inch. Assemble center and edge crimped blades in prime coated or galvanized channel frame with suitable hardware.
 - 1. Blade: 18 gage, 0.0478 inch, minimum.
- D. End Bearings: Except in round ducts 12 inches and smaller, provide end bearings. On multiple blade dampers, provide oil-impregnated nylon, thermoplastic elastomer, or sintered bronze bearings.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install accessories in accordance with manufacturer's instructions, NFPA 90A, and follow SMACNA (DCS). Refer to Section 23 3100 for duct construction and pressure class.
- B. Provide duct test holes where indicated and required for testing and balancing purposes.

END OF SECTION

**SECTION 23 3416
CENTRIFUGAL HVAC FANS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 WHEEL AND INLET

- A. Backward Inclined: Steel or aluminum construction with smooth curved inlet flange, heavy back plate, backwardly curved blades welded or riveted to flange and back plate; cast iron or cast steel hub riveted to back plate and keyed to shaft with set screws.
- B. Forward Curved: Black enameled steel construction with inlet flange, back plate, shallow blades with inlet and tip curved forward in direction of airflow, mechanically secured to flange and back plate; steel hub swaged to back plate and keyed to shaft with set screw.
- C. Airfoil Wheel: Steel construction with smooth curved inlet flange, heavy back plate die formed hollow airfoil shaped blades continuously welded at tip flange, and back plate; cast iron or cast steel hub riveted to back plate and keyed to shaft with set screws.
- D. Radial: Steel construction with inlet flange, heavy reinforced back plate, plate blades with reinforcing gussets welded or riveted to back plate and flange; cast iron or cast steel hub riveted to back plate and keyed to shaft with set screws.

2.02 HOUSING

- A. Heavy gage steel, spot welded for AMCA 99 Class I and II fans, and continuously welded for Class III, adequately braced, designed to minimize turbulence with spun inlet bell and shaped cut

2.03 BEARINGS AND DRIVES

- A. Bearings: Heavy duty pillow block type, selfgreasing ball bearings, with ABMA STD 9 life at 50,000 hours.
- B. Shafts: Hot rolled steel, ground and polished, with keyway, protectively coated with lubricating oil, and shaft guard.
- C. Drive: Cast iron or steel sheaves, dynamically balanced, keyed. Variable and adjustable pitch sheaves for motors 15 hp and under, selected so required rpm is obtained with sheaves set at mid Fixed sheave for 20 hp and over, matched belts, and drive rated as recommended by manufacturer or minimum 1.5 times nameplate rating of the motor.
- D. Belt Guard: Fabricate to SMACNA (DCS); 0.106 inch thick, 3/4 inch diamond mesh wire screen welded to steel angle frame or equivalent, prime coated. Secure to fan or fan supports without short circuiting vibration isolation, with provision for adjustment of belt tension, lubrication, and use of tachometer with guard in place.

2.04 ACCESSORIES

- A. Fixed Inlet Vanes: Steel construction with fixed cantilevered inlet guide vanes welded to inlet bell.
- B. Adjustable Inlet Vanes: Steel construction with blades supported at both ends with two permanently lubricated bearings, variable mechanism out of air stream terminating in single control lever with control shaft for double width fans and locking quadrant.
- C. Discharge Dampers: Parallel blade heavy duty steel damper assembly with blades constructed of two plates formed around and welded to shaft, channel frame, sealed ball bearings, with blades linked out of air stream to single control lever.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

END OF SECTION

SECTION 26 0519

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

PART 2 PRODUCTS

2.01 CONDUCTOR AND CABLE APPLICATIONS

- A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.
- B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.
- C. Nonmetallic-sheathed cable is not permitted.
 - 1. In addition to other applicable restrictions, may not be used:
 - a. Where exposed to view.
 - b. Where exposed to damage.
- D. Underground feeder and branch-circuit cable is permitted only as follows:
 - 1. In addition to other applicable restrictions, may not be used:
 - a. Where exposed to damage.
- E. Service entrance cable is permitted only as follows:
 - 1. Where not otherwise restricted, may be used:
 - a. For underground service entrance, installed in raceway.
 - 2. In addition to other applicable restrictions, may not be used:
 - a. Where exposed to damage.

2.02 CONDUCTOR AND CABLE GENERAL REQUIREMENTS

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Provide new conductors and cables manufactured not more than one year prior to installation.
- D. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.
- E. Comply with NEMA WC 70.
- F. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.
- G. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.
- H. Conductors and Cables Installed in Cable Tray: Listed and labeled as suitable for cable tray use.
- I. Conductors and Cables Installed Where Exposed to Direct Rays of Sun: Listed and labeled as sunlight resistant.
- J. Conductors and Cables Installed Exposed in Spaces Used for Environmental Air (only where specifically permitted): Plenum rated, listed and labeled as suitable for use in return air plenums.
- K. Conductor Material:
 - 1. Provide copper conductors only. Aluminum conductors are not acceptable for this project. Conductor sizes indicated are based on copper.
 - 2. Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B 787M unless otherwise indicated.
 - 3. Tinned Copper Conductors: Comply with ASTM B33.
- L. Minimum Conductor Size:
 - 1. Branch Circuits: 12 AWG.
 - a. Exceptions:

- 1) 20 A, 120 V circuits longer than 75 feet: 10 AWG, for voltage drop.
 - 2) 20 A, 120 V circuits longer than 150 feet: 8 AWG, for voltage drop.
2. Control Circuits: 14 AWG.
- M. Conductor Color Coding:
1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project.
 2. Color Coding Method: Integrally colored insulation.
 3. Color Code:
 - a. Equipment Ground, All Systems: Green.

2.03 SINGLE CONDUCTOR BUILDING WIRE

- A. Description: Single conductor insulated wire.
- B. Conductor Stranding:
1. Feeders and Branch Circuits:
 - a. Size 10 AWG and Smaller: Solid.
 - b. Size 8 AWG and Larger: Stranded.
- C. Insulation Voltage Rating: 600 V.
- D. Insulation:
1. Copper Building Wire: Type THHN/THWN or THHN/THWN-2, except as indicated below.
 - a. Size 4 AWG and Larger: Type XHHW-2.
 - b. Installed Underground: Type XHHW-2.
 - c. Fixture Wiring Within Luminaires: Type TFFN/TFN for luminaires with labeled maximum temperature of 90 degrees C; Approved suitable type for luminaires with labeled maximum temperature greater than 90 degrees C.

2.04 UNDERGROUND FEEDER AND BRANCH-CIRCUIT CABLE

- A. Description: NFPA 70, Type UF multiple-conductor cable listed and labeled as complying with UL 493, Type UF-B.
- B. Provide equipment grounding conductor unless otherwise indicated.
- C. Conductor Stranding:
1. Size 10 AWG and Smaller: Solid.
 2. Size 8 AWG and Larger: Stranded.
- D. Insulation Voltage Rating: 600 V.
- E. Cable Jacket: Listed and labeled as sunlight resistant.

2.05 SERVICE ENTRANCE CABLE

- A. Service Entrance Cable for Underground Use: NFPA 70, Type USE single-conductor cable listed and labeled as complying with UL 854, Type USE-2, and with UL 44, Type RHH/RHW-2.
- B. Conductor Stranding: Stranded.
- C. Insulation Voltage Rating: 600 V.

2.06 WIRING CONNECTORS

- A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.
- B. Wiring Connectors for Splices and Taps:
1. Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.
 2. Copper Conductors Size 6 AWG and Larger: Use mechanical connectors or compression connectors.
- C. Wiring Connectors for Terminations:
1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.

2. Provide compression adapters for connecting conductors to equipment furnished with mechanical lugs when only compression connectors are specified.
 3. Where over-sized conductors are larger than the equipment terminations can accommodate, provide connectors suitable for reducing to appropriate size, but not less than required for the rating of the overcurrent protective device.
 4. Provide motor pigtail connectors for connecting motor leads in order to facilitate disconnection.
 5. Copper Conductors Size 8 AWG and Larger: Use mechanical connectors or compression connectors where connectors are required.
 6. Stranded Conductors Size 10 AWG and Smaller: Use crimped terminals for connections to terminal screws.
- D. Do not use insulation-piercing or insulation-displacement connectors designed for use with conductors without stripping insulation.
 - E. Do not use push-in wire connectors as a substitute for twist-on insulated spring connectors.
 - F. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F for standard applications and 302 degrees F for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.
 - G. Mechanical Connectors: Provide bolted type or set-screw type.
 - H. Compression Connectors: Provide circumferential type or hex type crimp configuration.
 - I. Crimped Terminals: Nylon-insulated, with insulation grip and terminal configuration suitable for connection to be made.

2.07 WIRING ACCESSORIES

- A. Electrical Tape:
 1. Vinyl Color Coding Electrical Tape: Integrally colored to match color code indicated; listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; suitable for continuous temperature environment up to 221 degrees F.
 2. Vinyl Insulating Electrical Tape: Complying with ASTM D3005 and listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; conformable for application down to 0 degrees F and suitable for continuous temperature environment up to 221 degrees F.
 3. Rubber Splicing Electrical Tape: Ethylene Propylene Rubber (EPR) tape, complying with ASTM D4388; minimum thickness of 30 mil; suitable for continuous temperature environment up to 194 degrees F and short-term 266 degrees F overload service.
 4. Electrical Filler Tape: Rubber-based insulating moldable putty, minimum thickness of 125 mil; suitable for continuous temperature environment up to 176 degrees F.
 5. Varnished Cambric Electrical Tape: Cotton cambric fabric tape, with or without adhesive, oil-primed and coated with high-grade insulating varnish; minimum thickness of 7 mil; suitable for continuous temperature environment up to 221 degrees F.
 6. Moisture Sealing Electrical Tape: Insulating mastic compound laminated to flexible, all-weather vinyl backing; minimum thickness of 90 mil.
- B. Heat Shrink Tubing: Heavy-wall, split-resistant, with factory-applied adhesive; rated 600 V; suitable for direct burial applications; listed as complying with UL 486D.
- C. Oxide Inhibiting Compound: Listed; suitable for use with the conductors or cables to be installed.
- D. Wire Pulling Lubricant: Listed; suitable for use with the conductors or cables to be installed and suitable for use at the installation temperature.

END OF SECTION

SECTION 26 0526

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

PART 2 PRODUCTS

2.01 GROUNDING AND BONDING REQUIREMENTS

- A. Existing Work: Where existing grounding and bonding system components are indicated to be reused, they may be reused only where they are free from corrosion, integrity and continuity are verified, and where acceptable to the authority having jurisdiction.
- B. Do not use products for applications other than as permitted by NFPA 70 and product listing.
- C. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.
- D. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
- E. Grounding System Resistance:
 - 1. Achieve specified grounding system resistance under normally dry conditions unless otherwise approved by Architect. Precipitation within the previous 48 hours does not constitute normally dry conditions.
 - 2. Grounding Electrode System: Not greater than 25 ohms to ground, when tested according to IEEE 81 using "fall-of-potential" method or alternate test described in IEEE 81.
 - 3. Between Grounding Electrode System and Major Electrical Equipment Frames, System Neutral, and Derived Neutral Points: Not greater than 0.5 ohms, when tested using "point-to-point" methods.
- F. Grounding Electrode System:
 - 1. Provide connection to required and supplemental grounding electrodes indicated to form grounding electrode system.
 - a. Provide continuous grounding electrode conductors without splice or joint.
 - b. Install grounding electrode conductors in raceway where exposed to physical damage. Bond grounding electrode conductor to metallic raceways at each end with bonding jumper.
 - 2. Metal Underground Water Pipe(s):
 - a. Provide connection to underground metal domestic and fire protection (where present) water service pipe(s) that are in direct contact with earth for at least 10 feet at an accessible location not more than 5 feet from the point of entrance to the building.
 - b. Provide bonding jumper(s) around insulating joints/pipes as required to make pipe electrically continuous.
 - c. Provide bonding jumper around water meter of sufficient length to permit removal of meter without disconnecting jumper.
 - 3. Metal Building or Structure Frame:
 - a. Provide connection to metal building or structure frame effectively grounded in accordance with NFPA 70 at nearest accessible location.
 - 4. Concrete-Encased Electrode:
 - a. Provide connection to concrete-encased electrode consisting of not less than 20 feet of either steel reinforcing bars or bare copper conductor not smaller than 4 AWG embedded within concrete foundation or footing that is in direct contact with earth in accordance with NFPA 70.
 - 5. Ground Ring:

- a. Provide a ground ring encircling the building or structure consisting of bare copper conductor not less than 2 AWG in direct contact with earth, installed at a depth of not less than 30 inches.
 - b. Where location is not indicated, locate ground ring conductor at least 24 inches outside building perimeter foundation.
 - c. Provide ground enhancement material around conductor where indicated.
 - d. Provide connection from ground ring conductor to:
 - 1) Perimeter columns of metal building frame.
 - 2) Ground rod electrodes located as indicated.
 6. Ground Rod Electrode(s):
 - a. Provide three electrodes in an equilateral triangle configuration unless otherwise indicated or required.
 - b. Space electrodes not less than 10 feet from each other and any other ground electrode.
 - c. Where location is not indicated, locate electrode(s) at least 5 feet outside building perimeter foundation as near as possible to electrical service entrance; where possible, locate in softscape (uncovered) area.
 - d. Provide ground enhancement material around electrode where indicated.
 - e. Provide ground access well for each electrode.
 7. Provide additional ground electrode(s) as required to achieve specified grounding electrode system resistance.
 8. Ground Bar: Provide ground bar, separate from service equipment enclosure, for common connection point of grounding electrode system bonding jumpers as permitted in NFPA 70. Connect grounding electrode conductor provided for service-supplied system grounding to this ground bar.
 - a. Ground Bar Size: 1/4 by 2 by 12 inches unless otherwise indicated or required.
 - b. Where ground bar location is not indicated, locate in accessible location as near as possible to service disconnect enclosure.
 9. Ground Riser: Provide common grounding electrode conductor not less than 3/0 AWG for tap connections to multiple separately derived systems as permitted in NFPA 70.
- G. Service-Supplied System Grounding:
1. For each service disconnect, provide grounding electrode conductor to connect neutral (grounded) service conductor to grounding electrode system. Unless otherwise indicated, make connection at neutral (grounded) bus in service disconnect enclosure.
 2. For each service disconnect, provide main bonding jumper to connect neutral (grounded) bus to equipment ground bus where not factory-installed. Do not make any other connections between neutral (grounded) conductors and ground on load side of service disconnect.
- H. Grounding for Separate Building or Structure Supplied by Feeder(s) or Branch Circuits:
1. Provide grounding electrode system for each separate building or structure.
 2. Provide equipment grounding conductor routed with supply conductors.
 3. For each disconnecting means, provide grounding electrode conductor to connect equipment ground bus to grounding electrode system.
 4. Do not make any connections and remove any factory-installed jumpers between neutral (grounded) conductors and ground.
- I. Separately Derived System Grounding:
1. Separately derived systems include, but are not limited to:
 - a. Transformers (except autotransformers such as buck-boost transformers).
 - b. Uninterruptible power supplies (UPS), when configured as separately derived systems.
 - c. Generators, when neutral is switched in the transfer switch.
 2. Provide grounding electrode conductor to connect derived system grounded conductor to nearest effectively grounded metal building frame. Unless otherwise indicated, make connection at neutral (grounded) bus in source enclosure.

3. Provide bonding jumper to connect derived system grounded conductor to nearest metal building frame and nearest metal water piping in the area served by the derived system, where not already used as a grounding electrode for the derived system. Make connection at same location as grounding electrode conductor connection.
 4. Where common grounding electrode conductor ground riser is used for tap connections to multiple separately derived systems, provide bonding jumper to connect the metal building frame and metal water piping in the area served by the derived system to the common grounding electrode conductor.
 5. Outdoor Source: Where the source of the separately derived system is located outside the building or structure supplied, provide connection to grounding electrode at source in accordance with NFPA 70.
 6. Provide system bonding jumper to connect system grounded conductor to equipment ground bus. Make connection at same location as grounding electrode conductor connection. Do not make any other connections between neutral (grounded) conductors and ground on load side of separately derived system disconnect.
 7. Where the source and first disconnecting means are in separate enclosures, provide supply-side bonding jumper between source and first disconnecting means.
- J. Bonding and Equipment Grounding:
1. Provide bonding for equipment grounding conductors, equipment ground busses, metallic equipment enclosures, metallic raceways and boxes, device grounding terminals, and other normally non-current-carrying conductive materials enclosing electrical conductors/equipment or likely to become energized as indicated and in accordance with NFPA 70.
 2. Provide insulated equipment grounding conductor in each feeder and branch circuit raceway. Do not use raceways as sole equipment grounding conductor.
 3. Raceways may be used as sole equipment grounding conductor where permitted by NFPA 70. Provide insulated equipment grounding conductor where indicated or required, including but not limited to:
 - a. In each nonmetallic feeder and branch circuit raceway.
 - b. In each flexible conduit.
 4. Where circuit conductor sizes are increased for voltage drop, increase size of equipment grounding conductor proportionally in accordance with NFPA 70.
 5. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
 6. Terminate branch circuit equipment grounding conductors on solidly bonded equipment ground bus only. Do not terminate on neutral (grounded) or isolated/insulated ground bus.
 7. Provide bonding jumper across expansion or expansion/deflection fittings provided to accommodate conduit movement.
 8. Provide bonding for interior metal piping systems in accordance with NFPA 70. This includes, but is not limited to:
 - a. Metal water piping where not already effectively bonded to metal underground water pipe used as grounding electrode.
 - b. Metal gas piping.
 - c. Metal process piping.
 9. Provide bonding for interior metal air ducts.
 10. Provide bonding for metal building frame where not used as a grounding electrode.
 11. Provide bonding for metal siding not effectively bonded through attachment to metal building frame.
 12. Provide bonding and equipment grounding for pools and fountains and associated equipment in accordance with NFPA 70.
 13. Provide redundant grounding and bonding for patient care areas of health care facilities in accordance with NFPA 70 and NFPA 99.
- K. Isolated Ground System:

1. Where isolated ground receptacles or other isolated ground connections are indicated, provide separate isolated/insulated equipment grounding conductors.
 2. Connect isolated/insulated equipment grounding conductors only to separate isolated/insulated equipment ground busses.
 3. Connect the isolated/insulated equipment grounding conductors to the solidly bonded equipment ground bus only at the service disconnect or separately derived system disconnect. Do not make any other connections between isolated ground system and normal equipment ground system on the load side of this connection.
- L. Communications Systems Grounding and Bonding:
1. Provide intersystem bonding termination at service equipment or metering equipment enclosure and at disconnecting means for any additional buildings or structures in accordance with NFPA 70.
 2. Provide bonding jumper in raceway from intersystem bonding termination to each communications room or backboard and provide ground bar for termination.
 - a. Bonding Jumper Size: 6 AWG, unless otherwise indicated or required.
 - b. Raceway Size: 3/4 inch unless otherwise indicated or required.
 - c. Ground Bar Size: 1/4 by 2 by 12 inches unless otherwise indicated or required.
- M. Lightning Protection Systems, in Addition to Requirements of Section 26 4113:
1. Do not use grounding electrode dedicated for lightning protection system for component of building grounding electrode system provided under this section.
 2. Provide bonding of building grounding electrode system provided under this section and lightning protection grounding electrode system in accordance with NFPA 70 and NFPA 780.

2.02 GROUNDING AND BONDING COMPONENTS

- A. General Requirements:
1. Provide products listed, classified, and labeled as suitable for the purpose intended.
 2. Provide products listed and labeled as complying with UL 467 where applicable.
- B. Conductors for Grounding and Bonding, in Addition to Requirements of Section 26 0526:
1. Use insulated copper conductors unless otherwise indicated.
 - a. Exceptions:
 - 1) Use bare copper conductors where installed underground in direct contact with earth.
 - 2) Use bare copper conductors where directly encased in concrete (not in raceway).
 2. Factory Pre-fabricated Bonding Jumpers: Furnished with factory-installed ferrules; size braided cables to provide equivalent gauge of specified conductors.
- C. Connectors for Grounding and Bonding:
1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
 2. Unless otherwise indicated, use exothermic welded connections for underground, concealed and other inaccessible connections.
 3. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.
 - a. Exceptions:
 - 1) Use exothermic welded connections for connections to metal building frame.
- D. Ground Bars:
1. Description: Copper rectangular ground bars with mounting brackets and insulators.
 2. Size: As indicated.
 3. Holes for Connections: As indicated or as required for connections to be made.
- E. Ground Rod Electrodes:
1. Comply with NEMA GR 1.
 2. Material: Copper-bonded (copper-clad) steel.

3. Size: 3/4 inch diameter by 10 feet length, unless otherwise indicated.
 4. Where rod lengths of greater than 10 feet are indicated or otherwise required, sectionalized ground rods may be used.
- F. Chemically-Enhanced Ground Electrodes:
1. Description: Copper tube factory-filled with electrolytic salts designed to provide a low-impedance ground in locations with high soil resistivity; straight (for vertical installations) or L-shaped (for horizontal installations) as indicated or as required.
 2. Length: 10 feet.
 3. Integral Pigtail: Factory-attached, sized not less than grounding electrode conductor to be attached.
 4. Backfill Material: Grounding enhancement material recommended by electrode manufacturer.
- G. Ground Plate Electrodes:
1. Material: Copper.
 2. Size: 24 by 24 by 1/4 inches, unless otherwise indicated.
- H. Ground Enhancement Material:
1. Description: Factory-mixed conductive material designed for permanent and maintenance-free improvement of grounding effectiveness by lowering resistivity.
 2. Resistivity: Not more than 20 ohm-cm in final installed form.
- I. Ground Access Wells:
1. Description: Open bottom round or rectangular well with access cover for testing and inspection; suitable for the expected load at the installed location.
 - a. Areas Exposed to Vehicular Traffic: Rated for not less than 20,800 pounds vertical design load.
 2. Size: As required to provide adequate access for testing and inspection, but not less than minimum size requirements specified.
 - a. Round Wells: Not less than 8 inches in diameter.
 - b. Rectangular Wells: Not less than 12 by 12 inches.
 3. Depth: As required to extend below frost line to prevent frost upheaval, but not less than 10 inches.
 4. Cover: Factory-identified by permanent means with word "GROUND".
- J. Pre-Fabricated Signal Reference Grids:
1. Description: Factory pre-fabricated grid manufactured from 2 inch (50 mm) by 26 gage flat copper strips spaced on 24 inch centers, factory-welded at each crossover.
 2. Low Impedance Risers: Factory fabricated 2 inch (50 mm) by 26 gage flat copper strip designed for connecting equipment enclosures to pre-fabricated signal reference grid.

END OF SECTION

SECTION 26 0529

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

PART 2 PRODUCTS

2.01 SUPPORT AND ATTACHMENT COMPONENTS

- A. General Requirements:
1. Provide all required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for the complete installation of electrical work.
 2. Provide products listed, classified, and labeled as suitable for the purpose intended, where applicable.
 3. Where support and attachment component types and sizes are not indicated, select in accordance with manufacturer's application criteria as required for the load to be supported with a minimum safety factor of 5. Include consideration for vibration, equipment operation, and shock loads where applicable.
 4. Do not use products for applications other than as permitted by NFPA 70 and product listing.
 5. Do not use wire, chain, perforated pipe strap, or wood for permanent supports unless specifically indicated or permitted.
 6. Steel Components: Use corrosion resistant materials suitable for the environment where installed.
 - a. Indoor Dry Locations: Use zinc-plated steel or approved equivalent unless otherwise indicated.
 - b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel, stainless steel, or approved equivalent unless otherwise indicated.
 - c. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
 - d. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.
- B. Conduit and Cable Supports: Straps, clamps, etc. suitable for the conduit or cable to be supported.
1. Conduit Straps: One-hole or two-hole type; steel or malleable iron.
 2. Conduit Clamps: Bolted type unless otherwise indicated.
- C. Outlet Box Supports: Hangers, brackets, etc. suitable for the boxes to be supported.
- D. Metal Channel (Strut) Framing Systems: Factory-fabricated continuous-slot metal channel (strut) and associated fittings, accessories, and hardware required for field-assembly of supports.
1. Comply with MFMA-4.
 2. Channel (Strut) Used as Raceway (only where specifically indicated): Listed and labeled as complying with UL 5B.
 3. Channel Material:
 - a. Indoor Dry Locations: Use painted steel, zinc-plated steel, or galvanized steel.
 - b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel.
 4. Minimum Channel Thickness: Steel sheet, 12 gage, 0.1046 inch.
 5. Minimum Channel Dimensions: 1-5/8 inch width by 13/16 inch height.
- E. Hanger Rods: Threaded zinc-plated steel unless otherwise indicated.
1. Minimum Size, Unless Otherwise Indicated or Required:
 - a. Equipment Supports: 1/2 inch diameter.
 - b. Busway Supports: 1/2 inch diameter.
 - c. Single Conduit up to 1 inch (27mm) trade size: 1/4 inch diameter.
 - d. Single Conduit larger than 1 inch (27mm) trade size: 3/8 inch diameter.
 - e. Trapeze Support for Multiple Conduits: 3/8 inch diameter.
 - f. Outlet Boxes: 1/4 inch diameter.

- g. Luminaires: 1/4 inch diameter.
- F. Non-Penetrating Rooftop Supports for Low-Slope Roofs: Steel pedestals with thermoplastic or rubber bases that rest on top of roofing membrane, not requiring any attachment to the roof structure and not penetrating the roofing assembly, with support fixtures as specified.
 - 1. Base Sizes: As required to distribute load sufficiently to prevent indentation of roofing assembly.
 - 2. Attachment/Support Fixtures: As recommended by manufacturer, same type as indicated for equivalent indoor hangers and supports.
 - 3. Mounting Height: Provide minimum clearance of 6 inches under supported component to top of roofing.
- G. Anchors and Fasteners:
 - 1. Unless otherwise indicated and where not otherwise restricted, use the anchor and fastener types indicated for the specified applications.
 - 2. Concrete: Use preset concrete inserts, expansion anchors, or screw anchors.
 - 3. Solid or Grout-Filled Masonry: Use expansion anchors or screw anchors.
 - 4. Hollow Masonry: Use toggle bolts.
 - 5. Hollow Stud Walls: Use toggle bolts.
 - 6. Steel: Use beam clamps, machine bolts, or welded threaded studs.
 - 7. Sheet Metal: Use sheet metal screws.
 - 8. Wood: Use wood screws.
 - 9. Plastic and lead anchors are not permitted.
 - 10. Powder-actuated fasteners are not permitted.
 - 11. Hammer-driven anchors and fasteners are not permitted.
 - 12. Preset Concrete Inserts: Continuous metal channel (strut) and spot inserts specifically designed to be cast in concrete ceilings, walls, and floors.
 - a. Comply with MFMA-4.
 - b. Channel Material: Use galvanized steel.
 - c. Minimum Channel Thickness: Steel sheet, 12 gage, 0.1046 inch minimum base metal thickness.
 - d. Manufacturer: Same as manufacturer of metal channel (strut) framing system.
 - 13. Post-Installed Concrete and Masonry Anchors: Evaluated and recognized by ICC Evaluation Service, LLC (ICC-ES) for compliance with applicable building code.

END OF SECTION

SECTION 26 0534

CONDUIT

PART 1 GENERAL

PART 2 PRODUCTS

2.01 CONDUIT APPLICATIONS

- A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70 and product listing.
- B. Unless otherwise indicated and where not otherwise restricted, use the conduit types indicated for the specified applications. Where more than one listed application applies, comply with the most restrictive requirements. Where conduit type for a particular application is not specified, use galvanized steel rigid metal conduit.
- C. Underground:
 - 1. Under Slab on Grade: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), PVC-coated galvanized steel rigid metal conduit, or rigid PVC conduit.
 - 2. Exterior, Direct-Buried: Use galvanized steel rigid metal conduit, intermediate metallic conduit (IMC), PVC-coated galvanized steel rigid metal conduit, or rigid PVC conduit.
 - 3. Exterior, Embedded Within Concrete: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), PVC-coated galvanized steel rigid metal conduit, or rigid PVC conduit.
 - 4. Where rigid polyvinyl (PVC) conduit is provided, transition to galvanized steel rigid metal conduit where emerging from underground.
 - 5. Where rigid polyvinyl (PVC) conduit larger than 2 inch (53 mm) trade size is provided, use galvanized steel rigid metal conduit elbows for bends.
 - 6. Where steel conduit is installed in direct contact with earth where soil has a resistivity of less than 2000 ohm-centimeters or is characterized as severely corrosive based on soils report or local experience, use corrosion protection tape to provide supplementary corrosion protection or use PVC-coated galvanized steel rigid metal conduit.
 - 7. Where steel conduit emerges from concrete into soil, use corrosion protection tape to provide supplementary corrosion protection for a minimum of 4 inches on either side of where conduit emerges or use PVC-coated galvanized steel rigid metal conduit.
- D. Embedded Within Concrete:
 - 1. Within Slab on Grade (within structural slabs only where approved by Structural Engineer): Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), PVC-coated galvanized steel rigid metal conduit, or rigid PVC conduit.
 - 2. Within Slab Above Ground (within structural slabs only where approved by Structural Engineer): Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), PVC-coated galvanized steel rigid metal conduit, or rigid PVC conduit.
 - 3. Within Concrete Walls Above Ground: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), PVC-coated galvanized steel rigid metal conduit, or rigid PVC conduit.
 - 4. Where rigid polyvinyl (PVC) conduit is provided, transition to galvanized steel rigid metal conduit where emerging from concrete.
 - 5. Where electrical metallic tubing (EMT) emerges from concrete into salt air, use corrosion protection tape to provide supplementary corrosion protection for a minimum of 4 inches on either side of where conduit emerges.
- E. Concealed Within Masonry Walls: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).
- F. Concealed Within Hollow Stud Walls: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).
- G. Concealed Above Accessible Ceilings: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).

- H. Interior, Damp or Wet Locations: Use galvanized steel rigid metal conduit or intermediate metal conduit (IMC).
- I. Exposed, Interior, Not Subject to Physical Damage: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).
- J. Exposed, Interior, Subject to Physical Damage: Use galvanized steel rigid metal conduit or intermediate metal conduit (IMC).
- K. Exposed, Exterior: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or PVC-coated galvanized steel rigid metal conduit.
- L. Concealed, Exterior, Not Embedded in Concrete or in Contact With Earth: Use galvanized steel rigid metal conduit or intermediate metal conduit (IMC).
- M. Corrosive Locations Above Ground: Use PVC-coated galvanized steel rigid metal conduit or aluminum rigid metal conduit.
- N. Hazardous (Classified) Locations: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), aluminum rigid metal conduit, or PVC-coated galvanized steel rigid metal conduit.
- O. Connections to Luminaires Above Accessible Ceilings: Use flexible metal conduit.
- P. Connections to Vibrating Equipment:
 - 1. Dry Locations: Use flexible metal conduit.
 - 2. Damp, Wet, or Corrosive Locations: Use liquidtight flexible metal conduit.

2.02 CONDUIT REQUIREMENTS

- A. Existing Work: Where existing conduits are indicated to be reused, they may be reused only where they comply with specified requirements, are free from corrosion, and integrity is verified by pulling a mandrel through them.
- B. Provide all conduit, fittings, supports, and accessories required for a complete raceway system.
- C. Provide products listed, classified, and labeled as suitable for the purpose intended.
- D. Minimum Conduit Size, Unless Otherwise Indicated:
 - 1. Branch Circuits: 1/2 inch (16 mm) trade size.
 - 2. Branch Circuit Homeruns: 3/4 inch (21 mm) trade size.
 - 3. Control Circuits: 1/2 inch (16 mm) trade size.
 - 4. Flexible Connections to Luminaires: 3/8 inch (12 mm) trade size.
 - 5. Underground, Interior: 3/4 inch (21 mm) trade size.
 - 6. Underground, Exterior: 1 inch (27 mm) trade size.
- E. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.03 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

- A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.
- B. Fittings:
 - 1. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Hazardous (Classified) Locations: Use fittings listed and labeled as complying with UL 1203 for the classification of the installed location.
 - 3. Material: Use steel or malleable iron.
 - a. Do not use die cast zinc fittings.
 - 4. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

2.04 ALUMINUM RIGID METAL CONDUIT (RMC)

- A. Description: NFPA 70, Type RMC aluminum rigid metal conduit complying with ANSI C80.5 and listed and labeled as complying with UL 6A.

- B. Fittings:
 1. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 2. Hazardous (Classified) Locations: Use fittings listed and labeled as complying with UL 1203 for the classification of the installed location.
 3. Material: Use aluminum.
 4. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

2.05 INTERMEDIATE METAL CONDUIT (IMC)

- A. Description: NFPA 70, Type IMC galvanized steel intermediate metal conduit complying with ANSI C80.6 and listed and labeled as complying with UL 1242.
- B. Fittings:
 1. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 2. Hazardous (Classified) Locations: Use fittings listed and labeled as complying with UL 1203 for the classification of the installed location.
 3. Material: Use steel or malleable iron.
 - a. Do not use die cast zinc fittings.
 4. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

2.06 PVC-COATED GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

- A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit with external polyvinyl chloride (PVC) coating complying with NEMA RN 1 and listed and labeled as complying with UL 6.
- B. Exterior Coating: Polyvinyl chloride (PVC), nominal thickness of 40 mil.
- C. Interior Coating: Urethane, minimum thickness of 2 mil.
- D. PVC-Coated Fittings:
 1. Manufacturer: Same as manufacturer of PVC-coated conduit to be installed.
 2. Non-Hazardous Locations: Use fittings listed and labeled as complying with UL 514B.
 3. Hazardous (Classified) Locations: Use fittings listed and labeled as complying with UL 1203 for the classification of the installed location.
 4. Material: Use steel or malleable iron.
 5. Exterior Coating: Polyvinyl chloride (PVC), minimum thickness of 40 mil.
 6. Interior Coating: Urethane, minimum thickness of 2 mil.
- E. PVC-Coated Supports: Furnish with exterior coating of polyvinyl chloride (PVC), minimum thickness of 15 mil.

2.07 FLEXIBLE METAL CONDUIT (FMC)

- A. Description: NFPA 70, Type FMC standard wall steel flexible metal conduit listed and labeled as complying with UL 1, and listed for use in classified firestop systems to be used.
- B. Fittings:
 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 2. Material: Use steel or malleable iron.
 - a. Do not use die cast zinc fittings.

2.08 LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC)

- A. Description: NFPA 70, Type LFMC polyvinyl chloride (PVC) jacketed steel flexible metal conduit listed and labeled as complying with UL 360.
- B. Fittings:
 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.

2. Material: Use steel or malleable iron.
 - a. Do not use die cast zinc fittings.

2.09 ELECTRICAL METALLIC TUBING (EMT)

- A. Description: NFPA 70, Type EMT steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797.
- B. Fittings:
 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 2. Material: Use steel or malleable iron.
 - a. Do not use die cast zinc fittings.
 3. Connectors and Couplings: Use compression (gland) or set-screw type.
 - a. Do not use indenter type connectors and couplings.
 - b. Do not use set-screw type connectors and couplings.
 4. Damp or Wet Locations (where permitted): Use fittings listed for use in wet locations.
 5. Embedded Within Concrete (where permitted): Use fittings listed as concrete-tight. Fittings that require taping to be concrete-tight are acceptable.

2.10 RIGID POLYVINYL CHLORIDE (PVC) CONDUIT

- A. Description: NFPA 70, Type PVC rigid polyvinyl chloride conduit complying with NEMA TC 2 and listed and labeled as complying with UL 651; Schedule 40 unless otherwise indicated, Schedule 80 where subject to physical damage; rated for use with conductors rated 90 degrees C.
- B. Fittings:
 1. Manufacturer: Same as manufacturer of conduit to be connected.
 2. Description: Fittings complying with NEMA TC 3 and listed and labeled as complying with UL 651; material to match conduit.

2.11 ELECTRICAL NONMETALLIC TUBING (ENT)

- A. Description: NFPA 70, Type ENT electrical nonmetallic tubing complying with NEMA TC 13 and listed and labeled as complying with UL 1653.
- B. Fittings:
 1. Manufacturer: Same as manufacturer of ENT to be connected.
 2. Use solvent-welded type fittings.
 3. Solvent-Welded Fittings: Rigid PVC fittings complying with NEMA TC 3 and listed and labeled as complying with UL 651; suitable for use with ENT.

2.12 LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC)

- A. Description: NFPA 70, Type LFNC liquidtight flexible nonmetallic conduit listed and labeled as complying with UL 1660.
- B. Fittings:
 1. Manufacturer: Same as manufacturer of conduit to be connected.
 2. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B; suitable for the type of conduit to be connected.

2.13 ACCESSORIES

- A. Corrosion Protection Tape: PVC-based, minimum thickness of 20 mil.
- B. Pull Strings: Use nylon cord with average breaking strength of not less than 200 pound-force.
- C. Modular Seals for Conduit Penetrations: Rated for minimum of 40 psig; Suitable for the conduits to be installed.

END OF SECTION

SECTION 26 0537

BOXES

PART 1 GENERAL

PART 2 PRODUCTS

2.01 BOXES

- A. General Requirements:
1. Do not use boxes and associated accessories for applications other than as permitted by NFPA 70 and product listing.
 2. Provide all boxes, fittings, supports, and accessories required for a complete raceway system and to accommodate devices and equipment to be installed.
 3. Provide products listed, classified, and labeled as suitable for the purpose intended.
 4. Where box size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
 5. Provide grounding terminals within boxes where equipment grounding conductors terminate.
- B. Outlet and Device Boxes Up to 100 cubic inches, Including Those Used as Junction and Pull Boxes:
1. Use sheet-steel boxes for dry locations unless otherwise indicated or required.
 2. Use cast iron boxes or cast aluminum boxes for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
 3. Use cast iron boxes or cast aluminum boxes where exposed galvanized steel rigid metal conduit or exposed intermediate metal conduit (IMC) is used.
 4. Use cast aluminum boxes where aluminum rigid metal conduit is used.
 5. Use nonmetallic boxes where exposed rigid PVC conduit is used.
 6. Use suitable concrete type boxes where flush-mounted in concrete.
 7. Use suitable masonry type boxes where flush-mounted in masonry walls.
 8. Use raised covers suitable for the type of wall construction and device configuration where required.
 9. Use shallow boxes where required by the type of wall construction.
 10. Do not use "through-wall" boxes designed for access from both sides of wall.
 11. Sheet-Steel Boxes: Comply with NEMA OS 1, and list and label as complying with UL 514A.
 12. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.
 13. Nonmetallic Boxes: Comply with NEMA OS 2, and list and label as complying with UL 514C.
 14. Boxes for Supporting Luminaires and Ceiling Fans: Listed as suitable for the type and weight of load to be supported; furnished with fixture stud to accommodate mounting of luminaire where required.
 15. Boxes for Ganged Devices: Use multigang boxes of single-piece construction. Do not use field-connected gangable boxes.
- C. Cabinets and Enclosures, Including Junction and Pull Boxes Larger Than 100 cubic inches:
1. Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E, or UL 508A.
 2. Junction and Pull Boxes Larger Than 100 cubic inches:
 - a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.
 - b. Boxes 6 square feet and Larger: Provide sectionalized screw-cover or hinged-cover enclosures.
 3. Cabinets and Hinged-Cover Enclosures, Other Than Junction and Pull Boxes:
 - a. Provide lockable hinged covers, all locks keyed alike unless otherwise indicated.
 - b. Back Panels: Painted steel, removable.

- c. Terminal Blocks: Provide voltage/current ratings and terminal quantity suitable for purpose indicated, with 25 percent spare terminal capacity.
- D. Boxes for Hazardous (Classified) Locations: Listed and labeled as complying with UL 1203 for the classification of the installed location.
- E. Floor Boxes:
 - 1. Description: Floor boxes compatible with floor box service fittings provided in accordance with Section 26 2726; with partitions to separate multiple services; furnished with all components, adapters, and trims required for complete installation.
 - 2. Use cast iron floor boxes within slab on grade.
 - 3. Use sheet-steel or cast iron floor boxes within slab above grade.
 - 4. Metallic Floor Boxes: Fully adjustable (with integral means for leveling adjustment prior to and after concrete pour).
 - 5. Manufacturer: Same as manufacturer of floor box service fittings.
- F. Underground Boxes/Enclosures:
 - 1. Description: In-ground, open bottom boxes furnished with flush, non-skid covers with legend indicating type of service and stainless steel tamper resistant cover bolts.
 - 2. Size: As indicated on drawings.
 - 3. Depth: As required to extend below frost line to prevent frost upheaval, but not less than 12 inches.
 - 4. Provide logo on cover to indicate type of service.
 - 5. Applications:
 - a. Sidewalks and Landscaped Areas Subject Only to Occasional Nondeliberate Vehicular Traffic: Use polymer concrete enclosures, with minimum SCTE 77, Tier 8 load rating.
 - b. Parking Lots, in Areas Subject Only To Occasional Nondeliberate Vehicular Traffic: Use polymer concrete enclosures, with minimum SCTE 77, Tier 15 load rating.
 - c. Do not use polymer concrete enclosures in areas subject to deliberate vehicular traffic.
 - 6. Polymer Concrete Underground Boxes/Enclosures: Comply with SCTE 77.

END OF SECTION

SECTION 26 0553
IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

PART 2 PRODUCTS

2.01 IDENTIFICATION REQUIREMENTS

- A. Existing Work: Unless specifically excluded, identify existing elements to remain that are not already identified in accordance with specified requirements.
- B. Identification for Equipment:
 - 1. Use identification nameplate to identify each piece of electrical distribution and control equipment and associated sections, compartments, and components.
 - a. Switchgear:
 - 1) Identify power source and circuit number. Include location when not within sight of equipment.
 - 2) Use identification nameplate to identify main and tie devices.
 - 3) Use identification nameplate to identify load(s) served for each branch device. Do not identify spares and spaces.
 - b. Switchboards:
 - 1) Identify power source and circuit number. Include location when not within sight of equipment.
 - 2) Use identification nameplate to identify main overcurrent protective device.
 - 3) Use identification nameplate to identify load(s) served for each branch device. Do not identify spares and spaces.
 - c. Motor Control Centers:
 - 1) Use identification nameplate to identify main overcurrent protective device.
 - 2) Use identification nameplate to identify load(s) served for each branch device. Do not identify spares and spaces.
 - d. Panelboards:
 - 1) Identify power source and circuit number. Include location when not within sight of equipment.
 - 2) Identify main overcurrent protective device. Use identification label for panelboards with a door. For power distribution panelboards without a door, use identification nameplate.
 - 3) Use typewritten circuit directory to identify load(s) served for panelboards with a door. Identify spares and spaces using pencil.
 - 4) For power panelboards without a door, use identification nameplate to identify load(s) served for each branch device. Do not identify spares and spaces.
 - 2. Service Equipment:
 - a. Use identification nameplate to identify each service disconnecting means.
 - b. For buildings or structures supplied by more than one service, or any combination of branch circuits, feeders, and services, use identification nameplate or means of identification acceptable to authority having jurisdiction at each service disconnecting means to identify all other services, feeders, and branch circuits supplying that building or structure. Verify format and descriptions with authority having jurisdiction.
 - c. Use identification label at each piece of service equipment to identify the available fault current and the date calculations were performed.
 - 3. Emergency System Equipment:
 - a. Use identification nameplate or voltage marker to identify emergency system equipment in accordance with NFPA 70.
 - b. Use identification nameplate at each piece of service equipment to identify type and location of on-site emergency power sources.
 - c. Use identification nameplate to identify emergency operating instructions for emergency system equipment.

4. Use voltage marker to identify highest voltage present for each piece of electrical equipment.
 5. Use identification nameplate to identify equipment utilizing series ratings, where permitted, in accordance with NFPA 70.
 6. Use identification nameplate to identify switchboards and panelboards utilizing a high leg delta system in accordance with NFPA 70.
 7. Use identification nameplate to identify disconnect location for equipment with remote disconnecting means.
 8. Use identification label or handwritten text using indelible marker on inside of door at each fused switch to identify required NEMA fuse class and size.
 9. Use identification label or handwritten text using indelible marker on inside of door at each motor controller to identify nameplate horsepower, full load amperes, code letter, service factor, voltage, and phase of motor(s) controlled.
 10. Use identification label to identify overcurrent protective devices for branch circuits serving fire alarm circuits. Identify with text "FIRE ALARM CIRCUIT".
 11. Use field-painted floor markings, floor marking tape, or warning labels to identify required equipment working clearances where indicated or where required by the authority having jurisdiction.
 - a. Field-Painted Floor Markings: Alternating black and white stripes, 3 inches wide, painted in accordance with Section 09 9123 and 09 9113.
 12. Arc Flash Hazard Warning Labels: Use warning labels to identify arc flash hazards for electrical equipment, such as switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers that are likely to require examination, adjustment, servicing, or maintenance while energized.
 13. Use warning signs to identify electrical hazards for entrances to all rooms and other guarded locations that contain exposed live parts operating at 600 V nominal or less with the word message "DANGER; Electrical hazard; Authorized personnel only" or approved equivalent.
 14. Use warning signs to identify electrical hazards for entrances to all buildings, vaults, rooms, or enclosures containing exposed live parts or exposed conductors operating at over 600 V nominal with the word message "DANGER; HIGH VOLTAGE; KEEP OUT".
 15. Use warning labels to identify electrical hazards for equipment, compartments, and enclosures containing exposed live parts or exposed conductors operating at over 600 V nominal with the word message "DANGER; HIGH VOLTAGE; KEEP OUT".
 16. Use warning labels, identification nameplates, or identification labels to identify electrical hazards for equipment where multiple power sources are present with the word message "DANGER; Hazardous voltage; Multiple power sources may be present; Disconnect all electric power including remote disconnects before servicing" or approved equivalent.
- C. Identification for Conductors and Cables:
1. Color Coding for Power Conductors 600 V and Less: Comply with Section 26 0519.
 2. Use identification nameplate or identification label to identify color code for ungrounded and grounded power conductors inside door or enclosure at each piece of feeder or branch-circuit distribution equipment when premises has feeders or branch circuits served by more than one nominal voltage system.
 3. Use wire and cable markers to identify circuit number or other designation indicated for power, control, and instrumentation conductors and cables at the following locations:
 - a. At each source and load connection.
 - b. Within boxes when more than one circuit is present.
 - c. Within equipment enclosures when conductors and cables enter or leave the enclosure.
 - d. In cable tray, at maximum intervals of 20 feet.
 4. Use wire and cable markers to identify connected grounding electrode system components for grounding electrode conductors.
 5. Use underground warning tape to identify direct buried cables.

- D. Identification for Raceways:
 - 1. Use voltage markers to identify highest voltage present for accessible conduits at maximum intervals of 20 feet.
 - 2. Use voltage markers or color-coded bands to identify systems other than normal power system for accessible conduits at maximum intervals of 20 feet.
 - a. Color-Coded Bands: Use field-painting or vinyl color coding electrical tape to mark bands 3 inches wide.
 - 1) Color Code:
 - 2) Field-Painting: Comply with Section 09 9123 and 09 9113.
 - 3) Vinyl Color Coding Electrical Tape: Comply with Section 26 0519.
 - 3. Use identification labels, handwritten text using indelible marker, or plastic marker tags to identify circuits enclosed for accessible conduits at wall penetrations, at floor penetrations, at roof penetrations, and at equipment terminations when source is not within sight.
 - 4. Use identification labels, handwritten text using indelible marker, or plastic marker tags to identify spare conduits at each end. Identify purpose and termination location.
 - 5. Use underground warning tape to identify underground raceways.
 - 6. Use voltage markers to identify highest voltage present for wireways at maximum intervals of 20 feet.
- E. Identification for Boxes:
 - 1. Use voltage markers to identify highest voltage present.
 - 2. Use voltage markers or color coded boxes to identify systems other than normal power system.
 - a. Color-Coded Boxes: Field-painted in accordance with Section 09 9123 and 09 9113 per the same color code used for raceways.
 - b. For exposed boxes in public areas, do not color code.
 - 3. Use identification labels or handwritten text using indelible marker to identify circuits enclosed.
 - a. For exposed boxes in public areas, use only identification labels.
 - 4. Use warning labels to identify electrical hazards for boxes containing exposed live parts or exposed conductors operating at over 600 V nominal with the word message "DANGER; HIGH VOLTAGE; KEEP OUT".
- F. Identification for Devices:
 - 1. Use identification label to identify fire alarm system devices.
 - a. For devices concealed above suspended ceilings, provide additional identification on ceiling tile below device location.
 - 2. Use identification label or engraved wallplate to identify serving branch circuit for all receptacles.
 - a. For receptacles in public areas or in areas as directed by Architect, provide identification on inside surface of wallplate.
 - 3. Use identification label or engraved wallplate to identify load controlled for wall-mounted control devices controlling loads that are not visible from the control location and for multiple wall-mounted control devices installed at one location.
 - 4. Use identification label to identify receptacles protected by upstream GFI protection, where permitted.
- G. Identification for Luminaires:
 - 1. Use permanent red dot on luminaire frame to identify luminaires connected to emergency power system.
- H. Identification for Photovoltaic Systems: Comply with Section 26 3100

2.02 IDENTIFICATION NAMEPLATES AND LABELS

- A. Identification Nameplates:
 - 1. Materials:
 - a. Indoor Clean, Dry Locations: Use plastic nameplates.

- b. Outdoor Locations: Use plastic, stainless steel, or aluminum nameplates suitable for exterior use.
 - 2. Plastic Nameplates: Two-layer or three-layer laminated acrylic or electrically non-conductive phenolic with beveled edges; minimum thickness of 1/16 inch; engraved text.
 - a. Exception: Provide minimum thickness of 1/8 inch when any dimension is greater than 4 inches.
 - 3. Stainless Steel Nameplates: Minimum thickness of 1/32 inch; engraved or laser-etched text.
 - 4. Aluminum Nameplates: Anodized; minimum thickness of 1/32 inch; engraved or laser-etched text.
- B. Identification Labels:
 - 1. Materials: Use self-adhesive laminated plastic labels; UV, chemical, water, heat, and abrasion resistant.
 - a. Use only for indoor locations.
 - 2. Text: Use factory pre-printed or machine-printed text. Do not use handwritten text unless otherwise indicated.

2.03 WIRE AND CABLE MARKERS

- A. Markers for Conductors and Cables: Use wrap-around self-adhesive vinyl cloth, wrap-around self-adhesive vinyl self-laminating, heat-shrink sleeve, plastic sleeve, plastic clip-on, or vinyl split sleeve type markers suitable for the conductor or cable to be identified.
- B. Markers for Conductor and Cable Bundles: Use plastic marker tags secured by nylon cable ties.
- C. Legend: Power source and circuit number or other designation indicated.
- D. Text: Use factory pre-printed or machine-printed text, all capitalized unless otherwise indicated.
- E. Minimum Text Height: 1/8 inch.
- F. Color: Black text on white background unless otherwise indicated.

2.04 VOLTAGE MARKERS

- A. Markers for Conduits: Use factory pre-printed self-adhesive vinyl, self-adhesive vinyl cloth, or vinyl snap-around type markers.
- B. Markers for Boxes and Equipment Enclosures: Use factory pre-printed self-adhesive vinyl or self-adhesive vinyl cloth type markers.
- C. Minimum Size:
 - 1. Markers for Equipment: 1 1/8 by 4 1/2 inches.
 - 2. Markers for Conduits: As recommended by manufacturer for conduit size to be identified.
 - 3. Markers for Pull Boxes: 1 1/8 by 4 1/2 inches.
 - 4. Markers for Junction Boxes: 1/2 by 2 1/4 inches.
- D. Legend:
 - 1. Markers for Voltage Identification: Highest voltage present.
 - 2. Markers for System Identification:
 - a. Emergency Power System: Text "EMERGENCY".
- E. Color: Black text on orange background unless otherwise indicated.

2.05 UNDERGROUND WARNING TAPE

- A. Materials: Use non-detectable type polyethylene tape suitable for direct burial, unless otherwise indicated.
 - 1. Exception: Use foil-backed detectable type tape where required by serving utility or where directed by Owner.
- B. Non-detectable Type Tape: 6 inches wide, with minimum thickness of 4 mil.
- C. Foil-backed Detectable Type Tape: 3 inches wide, with minimum thickness of 5 mil, unless otherwise required for proper detection.

D. Legend: Type of service, continuously repeated over full length of tape.

E. Color:

2.06 FLOOR MARKING TAPE

A. Floor Marking Tape for Equipment Working Clearance Identification: Self-adhesive vinyl or polyester tape with overlamine, 3 inches wide, with alternating black and white stripes.

2.07 WARNING SIGNS AND LABELS

A. Comply with ANSI Z535.2 or ANSI Z535.4 as applicable.

B. Warning Signs:

1. Materials:

a. Indoor Dry, Clean Locations: Use factory pre-printed rigid plastic or self-adhesive vinyl signs.

b. Outdoor Locations: Use factory pre-printed rigid aluminum signs.

2. Minimum Size: 7 by 10 inches unless otherwise indicated.

C. Warning Labels:

1. Materials: Use factory pre-printed or machine-printed self-adhesive polyester or self-adhesive vinyl labels; UV, chemical, water, heat, and abrasion resistant; produced using materials recognized to UL 969.

a. Do not use labels designed to be completed using handwritten text.

2. Machine-Printed Labels: Use thermal transfer process printing machines and accessories recommended by label manufacturer.

3. Minimum Size: 2 by 4 inches unless otherwise indicated.

END OF SECTION

**SECTION 26 0573
POWER SYSTEM STUDIES**

PART 1 GENERAL

1.01 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the work to provide equipment and associated protective devices complying with criteria for selection and adjustment, as determined by studies to be performed.
- B. Sequencing:
 - 1. Submit study reports prior to or concurrent with product submittals.
 - 2. Do not order equipment until matching study reports and product submittals have both been evaluated by Architect.

1.02 SUBMITTALS

- A. Study reports, stamped or sealed and signed by study preparer.

1.03 POWER SYSTEM STUDIES

- A. Scope of Studies:
 - 1. Except where study descriptions below indicate exclusions, analyze system at each bus from primary protective devices of utility source down to each piece of equipment involved, including parts of system affecting calculations being performed (e.g. fault current contribution from motors).
 - 2. Include in analysis alternate sources and operating modes (including known future configurations) to determine worst case conditions.
- B. General Study Requirements:
 - 1. Comply with NFPA 70.
 - 2. Perform studies utilizing computer software complying with specified requirements; manual calculations are not permitted.
- C. Data Collection:
 - 1. Compile information on project-specific characteristics of actual installed equipment, protective devices, feeders, etc. as necessary to develop single-line diagram of electrical distribution system and associated input data for use in system modeling.
 - a. Utility Source Data: Include primary voltage, maximum and minimum three-phase and line-to-ground fault currents, impedance, X/R ratio, and primary protective device information.
 - 1) Obtain up-to-date information from Utility Company.
- D. Study Reports:
 - 1. General Requirements:
 - a. Identify date of study and study preparer.
 - b. Identify study methodology and software product(s) used.
 - c. Identify scope of studies, assumptions made, implications of possible alternate scenarios, and any exclusions from studies.
 - d. Identify base used for per unit values.
 - e. Include single-line diagram and associated input data used for studies; identify buses on single-line diagram as referenced in reports, and indicate bus voltage.
 - f. Include conclusions and recommendations.

1.04 QUALITY ASSURANCE

- A. Study Preparer Qualifications: Professional electrical engineer licensed in California and with minimum five years experience in the preparation of studies of similar type and complexity using specified computer software.
- B. Computer Software for Study Preparation: Use the latest edition of commercially available software utilizing specified methodologies.

PART 2 PRODUCTS

2.01 ARC FLASH HAZARD WARNING LABELS

- A. Provide warning labels complying with ANSI Z535.4 to identify arc flash hazards for each work location analyzed by the arc flash and shock risk assessment.
 - 1. Materials: Comply with Section 26 0553.
 - 2. Legend: Provide custom legend in accordance with NFPA 70E based on equipment-specific data as determined by arc flash and shock risk assessment.

PART 3 EXECUTION

3.01 FIELD QUALITY CONTROL

- A. Inspect and test in accordance with NETA ATS, except Section 4.
- B. Adjust equipment and protective devices for compliance with studies and recommended settings.

END OF SECTION

**SECTION 26 0923
LIGHTING CONTROL DEVICES**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 LIGHTING CONTROL DEVICES - GENERAL REQUIREMENTS

- A. Provide products listed, classified, and labeled as suitable for the purpose intended.
- B. Unless specifically indicated to be excluded, provide all required conduit, wiring, connectors, hardware, components, accessories, etc. as required for a complete operating system.
- C. Products for Switching of Electronic Fluorescent Ballasts: Tested and rated to be suitable for peak inrush currents specified in NEMA 410.

2.02 OCCUPANCY SENSORS

- A. All Occupancy Sensors:
 - 1. Description: Factory-assembled commercial specification grade devices for indoor use capable of sensing both major motion, such as walking, and minor motion, such as small desktop level movements, according to published coverage areas, for automatic control of load indicated.
 - 2. Turn-Off Delay: Field adjustable, with time delay settings up to 30 minutes.
 - 3. Adaptive Technology: Field selectable; capable of self-adjusting sensitivity and time delay according to conditions.
 - 4. Integral Photocell: For field selectable and adjustable inhibition of automatic turn-on of load when ambient lighting is above the selected level.
 - 5. Compatibility (Non-Dimming Sensors): Suitable for controlling incandescent lighting, low-voltage lighting with electronic and magnetic transformers, fluorescent lighting with electronic and magnetic ballasts, and fractional motor loads, with no minimum load requirements.
 - 6. Where wired sensors are indicated, wireless sensors are acceptable provided that all components and wiring modifications necessary for proper operation are included.
 - 7. Wireless Sensors:
 - a. RF Range: 30 feet through typical construction materials.
 - b. Electromagnetic Interference/Radio Frequency Interference (EMI/RFI) Limits: Comply with FCC requirements of 47 CFR 15, for Class B application.
 - c. Power: Battery-operated with minimum ten-year battery life.
- B. Wall Switch Occupancy Sensors:
 - 1. All Wall Switch Occupancy Sensors:
 - a. Description: Occupancy sensors designed for installation in standard wall box at standard wall switch mounting height with a field of view of 180 degrees, integrated manual control capability, and no leakage current to load in off mode.
- C. Wall Dimmer Occupancy Sensors:
 - 1. General Requirements:
 - a. Description: Occupancy sensors designed for installation in standard wall box at standard wall switch mounting height with a field of view of 180 degrees, integrated dimming control capability, and no leakage current to load in off mode.
 - b. Dimmer: Solid-state with continuous full-range even control following square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, and listed as complying with UL 1472; type and rating suitable for load controlled.
 - c. Provide field adjustable dimming preset for occupied state.
- D. Ceiling Mounted Occupancy Sensors:
 - 1. All Ceiling Mounted Occupancy Sensors:
 - a. Description: Low profile occupancy sensors designed for ceiling installation.

- E. Directional Occupancy Sensors:
 1. All Directional Occupancy Sensors: Designed for wall or ceiling mounting, with integral swivel for field adjustment of motion detection coverage.
- F. Luminaire Mounted Occupancy Sensors: Designed for direct luminaire installation and control, suitable for use with specified luminaires.
 1. Fluorescent High Bay Luminaire Mounted Occupancy Sensors: Passive infrared (PIR) type with a field of view of 360 degrees unless otherwise indicated.
- G. Power Packs for Low Voltage Occupancy Sensors:
 1. Description: Plenum rated, self-contained low voltage class 2 transformer and relay compatible with specified low voltage occupancy sensors for switching of line voltage loads.
 2. Provide quantity and configuration of power and slave packs with all associated wiring and accessories as required to control the load indicated on the drawings.
 3. Input Supply Voltage: Dual rated for 120/277 V ac.
- H. Power Packs for Wireless Occupancy Sensors:
 1. Description: Plenum rated, self-contained relay compatible with specified wireless occupancy sensors for switching of line voltage loads.
 2. Input Supply Voltage: Dual rated for 120/277 V ac.
 3. Provide auxiliary contact closure output where indicated.
 4. Rated Life of Relay: One million cycles.

2.03 OUTDOOR MOTION SENSORS

- A. Description: Factory-assembled wet location listed device suitable for wall or ceiling/leave mounting, with integral swivel for field adjustment of coverage, capable of detecting motion for automatic control of load indicated.
- B. Sensor Technology: Passive Infrared (PIR) designed to detect occupancy by sensing movement of thermal energy between zones.
- C. Turn-Off Delay: Field adjustable, with time delay settings available up to 15 minutes.
- D. Integral Photocell: For dusk to dawn operation.
- E. Manual Override: Activated by switching power off to unit and then back on.
- F. Load Rating: 1,000 W incandescent and fluorescent load at 120 V ac.
- G. Coverage: Capable of detecting motion within a distance of 50 feet at a mounting height of 8 feet, with a field of view of 270 degrees.

2.04 TIME SWITCHES

- A. Digital Electronic Time Switches:
 1. Description: Factory-assembled solid state programmable controller with LCD display, listed and labeled as complying with UL 916 or UL 917.
 2. Program Capability:
 - a. 24-Hour Time Switches: Single channel, with same schedule for each day of the week and skip-a-day feature to omit selected days.
 - b. 7-Day Time Switches: Single channel, capable of different schedule for each day of the week with additional holiday schedule available to override normal schedule for selected days.
 - c. Astronomic Time Switches: Single channel, capable of different schedule for each day of the week with additional holiday schedule available to override normal schedule for selected days and field-configurable astronomic feature to automatically adjust for seasonal changes in sunrise and sunset times.
 3. Schedule Capacity: Not less than 16 programmable on/off operations.
 4. Provide power outage backup to retain programming and maintain clock.
 5. Manual override: Capable of overriding current schedule both permanently and temporarily until next scheduled event.
 6. Input Supply Voltage: As indicated on the drawings.

2.05 IN-WALL TIME SWITCHES

- A. Digital Electronic In-Wall Time Switches:
 - 1. Description: Factory-assembled solid state programmable controller with LCD display, suitable for mounting in standard wall box, and listed and labeled as complying with UL 916 or UL 917.
 - 2. Program Capability:
 - a. 7-Day Time Switches: Capable of different schedule for each day of the week.
 - b. Astronomic Time Switches: Capable of different schedule for each day of the week and field-configurable astronomic feature to automatically adjust for seasonal changes in sunrise and sunset times.
 - 3. Schedule Capacity: Not less than 40 programmable on/off operations.
 - 4. Provide power outage backup to retain programming and maintain clock.
 - 5. Manual override: Capable of overriding current schedule both permanently and temporarily until next scheduled event.

2.06 IN-WALL INTERVAL TIMERS

- A. Digital Electronic In-Wall Interval Timers:
 - 1. Description: Factory-assembled solid state programmable controller with LCD display, suitable for mounting in standard wall box, and listed and labeled as complying with UL 916 or UL 917.
 - 2. Program Capability: Designed to turn load off at end of preset time interval.
 - 3. Time Interval: Field selectable range of presets available up to 12 hours.
 - 4. Provide power outage backup to retain programming and maintain clock.
 - 5. Manual override: Capable of both turning load off and resetting timer to original preset time interval.

2.07 OUTDOOR PHOTO CONTROLS

- A. Stem-Mounted Outdoor Photo Controls:
 - 1. Description: Direct-wired photo control unit with threaded conduit mounting stem and field-adjustable swivel base, listed and labeled as complying with UL 773A.
 - 2. Housing: Weatherproof, impact resistant polycarbonate.
 - 3. Photo Sensor: Cadmium sulfide.
 - 4. Provide external sliding shield for field adjustment of light level activation.
 - 5. Light Level Activation: 1 to 5 footcandles turn-on and 3 to 1 turn-off to turn-on ratio with delayed turn-off.
 - 6. Voltage: As required to control the load indicated on the drawings.
 - 7. Load Rating: As required to control the load indicated on the drawings.
- B. Locking Receptacle-Mounted Outdoor Photo Controls
 - 1. Description: Plug-in locking type photo control unit complying with ANSI C136.10 for mounting on a compatible receptacle, listed and labeled as complying with UL 773.
 - 2. Housing: Weatherproof, impact resistant UV stabilized polypropylene, color to be selected.
 - 3. Photo Sensor: Cadmium sulfide.
 - 4. Light Level Activation: 1 to 3 footcandles turn-on and 1.5 to 1 turn-off to turn-on ratio with instant turn-on and delayed turn-off.
 - 5. Voltage: As required to control the load indicated on the drawings.
 - 6. Failure Mode: Fails to the on position.
 - 7. Load Rating: As required to control the load indicated on the drawings.
 - 8. Surge Protection: 160 joule metal oxide varistor.
- C. Button Type Outdoor Photo Controls
 - 1. Description: Direct-wired photo control unit complying with ANSI C136.24 with weatherproof gasketed wall plate where required or indicated, listed and labeled as complying with UL 773A.
 - 2. Housing: Weather resistant polycarbonate.

3. Photo Sensor: Cadmium sulfide.
4. Light Level Activation: 1 to 3 footcandles turn-on and 3 to 1 turn-off to turn-on ratio with delayed turn-off.
5. Voltage: As required to control the load indicated on the drawings.
6. Load Rating: As required to control the load indicated on the drawings.

2.08 DAYLIGHTING CONTROLS

- A. System Description: Control system consisting of photo sensors and compatible control modules and power packs, contactors, or relays as required for automatic control of load indicated according to available natural light; capable of integrating with occupancy sensors and manual override controls.
- B. Daylighting Control Photo Sensors: Low voltage class 2 photo sensor units with output signal proportional to the measured light level and provision for zero or offset based signal.
 1. Sensor Type: Filtered silicon photo diode.
 2. Sensor Range:
 3. Where wired sensors are indicated, wireless sensors are acceptable provided that all components and wiring modifications necessary for proper operation are included.
 4. Wireless Daylighting Control Photo Sensors:
 - a. RF Range: 30 feet through typical construction materials.
 - b. Electromagnetic Interference/Radio Frequency Interference (EMI/RFI) Limits: Comply with FCC requirements of 47 CFR 15, for Class B application.
 - c. Power: Battery-operated with minimum ten-year battery life.
- C. Dimming Photo Sensors: Photo sensor units with integral controller compatible with specified dimming ballasts, for direct continuous dimming of up to 50 ballasts.
- D. Daylighting Control Switching Modules for Low Voltage Sensors: Low voltage class 2 control unit compatible with specified photo sensors, for switching of compatible power packs, contactors, or relays in response to changes in measured light levels according to selected settings.
 1. Operation: Unless otherwise indicated, load to be turned on when light level is below selected low set point and load to be turned off when light level is above selected high set point, with a no switching dead band between set points to prevent unwanted cycling.
 2. Input Delay: To prevent unwanted cycling due to intermittent light level fluctuations.
 3. Control Capability:
 - a. Single Zone Switching Modules: Capable of controlling one programmable channel.
 - b. Multi-Zone Switching Modules: Capable of controlling up to three separately programmable channels.
- E. Daylighting Control Switching Modules for Wireless Sensors:
 1. Description: Plenum rated, self-contained relay compatible with specified wireless photo sensors for switching of line voltage loads in response to changes in measured light levels according to selected settings.
 2. Operation: Unless otherwise indicated, load to be turned on when light level is below selected low set point and load to be turned off when light level is above selected high set point, with a no switching dead band between set points to prevent unwanted cycling.
 3. Input Delay: To prevent unwanted cycling due to intermittent light level fluctuations.
 4. Control Capability: Capable of controlling one programmable channel.
 5. Input Supply Voltage: Dual rated for 120/277 V ac.
 6. Provide auxiliary contact closure output where indicated.
 7. Rated Life of Relay: One million cycles.
- F. Daylighting Control Dimming Modules for Low Voltage Sensors: Low voltage class 2 control unit compatible with specified photo sensors and with specified dimming ballasts, for both continuous dimming of compatible dimming ballasts and switching of compatible power packs, contactors, or relays in response to changes in measured light levels according to selected settings.

1. Control Capability: Capable of controlling up to three separately programmable channels, with up to 50 ballasts per channel.
 2. Dimming and Fade Rates: Adjustable from 5 to 60 seconds.
 3. Cut-Off Delay: Selectable and adjustable from 0 to 20 minutes.
- G. Daylighting Control Dimming Modules for Wireless Sensors:
1. Description: Plenum rated control unit compatible with specified wireless photo sensors and with specified dimming ballasts, for continuous dimming of compatible dimming ballasts in response to changes in measured light levels according to selected settings.
 2. Control Capability: Capable of controlling up to 32 ballasts with up to two separately programmable daylighting zones.
- H. Power Packs for Low Voltage Daylighting Control Modules:
1. Description: Plenum rated, self-contained low voltage class 2 transformer and relay compatible with specified low voltage daylighting control modules for switching of line voltage loads. Provide quantity and configuration of power and slave packs with all associated wiring and accessories as required to control the load indicated on the drawings.
 2. Input Supply Voltage: Dual rated for 120/277 V ac.

END OF SECTION

SECTION 26 2100
LOW-VOLTAGE ELECTRICAL SERVICE ENTRANCE

PART 2 PRODUCTS

1.01 ELECTRICAL SERVICE REQUIREMENTS

- A. Provide new electrical service consisting of all required conduits, conductors, equipment, metering provisions, supports, accessories, etc. as necessary for connection between Utility Company point of supply and service entrance equipment.
- B. Electrical Service Characteristics:
 - 1. Service Type: Underground.
 - 2. Service Voltage: 480Y/277 V, 3 phase, 60 Hz.
- C. Utility Company: As indicated on drawings.
- D. Division of Responsibility: As indicated on drawings.
- E. Products Furnished by Contractor: Comply with Utility Company requirements.

END OF SECTION

**SECTION 26 2413
SWITCHBOARDS**

PART 1 GENERAL

1.01 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.

PART 2 PRODUCTS

2.01 SWITCHBOARDS

- A. Provide products listed, classified, and labeled as suitable for the purpose intended.
- B. Description: Dead-front switchboard assemblies complying with NEMA PB 2, and listed and labeled as complying with UL 891; ratings, configurations and features as indicated on the drawings.
- C. Front-Connected Switchboards:
1. Main Device(s): Individually-mounted.
 2. Feeder Devices: Panel/group-mounted.
 3. Arrangement: Front accessible only (not rear accessible), rear aligned.
 4. Gutter Access: Bolted covers.
- D. Rear-Connected Switchboards:
1. Main Device(s): Individually-mounted.
 2. Feeder Devices: Individually-mounted.
 3. Compartmentalization: Provide barriered compartments for each overcurrent protective device, distribution bus, and rear cable connection area.
 4. Arrangement: Rear accessible, front and rear aligned.
 5. Rear Access: Bolted covers.
- E. Service Entrance Switchboards:
1. Listed and labeled as suitable for use as service equipment according to UL 869A.
- F. Service Conditions:
1. Provide switchboards and associated components suitable for operation at indicated ratings under the service conditions at the installed location.
- G. Short Circuit Current Rating:
1. Minimum Rating: 65,000 rms symmetrical amperes.
- H. Main Devices: Configure for top or bottom incoming feed as indicated or as required for the installation. Provide separate pull section and/or top-mounted pullbox as indicated or as required to facilitate installation of incoming feed.
- I. Bussing: Sized in accordance with UL 891 temperature rise requirements.
1. Through bus (horizontal cross bus) to be fully rated through full length of switchboard (non-tapered). Tapered bus is not permitted.
 2. Provide fully rated neutral bus unless otherwise indicated, with a suitable lug for each feeder or branch circuit requiring a neutral connection.
 3. Phase and Neutral Bus Material: Aluminum.
 4. Ground Bus Material: Aluminum.
- J. Conductor Terminations: Suitable for use with the conductors to be installed.
1. Line Conductor Terminations:
 - a. Main and Neutral Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
 - b. Main and Neutral Lug Type: Mechanical.
 2. Load Conductor Terminations:
 - a. Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
 - b. Lug Type:
 - 1) Provide mechanical lugs unless otherwise indicated.

2) Provide compression lugs where indicated.

K. Enclosures:

1. Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
2. Enclosure Space Heaters:
 - a. Provide in each switchboard section installed outdoors and in unconditioned indoor spaces.
 - b. Size according to manufacturer's recommendations for worst case ambient temperature to prevent condensation.
 - c. Heater Control: Thermostat.
 - d. Heater Power Source: Provide connection to transformer factory-installed in switchboard or suitable external branch circuit as indicated or as required.

L. Future Provisions:

1. Prepare designated spaces for future installation of devices including bussing, connectors, mounting hardware and all other required provisions.

M. Ground Fault Protection: Where ground-fault protection is indicated, provide system listed and labeled as complying with UL 1053.

N. Arc Flash Energy-Reducing Maintenance Switching: For circuit breakers rated 1200 A or higher, provide a local accessory switch with status indicator light that permits selection of a maintenance mode with alternate electronic trip unit settings for reduced fault clearing time.

O. Owner Metering:

1. Provide microprocessor-based digital electrical metering system including all instrument transformers, wiring, and connections necessary for measurements specified.
2. Measured Parameters:
 - a. Voltage (Volts AC): Line-to-line, line-to-neutral for each phase.
 - b. Current (Amps): For each phase and neutral.
 - c. Frequency (Hz).
 - d. Real power (kW): For each phase, 3-phase total.
 - e. Reactive power (kVAR): For each phase, 3-phase total.
 - f. Apparent power (kVA): For each phase, 3-phase total.
 - g. Power factor.
3. Meter Accuracy: Plus/minus 1.0 percent.

2.02 OVERCURRENT PROTECTIVE DEVICES

A. Fusible Devices:

1. Fusible Switches:
 - a. Description: Quick-make, quick-break, dead-front fusible switch units complying with NEMA KS 1, and listed and labeled as complying with UL 98; ratings, configurations, and features as indicated on the drawings.
 - b. Fuse Clips: As required to accept indicated fuses.
2. Fused Power-Circuit Devices:
 - a. Description: Quick-make, quick-break, dead-front bolted-pressure contact switches and high-pressure butt contact switches listed and labeled as complying with UL 977; ratings, configurations, and features as indicated on the drawings.
 - b. Minimum Short Circuit Current Rating: 200,000 rms symmetrical amperes when protected by Class L fuses.
 - c. Fuse Clips: As required to accept Class L fuses.

B. Circuit Breakers:

1. Molded Case Circuit Breakers:
 - a. Description: Quick-make, quick-break, over center toggle, trip-free, trip-indicating circuit breakers; listed and labeled as complying with UL 489, and complying with FS W-C-375 where applicable; ratings, configurations, and features as indicated on the drawings.

- 1) Provide thermal magnetic circuit breakers unless otherwise indicated.
 - 2) Provide electronic trip circuit breakers where indicated.
 - b. Minimum Interrupting Capacity:
 - 1) 10,000 rms symmetrical amperes at 240 VAC or 208 VAC.
 - 2) 14,000 rms symmetrical amperes at 480 VAC.
 - c. Thermal Magnetic Circuit Breakers: For each pole, furnish thermal inverse time tripping element for overload protection and magnetic instantaneous tripping element for short circuit protection.
 - 1) Provide field-adjustable magnetic instantaneous trip setting for circuit breaker frame sizes 225 amperes and larger.
 - 2) Provide interchangeable trip units where indicated.
 - d. Electronic Trip Circuit Breakers: Furnish solid state, microprocessor-based, true rms sensing trip units.
 - 1) Provide zone selective interlocking capability where indicated, capable of communicating with other electronic trip circuit breakers and external ground fault sensing systems to control short time delay and ground fault delay functions for system coordination purposes.
 - 2) Provide communication capability where indicated: Compatible with system indicated.
2. Insulated Case Circuit Breakers:
- a. Description: Quick-make, quick-break, trip-free circuit breakers with two-step stored energy closing mechanism; standard 80 percent rated unless otherwise indicated; listed and labeled as complying with UL 489; ratings, configurations, and features as indicated on the drawings.
 - b. Operation:
 - 1) Provide manually operated circuit breakers unless otherwise indicated.
 - 2) Provide electrically operated circuit breakers where indicated.
 - c. Construction:
 - 1) Provide fixed-mount circuit breakers unless otherwise indicated.
 - 2) Provide drawout circuit breakers where indicated.
 - d. Drawout Circuit Breakers:
 - e. Minimum Interrupting Capacity:
 - 1) 42,000 rms symmetrical amperes at 240 VAC or 208 VAC.
 - 2) 65,000 rms symmetrical amperes at 480 VAC.
 - f. Trip Units: Solid state, microprocessor-based, true rms sensing.
 - 1) Provide zone selective interlocking capability where indicated, capable of communicating with other electronic trip circuit breakers and external ground fault sensing systems to control short time delay and ground fault delay functions for system coordination purposes.
 - 2) Provide communication capability where indicated: Compatible with system indicated.

END OF SECTION

**SECTION 26 2416
PANELBOARDS**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 PANELBOARDS - GENERAL REQUIREMENTS

- A. Provide products listed, classified, and labeled as suitable for the purpose intended.
- B. Short Circuit Current Rating:
 - 1. Listed series ratings are acceptable, except where not permitted by motor contribution according to NFPA 70.
 - 2. Label equipment utilizing series ratings as required by NFPA 70.
- C. Panelboards Used for Service Entrance: Listed and labeled as suitable for use as service equipment according to UL 869A.
- D. Mains: Configure for top or bottom incoming feed as indicated or as required for the installation.
- E. Bussing: Sized in accordance with UL 67 temperature rise requirements.
 - 1. Provide fully rated neutral bus unless otherwise indicated, with a suitable lug for each feeder or branch circuit requiring a neutral connection.
 - 2. Provide 200 percent rated neutral bus and lugs where indicated, where oversized neutral conductors are provided, or where panelboards are fed from K-rated transformers.
 - 3. Provide solidly bonded equipment ground bus in each panelboard, with a suitable lug for each feeder and branch circuit equipment grounding conductor.
 - 4. Provide separate isolated/insulated ground bus where indicated or where isolated grounding conductors are provided.
- F. Conductor Terminations: Suitable for use with the conductors to be installed.
- G. Enclosures: Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E.
 - 1. Boxes: Galvanized steel unless otherwise indicated.
 - a. Provide wiring gutters sized to accommodate the conductors to be installed.
 - 2. Fronts:
 - 3. Lockable Doors: All locks keyed alike unless otherwise indicated.
- H. Future Provisions: Prepare all unused spaces for future installation of devices including bussing, connectors, mounting hardware and all other required provisions.
- I. Surge Protective Devices: Where factory-installed, internally mounted surge protective devices are provided in accordance with Section 26 4300, list and label panelboards as a complete assembly including surge protective device.
- J. Panelboard Contactors: Where panelboard contactors are indicated, provide electrically operated, mechanically held magnetic contactor complying with NEMA ICS 2.
 - 1. Ampere Rating: Not less than ampere rating of panelboard bus.
 - 2. Short Circuit Current Rating: Not less than the panelboard short circuit current rating.
 - 3. Coil Voltage: As required for connection to control system indicated.
- K. Ground Fault Protection: Where ground-fault protection is indicated, provide system listed and labeled as complying with UL 1053.
 - 1. Where electronic circuit breakers equipped with integral ground fault protection are used, provide separate neutral current sensor where applicable.
 - 2. Where accessory ground fault sensing and relaying equipment is used, equip companion overcurrent protective devices with ground-fault shunt trips.
 - a. Use zero sequence ground fault detection method unless otherwise indicated.
 - b. Provide test panel and field-adjustable ground fault pick-up and delay settings.
 - c. Provide zone selective interlocking capability where indicated, capable of communicating with other electronic trip circuit breakers and external ground fault

sensing systems to control ground fault delay functions for system coordination purposes.

2.02 POWER DISTRIBUTION PANELBOARDS

- A. Description: Panelboards complying with NEMA PB 1, power and feeder distribution type, circuit breaker type, and listed and labeled as complying with UL 67; ratings, configurations and features as indicated on the drawings.
- B. Conductor Terminations:
 - 1. Main and Neutral Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
 - 2. Main and Neutral Lug Type: Mechanical.
- C. Bussing:
 - 1. Phase and Neutral Bus Material: Aluminum.
 - 2. Ground Bus Material: Aluminum.
- D. Circuit Breakers:
 - 1. Provide bolt-on type or plug-in type secured with locking mechanical restraints.
- E. Enclosures:
 - 1. Provide surface-mounted enclosures unless otherwise indicated.
 - 2. Fronts: Provide lockable hinged door with concealed hinges for access to overcurrent protective device handles without exposing live parts.
 - 3. Provide clear plastic circuit directory holder mounted on inside of door.

2.03 LIGHTING AND APPLIANCE PANELBOARDS

- A. Description: Panelboards complying with NEMA PB 1, lighting and appliance branch circuit type, circuit breaker type, and listed and labeled as complying with UL 67; ratings, configurations and features as indicated on the drawings.
- B. Conductor Terminations:
 - 1. Main and Neutral Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
 - 2. Main and Neutral Lug Type: Mechanical.
- C. Bussing:
 - 1. Phase and Neutral Bus Material: Aluminum.
 - 2. Ground Bus Material: Aluminum.
- D. Circuit Breakers: Thermal magnetic bolt-on type unless otherwise indicated.
- E. Enclosures:
 - 1. Provide surface-mounted or flush-mounted enclosures as indicated.
 - 2. Fronts: Provide lockable hinged door with concealed hinges for access to overcurrent protective device handles without exposing live parts.
 - 3. Provide clear plastic circuit directory holder mounted on inside of door.

2.04 LOAD CENTERS

- A. Description: Circuit breaker type load centers listed and labeled as complying with UL 67; ratings, configurations, and features as indicated on the drawings.
- B. Bussing:
 - 1. Bus Material: Aluminum or copper.
- C. Circuit Breakers: Thermal magnetic plug-in type.
- D. Enclosures:
 - 1. Provide flush-mounted enclosures unless otherwise indicated.
 - 2. Fronts: Provide hinged door with concealed hinges for access to overcurrent protective device handles without exposing live parts.
 - 3. Provide circuit directory label on inside of door or individual circuit labels adjacent to circuit breakers.

2.05 OVERCURRENT PROTECTIVE DEVICES

A. Fusible Switches:

1. Description: Quick-make, quick-break, dead-front fusible switch units complying with NEMA KS 1, and listed and labeled as complying with UL 98; ratings, configurations, and features as indicated on the drawings.
2. Fuse Clips: As required to accept indicated fuses.
3. Provide externally operable handle with means for locking in the OFF position. Provide means for locking switch cover in the closed position. Provide safety interlock to prevent opening the cover with the switch in the ON position with capability of overriding interlock for testing purposes.

B. Molded Case Circuit Breakers:

1. Description: Quick-make, quick-break, over center toggle, trip-free, trip-indicating circuit breakers listed and labeled as complying with UL 489, and complying with FS W-C-375 where applicable; ratings, configurations, and features as indicated on the drawings.
2. Interrupting Capacity:
 - a. Provide circuit breakers with interrupting capacity as required to provide the short circuit current rating indicated, but not less than:
 - 1) 10,000 rms symmetrical amperes at 240 VAC or 208 VAC.
 - 2) 14,000 rms symmetrical amperes at 480 VAC.
 - b. Fully Rated Systems: Provide circuit breakers with interrupting capacity not less than the short circuit current rating indicated.
 - c. Series Rated Systems: Provide circuit breakers listed in combination with upstream devices to provide interrupting rating not less than the short circuit current rating indicated.
3. Conductor Terminations:
 - a. Provide mechanical lugs unless otherwise indicated.
 - b. Provide compression lugs where indicated.
 - c. Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
4. Thermal Magnetic Circuit Breakers: For each pole, furnish thermal inverse time tripping element for overload protection and magnetic instantaneous tripping element for short circuit protection.
 - a. Provide field-adjustable magnetic instantaneous trip setting for circuit breaker frame sizes 225 amperes and larger.
 - b. Provide interchangeable trip units where indicated.
5. Electronic Trip Circuit Breakers: Furnish solid state, microprocessor-based, true rms sensing trip units.
 - a. Provide the following field-adjustable trip response settings:
 - 1) Long time pickup, adjustable by replacing interchangeable trip unit or by setting dial.
 - 2) Long time delay.
 - 3) Short time pickup and delay.
 - 4) Instantaneous pickup.
 - 5) Ground fault pickup and delay where ground fault protection is indicated.
 - b. Provide zone selective interlocking capability where indicated, capable of communicating with other electronic trip circuit breakers and external ground fault sensing systems to control short time delay and ground fault delay functions for system coordination purposes.
 - c. Provide communication capability where indicated: Compatible with system indicated.
6. Provide listed switching duty rated circuit breakers with SWD marking for all branch circuits serving fluorescent lighting.
7. Provide listed high intensity discharge lighting rated circuit breakers with HID marking for all branch circuits serving HID lighting.
8. Do not use tandem circuit breakers.

9. Do not use handle ties in lieu of multi-pole circuit breakers.
10. Provide multi-pole circuit breakers for multi-wire branch circuits as required by NFPA 70.
11. Provide the following features and accessories where indicated or where required to complete installation:
 - a. Shunt Trip: Provide coil voltage as required for connection to indicated trip actuator.

END OF SECTION

**SECTION 26 2717
EQUIPMENT WIRING**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 MATERIALS

- A. Cords and Caps: NEMA WD 6; match receptacle configuration at outlet provided for equipment.
 - 1. Colors: Conform to NEMA WD 1.
 - 2. Cord Construction: NFPA 70, Type SO, multiconductor flexible cord with identified equipment grounding conductor, suitable for use in damp locations.
 - 3. Size: Suitable for connected load of equipment, length of cord, and rating of branch circuit overcurrent protection.

2.02 EQUIPMENT CONNECTIONS

PART 3 EXECUTION

3.01 ELECTRICAL CONNECTIONS

- A. Make electrical connections in accordance with equipment manufacturer's instructions.
- B. Make conduit connections to equipment using flexible conduit. Use liquidtight flexible conduit with watertight connectors in damp or wet locations.
- C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered.
- D. Provide receptacle outlet to accommodate connection with attachment plug.
- E. Provide cord and cap where field-supplied attachment plug is required.
- F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection boxes.
- G. Install disconnect switches, controllers, control stations, and control devices to complete equipment wiring requirements.
- H. Install terminal block jumpers to complete equipment wiring requirements.
- I. Install interconnecting conduit and wiring between devices and equipment to complete equipment wiring requirements.

END OF SECTION

**SECTION 26 2726
WIRING DEVICES**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 WIRING DEVICE APPLICATIONS

- A. Provide wiring devices suitable for intended use and with ratings adequate for load served.
- B. For single receptacles installed on an individual branch circuit, provide receptacle with ampere rating not less than that of the branch circuit.
- C. Provide weather resistant GFCI receptacles with specified weatherproof covers for receptacles installed outdoors or in damp or wet locations.
- D. Provide tamper resistant receptacles for receptacles installed in dwelling units.
- E. Provide GFCI protection for receptacles installed within 6 feet of sinks.
- F. Provide GFCI protection for receptacles installed in kitchens.
- G. Provide GFCI protection for receptacles serving electric drinking fountains.
- H. Provide isolated ground receptacles for receptacles serving computers and electronic cash registers.
- I. Unless noted otherwise, do not use combination switch/receptacle devices.
- J. For flush floor service fittings, use tile rings for installations in tile floors.
- K. For flush floor service fittings, use carpet flanges for installations in carpeted floors.

2.02 WALL SWITCHES

- A. Wall Switches - General Requirements: AC only, quiet operating, general-use snap switches with silver alloy contacts, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 20 and where applicable, FS W-S-896; types as indicated on the drawings.
- B. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.
- C. Lighted Wall Switches: Industrial specification grade, 20 A, 120/277 V with illuminated standard toggle type switch actuator and maintained contacts; illuminated with load off; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.
- D. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.
- E. Locking Wall Switches: Industrial specification grade, 20 A, 120/277 V with lever type keyed switch actuator and maintained contacts; switches keyed alike; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.
- F. Momentary Contact Wall Switches: Industrial specification grade, 20 A, 120/277 V with toggle type three position switch actuator and momentary contacts; single pole double throw, off with switch actuator in center position.
- G. Locking Momentary Contact Wall Switches: Industrial specification grade, 20 A, 120/277 V with lever type keyed three position switch actuator and momentary contacts; switches keyed alike; single pole double throw, off with switch actuator in center position.

2.03 WALL DIMMERS

- A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control following square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA

WD 1 and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load controlled as indicated on the drawings.

B. Control: Slide control type with separate on/off switch.

C. Provide locator light, illuminated with load off.

2.04 FAN SPEED CONTROLLERS

A. Description: 120 V AC, solid-state, full-range variable speed, slide control type with separate on/off switch, with integral radio frequency interference filtering, fan noise elimination circuitry, power failure preset memory, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 1917.

1. Current Rating: 1.5 A unless otherwise indicated or required to control the load indicated on the drawings.

2.05 RECEPTACLES

A. Receptacles - General Requirements: Self-grounding, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 498, and where applicable, FS W-C-596; types as indicated on the drawings.

1. NEMA configurations specified are according to NEMA WD 6.

2. Hospital Grade Receptacles: Listed as complying with UL 498 Supplement SD, with green dot hospital grade mark on device face.

B. Convenience Receptacles:

1. Standard Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20R; single or duplex as indicated on the drawings.

2. Automatically Controlled Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20R; controlled receptacle marking on device face per NFPA 70; single or duplex as indicated on the drawings.

3. Isolated Ground Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20R, with ground contacts isolated from mounting strap; isolated ground triangle mark on device face; single or duplex as indicated on the drawings.

4. Weather Resistant Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20R, listed and labeled as weather resistant type complying with UL 498 Supplement SE suitable for installation in damp or wet locations; single or duplex as indicated on the drawings.

5. Tamper Resistant Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20R, listed and labeled as tamper resistant type; single or duplex as indicated on the drawings.

6. Tamper Resistant and Weather Resistant Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20R, listed and labeled as tamper resistant type and as weather resistant type complying with UL 498 Supplement SE suitable for installation in damp or wet locations; single or duplex as indicated on the drawings.

7. Illuminated Convenience Receptacles: Hospital grade, 20A, 125V, NEMA 5-20R; illuminated face or indicator light to indicate power is being supplied to receptacle; single or duplex as indicated on the drawings.

C. GFCI Receptacles:

1. GFCI Receptacles - General Requirements: Self-testing, with feed-through protection and light to indicate ground fault tripped condition and loss of protection; listed as complying with UL 943, class A.

2. Standard GFCI Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style.

3. Weather Resistant GFCI Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style, listed and labeled as weather resistant type complying with UL 498 Supplement SE suitable for installation in damp or wet locations.

4. Tamper Resistant GFCI Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style, listed and labeled as tamper resistant type.

5. Tamper Resistant and Weather Resistant GFCI Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style, listed and labeled as tamper resistant type and as weather resistant type complying with UL 498 Supplement SE suitable for installation in damp or wet locations.
- D. Surge Protection Receptacles:
1. Surge Protection Receptacles - General Requirements: Listed and labeled as complying with UL 1449, Type 2 or 3.
 - a. Energy Dissipation: Not less than 240 J per mode.
 - b. Protected Modes: L-N, L-G, N-G.
 - c. UL 1449 Voltage Protection Rating (VPR): Not more than 700 V for L-N, L-G modes and 1200 V for N-G mode.
 - d. Diagnostics:
 - 1) Visual Notification: Provide indicator light to report functional status of surge protection.
 2. Standard Surge Protection Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style.
 3. Isolated Ground Surge Protection Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style, with ground contacts isolated from mounting strap.
- E. Locking Receptacles: Industrial specification grade, configuration as indicated on the drawings.
1. Standard Locking Convenience Receptacles: Single, 20A, 125V, NEMA L5-20R.
- F. Clock Hanger Receptacles: Single, 15A, 125V, NEMA 5-15R.

2.06 WALL PLATES

- A. Wall Plates: Comply with UL 514D.
1. Configuration: One piece cover as required for quantity and types of corresponding wiring devices.
 2. Size: Standard.
 3. Screws: Metal with slotted heads finished to match wall plate finish.

2.07 FLOOR BOX SERVICE FITTINGS

- A. Description: Service fittings compatible with floor boxes provided under Section 26 0537 with components, adapters, and trims required for complete installation.

2.08 POKE-THROUGH ASSEMBLIES

- A. Description: Assembly comprising floor service fitting, poke-through component, fire stops and smoke barriers, and junction box for conduit termination; fire rating listed to match fire rating of floor and suitable for floor thickness where installed.

2.09 ACCESS FLOOR BOXES

- A. Description: Metallic multi-service box suitable for mounting in access floor system specified in Section 09 6900.
- B. Access floor boxes with pre-wired connectors for manufactured wiring systems are permitted only where manufactured wiring systems are permitted as specified in Section 26 0519.
- C. Configuration:

PART 3 EXECUTION

3.01 INSTALLATION

- A. Perform work in a neat and workmanlike manner in accordance with NECA 1 and, where applicable, NECA 130, including mounting heights specified in those standards unless otherwise indicated.
- B. Coordinate locations of outlet boxes provided under Section 26 0537 as required for installation of wiring devices provided under this section.
- C. Install wiring devices in accordance with manufacturer's instructions.

- D. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.
- E. Connect wiring devices by wrapping conductor clockwise 3/4 turn around screw terminal and tightening to proper torque specified by the manufacturer. Where present, do not use push-in pressure terminals that do not rely on screw-actuated binding.
- F. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
- G. For isolated ground receptacles, connect wiring device grounding terminal only to identified branch circuit isolated equipment grounding conductor. Do not connect grounding terminal to outlet box or normal branch circuit equipment grounding conductor.
- H. Install wall dimmers to achieve full rating specified and indicated after derating for ganging as instructed by manufacturer.
- I. Do not share neutral conductor on branch circuits utilizing wall dimmers.
- J. Install poke-through closure plugs in each unused core holes to maintain fire rating of floor.

END OF SECTION

SECTION 26 2813

FUSES

PART 1 GENERAL

PART 2 PRODUCTS

2.01 FUSES

- A. Provide products listed, classified, and labeled as suitable for the purpose intended.
- B. Unless specifically indicated to be excluded, provide fuses for all fusible equipment as required for a complete operating system.
- C. Provide fuses of the same type, rating, and manufacturer within the same switch.
- D. Comply with UL 248-1.
- E. Unless otherwise indicated, provide cartridge type fuses complying with NEMA FU 1, Class and ratings as indicated.
- F. Voltage Rating: Suitable for circuit voltage.
- G. Class R Fuses: Comply with UL 248-12.
- H. Class J Fuses: Comply with UL 248-8.
- I. Class L Fuses: Comply with UL 248-10.
- J. Class T Fuses: Comply with UL 248-15.
- K. Class CC Fuses: Comply with UL 248-4.

END OF SECTION

SECTION 26 4300
SURGE PROTECTIVE DEVICES

PART 2 PRODUCTS

1.01 SURGE PROTECTIVE DEVICES - GENERAL REQUIREMENTS

- A. Description: Factory-assembled surge protective devices (SPDs) for 60 Hz service; listed, classified, and labeled as suitable for the purpose intended; system voltage as indicated on the drawings.
- B. Protected Modes:
 - 1. Wye Systems: L-N, L-G, N-G, L-L.
 - 2. Delta Systems: L-G, L-L.
 - 3. Single Split Phase Systems: L-N, L-G, N-G, L-L.
 - 4. High Leg Delta Systems: L-N, L-G, N-G, L-L.
- C. UL 1449 Voltage Protection Ratings (VPRs):
 - 1. Equivalent to basis of design.
 - 2. 480Y/277V System Voltage: Not more than 1,500 V for L-N, L-G, and N-G modes and 2,000 V for L-L mode.
- D. UL 1449 Maximum Continuous Operating Voltage (MCOV): Not less than 115% of nominal system voltage.
- E. Enclosure Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
- F. Equipment Containing Factory-installed, Internally Mounted SPDs: Listed and labeled as a complete assembly including SPD.

1.02 SURGE PROTECTIVE DEVICES FOR SERVICE ENTRANCE LOCATIONS

- A. Unless otherwise indicated, provide field-installed, externally mounted or factory-installed, internally mounted SPDs.
- B. List and label as complying with UL 1449, Type 1 when connected on line side of service disconnect overcurrent device and Type 1 or 2 when connected on load side of service disconnect overcurrent device.
- C. Provide SPDs utilizing field-replaceable modular or non-modular protection circuits.
- D. Surge Current Rating: Not less than 120 kA per mode/240 kA per phase.
- E. Repetitive Surge Current Capacity: Not less than 5,000 impulses.
- F. UL 1449 Nominal Discharge Current (I-n): 20 kA.
- G. UL 1449 Short Circuit Current Rating (SCCR): Not less than the available fault current at the installed location as indicated on the drawings.
- H. Diagnostics:
 - 1. Protection Status Monitoring: Provide indicator lights to report the protection for each phase.
 - 2. Alarm Notification: Provide indicator light and audible alarm to report alarm condition. Provide button to manually silence audible alarm.
- I. Provide surge rated integral disconnect switch for SPDs not connected to a dedicated circuit breaker or fused switch or not direct bus connected.
- J. Basis of Design: Schneider Electric; Square D Brand Surgeologic Products; www.surgeologic.com.
 - 1. Field-installed, Externally Mounted Surge Protective Devices:
 - a. EMA Series: Replaceable modules; 200 kA SCCR; individually fused MOVs, thermal fusing; dry contacts; EMI/RFI filtering; surge counter; duty cycle tested for 20,000 impulses; 10 year warranty.
 - 2. Factory-installed, Internally Mounted Surge Protective Devices:

- a. IMA Series: Replaceable modules; 200 kA SCCR; individually fused MOVs, thermal fusing; dry contacts; EMI/RFI filtering; surge counter; duty cycle tested for 20,000 impulses; 10 year warranty.

1.03 SURGE PROTECTIVE DEVICES FOR DISTRIBUTION LOCATIONS

- A. Unless otherwise indicated, provide field-installed, externally mounted or factory-installed, internally mounted SPDs.
- B. List and label as complying with UL 1449, Type 1 or Type 2.
- C. Distribution locations include SPDs connected to distribution panelboards, motor control centers, and busway.
- D. Provide SPDs utilizing field-replaceable modular or non-modular protection circuits.
- E. Surge Current Rating: Not less than 80 kA per mode/160 kA per phase.
- F. Repetitive Surge Current Capacity: Not less than 3,500 impulses.
- G. UL 1449 Nominal Discharge Current (I-n): 20 kA.
- H. UL 1449 Short Circuit Current Rating (SCCR): Not less than the available fault current at the installed location as indicated on the drawings.
- I. Diagnostics:
 - 1. Protection Status Monitoring: Provide indicator lights to report the protection status for each phase.
 - 2. Alarm Notification: Provide indicator light and audible alarm to report alarm condition. Provide button to manually silence audible alarm.
- J. Provide surge rated integral disconnect switch for SPDs not connected to a dedicated circuit breaker or fused switch or not direct bus connected.
- K. Basis of Design: Schneider Electric; Square D Brand SurgeLogic Products; www.surgeLogic.com.
 - 1. Field-installed, Externally Mounted Surge Protective Devices:
 - a. EMA Series: Replaceable modules; 200 kA SCCR; individually fused MOVs, thermal fusing; dry contacts; EMI/RFI filtering; surge counter; duty cycle tested for 20,000 impulses; 10 year warranty.
 - 2. Factory-installed, Internally Mounted Surge Protective Devices:
 - a. IMA Series: Replaceable modules; 200 kA SCCR; individually fused MOVs, thermal fusing; dry contacts; EMI/RFI filtering; surge counter; duty cycle tested for 20,000 impulses; 10 year warranty.

PART 3 EXECUTION

2.01 INSTALLATION

- A. Perform work in a neat and workmanlike manner in accordance with NECA 1.
- B. Install SPD in accordance with manufacturer's instructions.
- C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.
- D. Provide conductors with minimum ampacity as indicated on the drawings, as required by NFPA 70, and not less than manufacturer's recommended minimum conductor size.
- E. Install conductors between SPD and equipment terminations as short and straight as possible, not exceeding manufacturer's recommended maximum conductor length. Breaker locations may be reasonably rearranged in order to provide leads as short and straight as possible. Twist conductors together to reduce inductance.

END OF SECTION

**SECTION 26 5100
INTERIOR LIGHTING**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 LUMINAIRE TYPES

- A. Furnish products as indicated in luminaire schedule included on the drawings.

2.02 LUMINAIRE TYPES

- A. Furnish products as specified below.
- B. Recessed lensed fluorescent troffer.
1. Housing: Steel, painted white.
 2. Nominal Size: 2 by 4 feet.
 3. Air Function: Static (no air function).
 4. Lamp(s): Three-32 W T8 (48 inch).
 5. Shielding: Pattern 12 acrylic lens, 0.125 inch nominal thickness.
 6. Ballast(s): Two electronic ballast(s), instant start.
 - a. Total Harmonic Distortion (THD): Less than 10 percent.
 7. Provide emergency power supply unit in luminaires designated with "EM" on the drawings.
 - a. Operate two lamp(s) at a minimum of 1350 lumens unless otherwise indicated with indicated illumination evenly divided between the lamps.
 8. Provide with the following features/accessories:
 9. Listings:
 - a. Suitable for damp locations.
- C. Recessed parabolic fluorescent troffer.
1. Housing: Steel, painted white.
 2. Nominal Size: 2 by 4 feet.
 3. Air Function: Static (no air function).
 4. Lamp(s): Three-32 W T8 (48 inch).
 5. Parabolic Louver: Low-iridescent anodized semi-specular silver, 18 cells, 3 inch deep.
 6. Ballast(s): Two electronic ballast(s), instant start.
 - a. Total Harmonic Distortion (THD): Less than 10 percent.
 7. Provide emergency power supply unit in luminaires designated with "EM" on the drawings.
 8. Provide with the following features/accessories:
 9. Listings:
 - a. Suitable for damp locations.
- D. General purpose fluorescent strip.
1. Housing: Steel, painted white.
 2. Nominal Length: 2 feet.
 3. Lamp(s): Two-32 W T8 (48 inch).
 4. Reflector: None.
 5. Ballast(s): One electronic ballast(s), instant start.
 - a. Total Harmonic Distortion (THD): Less than 10 percent.
 6. Provide emergency power supply unit in luminaires designated with "EM" on the drawings.
 7. Provide with the following features/accessories:
 8. Listings:
 - a. Suitable for damp locations.
- E. Recessed compact fluorescent downlight.
1. Housing: Galvanized steel.
 2. Lamp Orientation: Vertical.
 3. Nominal Aperture Size: Round, 6 inches.
 4. Lamp(s): One-26 W TRT.

5. Ballast: Electronic ballast, programmed start.
 6. Provide emergency power supply unit in luminaires designated with "EM" on the drawings.
 7. Provide with the following features/accessories:
 8. Listings:
 - a. Suitable for damp locations.
 - b. Non-IC Rated: Not suitable for direct contact with insulation and combustible materials.
- F. Emergency lighting unit.
1. Lamps: included with unit.
 2. Housing: Thermoplastic.
 3. Mounting Type: Surface.
 4. Battery: Nickel cadmium.
 5. Provide with the following features/accessories:
 - a. Self-diagnostics.
 - b. Time delay.
 6. Listings:
 - a. Suitable for damp locations.
- G. Exit sign.
1. Lamps: LED.
 2. Housing: Thermoplastic.
 3. Emergency Operation: Self-powered.
 - a. Battery: Nickel cadmium.
 4. Provide with the following features/accessories:
 - a. Self-diagnostics.
 - b. Lamps wired on two separate circuits.
 5. Listings:
 - a. Suitable for damp locations.

2.03 LUMINAIRES

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products that are listed and labeled as complying with UL 1598, where applicable.
- C. Provide products listed, classified, and labeled as suitable for the purpose intended.
- D. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, ballasts, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.
- E. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, supports, trims, accessories, etc. as necessary for a complete operating system.
- F. Provide products suitable to withstand normal handling, installation, and service without any damage, distortion, corrosion, fading, discoloring, etc.
- G. Recessed Luminaires:
 1. Ceiling Compatibility: Comply with NEMA LE 4.
- H. Fluorescent Luminaires:
 1. Provide ballast disconnecting means complying with NFPA 70 where required.
 2. Fluorescent Luminaires Controlled by Occupancy Sensors: Provide programmed start ballasts.
- I. LED Luminaires:
 1. Components: UL 8750 recognized or listed as applicable.
 2. Tested in accordance with IES LM-79 and IES LM-80.
 3. LED Estimated Useful Life: Minimum of 50,000 hours at 70 percent lumen maintenance, calculated based on IES LM-80 test data.

- J. Track Lighting Systems: Provide track compatible with specified track heads, with all connectors, power feed fittings, dead ends, hangers and canopies as necessary to complete installation.

2.04 EMERGENCY LIGHTING UNITS

- A. Description: Emergency lighting units complying with NFPA 101 and all applicable state and local codes, and listed and labeled as complying with UL 924.
- B. Battery:
 - 1. Size battery to supply all connected lamps, including emergency remote heads where indicated.
- C. Self-Diagnostics: Provide units that self-monitor functionality and automatically perform testing required by NFPA 101 where indicated; provide indicator light(s) to report test and diagnostic status.

2.05 EXIT SIGNS

- A. Description: Internally illuminated exit signs with LEDs unless otherwise indicated; complying with NFPA 101 and all applicable state and local codes, and listed and labeled as complying with UL 924.
- B. Self-Powered Exit Signs:
 - 1. Self-Diagnostics: Provide units that self-monitor functionality and automatically perform testing required by NFPA 101 where indicated; provide indicator light(s) to report test and diagnostic status.
- C. Photoluminescent Exit Signs: Powder-coated sheet aluminum with photoluminescent pigmented material.

2.06 FLUORESCENT EMERGENCY POWER SUPPLY UNITS

- A. Description: Self-contained fluorescent emergency power supply units suitable for use with indicated luminaires, complying with NFPA 101 and all applicable state and local codes, and listed and labeled as complying with UL 924.
- B. Compatibility:
 - 1. Ballasts: Compatible with electronic, standard magnetic, energy saving, and dimming AC ballasts, including those with end of lamp life shutdown circuits.
- C. Emergency Illumination Output:
 - 1. Luminaires with F32T8 Lamps: Operate two lamp(s) at a minimum of 1350 lumens unless otherwise indicated with indicated illumination evenly divided between the lamps.
 - 2. Luminaires with F28T5 Lamps: Operate one lamp(s) at a minimum of 1325 lumens unless otherwise indicated.
 - 3. Luminaires with F54T5HO Lamps: Operate one lamp(s) at a minimum of 1250 lumens unless otherwise indicated.
- D. Self-Diagnostics: Provide units that self-monitor functionality and automatically perform testing required by NFPA 101 where indicated; provide indicator light(s) to report test and diagnostic status and field selectable audible alert.

END OF SECTION

**SECTION 26 5600
EXTERIOR LIGHTING**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 LUMINAIRE TYPES

- A. Furnish products as indicated in luminaire schedule included on the drawings.

2.02 LUMINAIRE TYPES

- A. Wall-mounted HID security luminaire.
1. Housing: Aluminum.
 2. Shape: Rectangular.
 3. Lamp: Metal Halide.
 4. Shielding: Clear tempered glass lens.
 5. Provide quartz restrike system with time delay in luminaires designated with "Q" on the drawings.
 6. Provide emergency power supply unit in luminaires designated with "EM" on the drawings.
 7. Provide with the following features/accessories:
 - a. Integral button type photo control.
 8. Listings:
 - a. Suitable for wet locations.
- B. Compact fluorescent bollard luminaire.
1. Housing: Aluminum.
 2. Shape: Round.
 3. Nominal Height: 24".
 4. Lamp: 42W TRT.
 5. Provide with the following features/accessories:
 6. Listings:
 - a. Suitable for wet locations.

2.03 LUMINAIRES

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products that are listed and labeled as complying with UL 1598, where applicable.
- C. Provide products listed, classified, and labeled as suitable for the purpose intended.
- D. Provide products complying with Federal Energy Management Program (FEMP) requirements.
- E. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, ballasts, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.
- F. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, poles, foundations, supports, trims, accessories, etc. as necessary for a complete operating system.
- G. Provide products suitable to withstand normal handling, installation, and service without any damage, distortion, corrosion, fading, discoloring, etc.
- H. Provide luminaires listed and labeled as suitable for wet locations unless otherwise indicated.
- I. Hazardous (Classified) Location Luminaires: Listed and labeled as complying with UL 844 for the classification of the installed location.
- J. LED Luminaires:
1. Components: UL 8750 recognized or listed as applicable.
 2. Tested in accordance with IES LM-79 and IES LM-80.
 3. LED Estimated Useful Life: Minimum of 50,000 hours at 70 percent lumen maintenance, calculated based on IES LM-80 test data.

2.04 POLES

- A. All Poles:
1. Provide poles and associated support components suitable for the luminaire(s) and associated supports and accessories to be installed.
 2. Structural Design Criteria:
 - a. Comply with AASHTO LTS.
 - b. Wind Load: Include effective projected area (EPA) of luminaire(s) and associated supports and accessories to be installed.
 - 1) Design Wind Speed: 100 miles per hour, with gust factor of 1.3.
 3. Material: Steel, unless otherwise indicated.
 4. Shape: Square straight, unless otherwise indicated.
 5. Mounting Height: 22', unless otherwise indicated.
 6. Mounting: Install on concrete foundation, height as indicated on the drawings, unless otherwise indicated.

END OF SECTION

SECTION 27 1005

STRUCTURED CABLING FOR VOICE AND DATA - INSIDE-PLANT

PART 1 GENERAL

PART 2 PRODUCTS

2.01 SYSTEM DESIGN

- A. Provide a complete permanent system of cabling and pathways for voice and data communications, including cables, conduits and wireways, pull wires, support structures, enclosures and cabinets, and outlets.
 - 1. Comply with TIA-568 (cabling) and TIA-569 (pathways), latest editions (commercial standards).
 - 2. Provide fixed cables and pathways that comply with NFPA 70 and TIA-607 and are UL listed or third party independent testing laboratory certified.
 - 3. Provide connection devices that are rated for operation under conditions of 32 to 140 degrees F at relative humidity of 0 to 95 percent, noncondensing.
 - 4. In this project, the term plenum is defined as return air spaces above ceilings, inside ducts, under raised floors, and other air-handling spaces.
- B. System Description:
 - 1. Building Entrance Cable: By others.
 - 2. Backbones - Within Building: Copper.
 - 3. Backbones - Between Buildings: Copper.
 - 4. Offices and Work Areas: Provide one voice outlet and one data outlet in each work area.
 - 5. Provide additional outlets where indicated on drawings.
- C. Main Distribution Frame (MDF): Centrally located support structure for terminating horizontal cables that extend to telecommunications outlets, functioning as point of presence to external service provider.
 - 1. For the entire campus there is one main distribution frame and for each building there is a building distribution frame (BDF) that functions as the main distribution frame (MDF) for that building.
 - 2. Locate main distribution frame as indicated on the drawings.
 - 3. Capacity: As required to terminate all cables required by design criteria plus minimum 25 percent spare space.
- D. Intermediate Distribution Frames (IDF): Support structures for terminating horizontal cables that extend to telecommunications outlets.
 - 1. Locate intermediate distribution frames as indicated on the drawings.
- E. Backbone Cabling: Cabling, pathways, and terminal hardware connecting intermediate distribution frames (IDF's) with main distribution frame (MDF), wired in star topology with main distribution frame at center hub of star.
- F. Cabling to Outlets: Specified horizontal cabling, wired in star topology to distribution frame located at center hub of star; also referred to as "links".

2.02 PATHWAYS

- A. Overhead Service Entrance: Weatherhead or service entrance fitting located on outside of building with galvanized rigid steel or intermediate metallic conduit running to entrance facility.
- B. Underground Service Entrance: Rigid polyvinyl chloride (PVC) conduit, Schedule 40.

2.03 COPPER CABLE AND TERMINATIONS

- A. Copper Backbone Cable:
 - 1. Description: 100 ohm, balanced twisted pair cable complying with TIA-568, ICEA S-90-661, and listed and labeled as complying with UL 444; arranged in 25-pair binder groups.
 - 2. Cable Type: TIA-568 Category 3 UTP (unshielded twisted pair); 24 AWG.
 - 3. Cable Capacity: Quantity of pairs as indicated on drawings.
 - 4. Cable Applications:

- a. Plenum Applications: Use listed NFPA 70 Type CMP plenum cable.
 - b. Riser Applications: Use listed NFPA 70 Type CMR riser cable or Type CMP plenum cable.
- B. Copper Horizontal Cable:
- 1. Description: 100 ohm, balanced twisted pair cable complying with TIA-568 and listed and labeled as complying with UL 444.
 - 2. Cable Type - Voice and Data: TIA-568 Category 6 UTP (unshielded twisted pair); 23 AWG.
 - 3. Cable Type - Voice: TIA-568 Category 5e UTP (unshielded twisted pair); 24 AWG.
 - 4. Cable Capacity: 4-pair.
 - 5. Cable Applications: Use listed NFPA 70 Type CMP plenum cable unless otherwise indicated.
- C. Copper Cable Terminations: Insulation displacement connection (IDC) type using appropriate tool; use screw connections only where specifically indicated.
- D. Jacks and Connectors: Modular RJ-45, non-keyed, terminated with 110-style insulation displacement connectors (IDC); high impact thermoplastic housing; suitable for and complying with same standard as specified horizontal cable; UL 1863 listed.
- 1. Performance: 500 mating cycles.
 - 2. Voice and Data Jacks: 8-position modular jack, color-coded for both T568A and T568B wiring configurations.
 - 3. Product(s):
 - a. METZ CONNECT USA Inc; P|Cabling Products; www.metz-connect.com.
 - 1) RJ45 Plugs:
 - (a) METZ CONNECT Model 130E405042-E: Cat 6A Field Plug Pro 360, configurable wire entry jack, metal body (no crimping tool required).
 - (b) METZ CONNECT Model 130E405032-E: Cat 6A Field Plug Pro, standard 'straight' jack, metal body (no crimping tool required).
 - (c) METZ CONNECT Model 1401505010-E: Cat 6 crimp plug, silver color (requires crimping tool 130907-E).
 - (d) METZ CONNECT Model 1401505012-E: Cat 6 crimp plug, black color (requires crimping tool 130907-E).
 - 2) RJ45 Jacks:
 - (a) METZ CONNECT Model 130B23-E: 90 degree Cat 6A.
 - (b) METZ CONNECT Model 130B21-E: 180 degree Cat 6A.
 - (c) METZ CONNECT Model 130B22-E: 270 degree Cat 6A.
 - 3) DIN Rail Mounted Jacks for Industrial Applications:
 - (a) METZ CONNECT Model 130B117003-E: 180 degree Cat 6A (hard wired on control cabinet side; RJ45 connector on field side).
 - (b) METZ CONNECT Model 130B127003-E: 270 degree Cat 6A (hard wired on control cabinet side; RJ45 connector on field side).
 - (c) METZ CONNECT Model 1309A07003-E: 180 degree coupler (RJ45 plugs on both control cabinet and field side).
 - (d) METZ CONNECT Model 1309A17003-E: 270 degree coupler (RJ45 plugs on both control cabinet and field side).
- E. Copper Patch Cords:
- 1. Description: Factory-fabricated 4-pair cable assemblies with 8-position modular connectors terminated at each end.
 - 2. Patch Cords for Patch Panels:
 - a. Quantity: One for each pair of patch panel ports.
 - b. Length: 6 feet.
 - 3. Patch Cords for Work Areas:
 - a. Quantity: One for each work area outlet port.
 - b. Length: 10 feet.

4. Product(s):
 - a. METZ CONNECT USA Inc; P|Cabling Products; www.metz-connect.com.
 - 1) Patch Cords - Cat 6A:
 - (a) Cat 6A, 0.5 m: METZ CONNECT Model 1308450533-E (gray).
 - (b) Cat 6A, 1.0 m: METZ CONNECT Model 1308451033-E (gray).
 - (c) Cat 6A, 1.5 m: METZ CONNECT Model 1308451533-E (gray).
 - (d) Cat 6A, 2.0 m: METZ CONNECT Model 1308452033-E (gray).
 - (e) Cat 6A, 3.0 m: METZ CONNECT Model 1308453033-E (gray).
 - (f) Cat 6A, 5.0 m: METZ CONNECT Model 1308455033-E (gray).
 - (g) Cat 6A, 7.0 m: METZ CONNECT Model 1308457033-E (gray).
 - (h) Cat 6A, 10 m: METZ CONNECT Model 130845A033-E (gray).
 - (i) Cat 6A, 15 m: METZ CONNECT Model 130845A533-E (gray).
 - (j) Cat 6A, 20 m: METZ CONNECT Model 130845B033-E (gray).
 - (k) Cat 6A, 25 m: METZ CONNECT Model 130845B533-E (gray).
 - (l) Cat 6A, 30 m: METZ CONNECT Model 130845C033-E (gray).

2.04 FIBER OPTIC CABLE AND INTERCONNECTING DEVICES

- A. Fiber Optic Backbone Cable:
 1. Description: Tight buffered, non-conductive fiber optic cable complying with TIA-568, TIA-598, ICEA S-83-596 and listed as complying with UL 444 and UL 1651.
 2. Cable Type: Multimode, laser-optimized 50/125 um (OM3) complying with TIA-492AAAC.
 3. Cable Capacity: Quantity of fibers as indicated on drawings.
 4. Cable Applications:
 - a. Plenum Applications: Use listed NFPA 70 Type OFNP plenum cable.
 - b. Riser Applications: Use listed NFPA 70 Type OFNR riser cable or Type OFNP plenum cable.
- B. Fiber Optic Horizontal Cable:
 1. Description: Tight buffered, non-conductive fiber optic cable complying with TIA-568, ICEA S-83-596 and listed as complying with UL 444 and UL 1651.
 2. Cable Type: Multimode, laser-optimized 50/125 um (OM3) complying with TIA-492AAAC.
 3. Cable Capacity: 2-fiber.
 4. Cable Applications: Use listed NFPA 70 Type OFNP plenum cable unless otherwise indicated.
- C. Fiber Optic Interconnecting Devices:
 1. Connector Type: Type SC.
 2. Connector Performance: 500 mating cycles, when tested in accordance with TIA-455-21.
 3. Maximum Attenuation/Insertion Loss: 0.3 dB.
- D. Fiber Optic Patch Cords:
 1. Description: Factory-fabricated 2-fiber cable assemblies with suitable connectors at each end.
 2. Patch Cords for Patch Panels:
 - a. Quantity: One for each pair of patch panel ports.
 - b. Length: 6 feet.
 3. Patch Cords for Work Areas:
 - a. Quantity: One for each work area outlet port.
 - b. Length: 10 feet.

2.05 COMMUNICATIONS EQUIPMENT ROOM FITTINGS

- A. Copper Cross-Connection Equipment:
 1. Connector Blocks for Category 3 Cabling: Type 66 insulation displacement connectors; capacity sufficient for cables to be terminated plus 25 percent spare.
 2. Connector Blocks for Category 5e and Up Cabling: Type 110 insulation displacement connectors; capacity sufficient for cables to be terminated plus 25 percent spare.

3. Patch Panels for Copper Cabling: Sized to fit EIA/ECA-310 standard 19 inch wide equipment racks; 0.09 inch thick aluminum; cabling terminated on Type 110 insulation displacement connectors; printed circuit board interface.
 - a. Jacks: Non-keyed RJ-45, suitable for and complying with same standard as cable to be terminated; maximum 48 ports per standard width panel.
 - b. Capacity: Provide ports sufficient for cables to be terminated plus 25 percent spare.
 - c. Labels: Factory installed laminated plastic nameplates above each port, numbered consecutively; comply with TIA-606.
 - d. Provide incoming cable strain relief and routing guides on back of panel.
 4. Product(s):
 - a. METZ CONNECT USA Inc; P|Cabling Products; www.metz-connect.com.
 - 1) Patch Panels:
 - (a) METZ CONNECT Model 130A24-00-E: 48 port stainless steel.
 - (b) METZ CONNECT Model 130A21-00-E: 24 port stainless steel.
 - (c) METZ CONNECT Model 130A20-00-E: 24 port silver anodized aluminum.
 - (d) METZ CONNECT Model 130A20-BK-E: 24 port black anodized aluminum.
 - 2) Data Center Solutions (special patch panels and pre-wired sets of jacks):
 - (a) METZ CONNECT Model 130D2B1B-E: DCCS2 black powder coated steel (accepts up to DCCS2 assemblies).
 - (b) METZ CONNECT Model 130D2B1G-E: DCCS2 gray powder coated steel (accepts up to DCCS2 assemblies).
 - (c) METZ CONNECT DCCS2 PL26 Link; Model 130D2CL1: Six port RJ45 DCCS2 assembly with 26 AWG cable.
 - (d) METZ CONNECT DCCS2 PL23 Link; Model 130D2CL2: Six port RJ45 DCCS2 assembly with 23 AWG cable.
- B. Fiber Optic Cross-Connection Equipment:
1. Patch Panels for Fiber Optic Cabling: Sized to fit EIA/ECA-310 standard 19 inch wide equipment racks; 0.09 inch thick aluminum.
 - a. Adapters: As specified above under FIBER OPTIC CABLE AND INTERCONNECTING DEVICES; maximum of 24 duplex adapters per standard panel width.
 - b. Labels: Factory installed laminated plastic nameplates above each port, numbered consecutively; comply with TIA-606.
 - c. Provide incoming cable strain relief and routing guides on back of panel.
 - d. Provide rear cable management tray at least 8 inches deep with removable cover.
 - e. Provide dust covers for unused adapters.
- C. Backboards: Interior grade plywood without voids, 3/4 inch thick; UL-labeled fire-retardant.
- D. Equipment Racks and Cabinets: EIA/ECA-310 standard 19 inch wide component racks:
1. Wall Mounted Racks: Steel construction, hinged to allow access to back of installed components.
 - a. Load Rating: 85 pounds.
 2. Floor Mounted Racks: Aluminum or steel construction with corrosion resistant finish; vertical and horizontal cable management channels, top and bottom cable troughs, and grounding lug.
 - a. Load Rating: 2000 pounds.
 3. Freestanding Cabinets: Front and rear doors with locks; removable side panels with locks; vented top and rear door; adjustable leveling feet; cable access in roof and base; grounding bar.
 - a. Load Rating: 3000 pounds.
 4. Wall Mounted Cabinets: Front doors with locks, louvered side panels, top and bottom cable access, and ground lug.
 - a. Load Rating: 200 pounds.
 5. Cabinets: Steel construction with corrosion resistant finish.

2.06 COMMUNICATIONS OUTLETS

- A. Outlet Boxes: Comply with Section 26 0537.
 - 1. Provide depth as required to accommodate cable manufacturer's recommended minimum conductor bend radius.
- B. Wall Plates:
 - 1. Comply with system design standards and UL 514C.
 - 2. Accepts modular jacks/inserts.
 - 3. Capacity:
 - 4. Wall Plate Material/Finish - Flush-Mounted Outlets: Match wiring device and wall plate finishes specified in Section 26 2726.
 - 5. Product(s):
 - a. METZ CONNECT USA Inc; P|Cabling Products; www.metz-connect.com.
 - 1) Flush-Mounted Faceplates:
 - (a) METZ CONNECT Model 1309142402KE: 1 port, white plastic, USA style of 2.75 x 4.5 inches.
 - (b) METZ CONNECT Model 1309152402KE: 2 port, white plastic, USA style of 2.75 x 4.5 inches.
 - (c) METZ CONNECT Model 1309162402KE: 3 port, white plastic, USA style of 2.75 x 4.5 inches.
 - (d) METZ CONNECT Model 1309172402KE: 4 port, white plastic, USA style of 2.75 x 4.5 inches.
 - (e) METZ CONNECT Model 1309192402KE: 6 port, white plastic, USA style of 2.75 x 4.5 inches.
 - (f) METZ CONNECT Model 1355022-SSS-E-H: 2 port, stainless steel, USA style of 2.75 x 4.5 inches.
 - (g) METZ CONNECT Model 1355024-SSS-E: 4 port, stainless steel, USA style of 2.75 x 4.5 inches.
 - (h) METZ CONNECT Model 1309142502KE: 1 port, white plastic, 86 x 86 mm.
 - (i) METZ CONNECT Model 1309152502KE: 2 port white plastic, 86 x 86 mm.
 - 2) Surface-Mounted Faceplates:
 - (a) METZ CONNECT Model 1309140002KE: 1 port 37 x 65 x 30 mm.
 - (b) METZ CONNECT Model 1309150002KE: 2 port 37 x 65 x 30 mm.
 - (c) METZ CONNECT Model 1309190002KE: 6 port 38 x 171 x 112 mm.
 - (d) METZ CONNECT Model 1309430003KE: 2 port IP44 protected.
 - (e) METZ CONNECT Model 1309460003KI: 2 port IP44 protected with locks for security.

2.07 GROUNDING AND BONDING COMPONENTS

- A. Comply with TIA-607.

2.08 IDENTIFICATION PRODUCTS

- A. Comply with TIA-606.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Comply with latest editions and addenda of TIA-568 (cabling), TIA-569 (pathways), TIA-607 (grounding and bonding), NECA/BICSI 568, NFPA 70, and SYSTEM DESIGN as specified in PART 2.
- B. Comply with Communication Service Provider requirements.
- C. Grounding and Bonding: Perform in accordance with TIA-607 and NFPA 70.

3.02 INSTALLATION OF EQUIPMENT AND CABLING

- A. Cabling:

1. Do not bend cable at radius less than manufacturer's recommended bend radius; for unshielded twisted pair use bend radius of not less than 4 times cable diameter.
 2. Do not over-cinch or crush cables.
 3. Do not exceed manufacturer's recommended cable pull tension.
 4. When installing in conduit, use only lubricants approved by cable manufacturer and do not chafe or damage outer jacket.
- B. Service Loops (Slack or Excess Length): Provide the following minimum extra length of cable, looped neatly:
1. At Distribution Frames: 120 inches.
 2. At Outlets - Copper: 12 inches.
 3. At Outlets - Optical Fiber: 39 inches.
- C. Copper Cabling:
1. Use T568B wiring configuration.
- D. Fiber Optic Cabling:
1. Support vertical cable at intervals as recommended by manufacturer.
- E. Wall-Mounted Racks and Enclosures:
1. Install to plywood backboards only, unless otherwise indicated.
 2. Mount so height of topmost panel does not exceed 78 inches above floor.
- F. Floor-Mounted Racks and Enclosures: Permanently anchor to floor in accordance with manufacturer's recommendations.
- G. Identification:
1. Use wire and cable markers to identify cables at each end.
 2. Use manufacturer-furnished label inserts, identification labels, or engraved wallplate to identify each jack at communications outlets with unique identifier.
 3. Use identification nameplate to identify cross-connection equipment, equipment racks, and cabinets.

3.03 FIELD QUALITY CONTROL

- A. Visual Inspection:
1. Inspect cable jackets for certification markings.
 2. Inspect cable terminations for color coded labels of proper type.
 3. Inspect outlet plates and patch panels for complete labels.
- B. Testing - Copper Cabling and Associated Equipment:
1. Test backbone cables after termination but before cross-connection.
 2. Test backbone cables for DC loop resistance, shorts, opens, intermittent faults, and polarity between connectors and between conductors and shield, if cable has overall shield.
 3. Test operation of shorting bars in connection blocks.
 4. Category 3 Backbone: Perform attenuation test.
 5. Category 3 Links: Test each pair for short circuit continuity, short to ground, crosses, reversed polarity, operational and ring-back, and dial tone.
- C. Testing - Fiber Optic Cabling:

END OF SECTION

**SECTION 28 1300
ACCESS CONTROL**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 ACCESS CONTROL SYSTEM REQUIREMENTS

- A. Provide new access control system consisting of all required equipment, conduit, boxes, wiring, connectors, hardware, supports, accessories, software, system programming, etc. as necessary for a complete operating system that provides the functional intent indicated.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install access control system in accordance with NECA 1 (general workmanship).
- B. Install products in accordance with manufacturer's instructions.
- C. Identify system wiring and components in accordance with Section 26 0553.

END OF SECTION

**SECTION 28 1600
INTRUSION DETECTION**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 INTRUSION DETECTION SYSTEM REQUIREMENTS

- A. Provide new intrusion detection system consisting of all required equipment, conduit, boxes, wiring, connectors, hardware, supports, accessories, software, system programming, etc. as necessary for a complete operating system that provides the functional intent indicated.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Perform work in a neat and workmanlike manner in accordance with NECA 1.
- B. Install products in accordance with manufacturer's instructions.
- C. Identify system wiring and components in accordance with Section 26 0553.

END OF SECTION

**SECTION 28 2300
VIDEO SURVEILLANCE**

PART 2 PRODUCTS

1.01 VIDEO SURVEILLANCE SYSTEM

- A. Provide new video surveillance system consisting of all required equipment, conduit, boxes, wiring, connectors, hardware, supports, accessories, software, system programming, etc. as necessary for a complete operating system that provides the functional intent indicated.
- B. System Description: IP system with connection to network (IP) cameras.
- C. Provide products listed, classified, and labeled as suitable for the purpose intended.
- D. Electromagnetic Interference/Radio Frequency Interference (EMI/RFI) Limits: Comply with FCC requirements of CFR, Title 47, Part 15, for Class B, consumer application.

END OF SECTION

**SECTION 28 3100
FIRE DETECTION AND ALARM**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Design Documents: Submit all information required for plan review and permitting by authorities having jurisdiction, including but not limited to floor plans, riser diagrams, and description of operation:
 - 1. NFPA 72 "Record of Completion", filled out to the extent known at the time.
 - 2. Clear and concise description of operation, with input/output matrix similar to that shown in NFPA 72 Appendix A-7-5-2.2(9), and complete listing of software required.

1.02 QUALITY ASSURANCE

- A. Designer Qualifications: NICET Level III or IV (3 or 4) certified fire alarm technician or registered fire protection engineer, employed by fire alarm control panel manufacturer, Contractor, or installer, with experience designing fire alarm systems in the jurisdictional area of the authorities having jurisdiction.
- B. Installer Qualifications: Firm with minimum 3 years documented experience installing fire alarm systems of the specified type and providing contract maintenance service as a regular part of their business.

PART 2 PRODUCTS

2.01 FIRE ALARM SYSTEM

- A. Fire Alarm System: Provide a new automatic fire detection and alarm system:
 - 1. Provide all components necessary, regardless of whether shown in the contract documents or not.
 - 2. Protected Premises: Entire building shown on drawings.
 - 3. Evacuation Alarm: Multiple smoke zones; allow for evacuation notification of any individual zone or combination of zones, in addition to general evacuation of entire premises.
 - 4. Voice Notification: Provide emergency voice/alarm communications with multichannel capability; digital.
 - 5. Hearing Impaired Occupants: Provide visible notification devices in all public areas and in dwelling units.
 - 6. Master Control Unit (Panel): New, located at fire command center.
 - 7. Two-Way Telephone: Provide two-way telephone service for the use of the fire service and others; provide jacks and two portable handsets.
- B. Supervising Stations and Fire Department Connections:
 - 1. Public Fire Department Notification: By on-premises supervising station.
 - 2. On-Premises Supervising Station: Existing proprietary station operated by Owner.
 - 3. Means of Transmission to On-Premises Supervising Station: Directly connected noncoded system.
 - 4. Means of Transmission to Remote Supervising Station: Digital alarm communicator transmitter (DACT), 2 telephone lines.
 - 5. Auxiliary Connection Type: Local energy.
- C. Power Sources:
 - 1. Primary: Dedicated branch circuits of the facility power distribution system.
 - 2. Secondary: Storage batteries.
 - 3. Capacity: Sufficient to operate entire system for period specified by NFPA 72.
 - 4. Each Computer System: Provide uninterruptible power supply (UPS).

2.02 FIRE SAFETY SYSTEMS INTERFACES

- A. Supervision: Provide supervisory signals in accordance with NFPA 72 for the following:

2.03 COMPONENTS

- A. General:
 - 1. Provide flush mounted units where installed in finish areas; in unfinished areas, surface mounted unit are acceptable.
 - 2. Provide legible, permanent labels for each control device, using identification used in operation and maintenance data.
- B. Fire Alarm Control Units, Initiating Devices, and Notification Appliances: Analog, addressable type; listed, classified, and labeled as suitable for the purpose intended.
- C. Circuit Conductors: Copper or optical fiber; provide 200 feet extra; color code and label.
- D. Surge Protection: In accordance with IEEE C62.41.2 category B combination waveform and NFPA 70; except for optical fiber conductors.
- E. Locks and Keys: Deliver keys to Owner.
- F. Instruction Charts: Printed instruction chart for operators, showing steps to be taken when a signal is received (normal, alarm, supervisory, and trouble); easily readable from normal operator's station.
- G. Storage Cabinet for Spare Parts and Tools: Steel with baked enamel finish, size appropriate to quantity of parts and tools.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with applicable codes, NFPA 72, NFPA 70, and the contract documents.
- B. Conceal all wiring, conduit, boxes, and supports where installed in finished areas.
- C. Obtain Owner's approval of locations of devices, before installation.
- D. Install instruction cards and labels.

3.02 INSPECTION AND TESTING FOR COMPLETION

- A. Perform inspection and testing in accordance with NFPA 72 and requirements of local authorities; document each inspection and test.
- B. Correct defective work, adjust for proper operation, and retest until entire system complies with contract documents.

3.03 CLOSEOUT

- A. Closeout Demonstration: Demonstrate proper operation of all functions to Owner.

END OF SECTION

**SECTION 31 2200
GRADING**

PART 2 PRODUCTS

1.02 GRADING

A. See geotechnical report for recommendations.

END OF SECTION

**SECTION 31 2316
EXCAVATION**

PART 3 EXECUTION

1.01 PREPARATION

1.02 EXCAVATING

- A. See geotechnical report for recommendations.
- B. Excavate to accommodate new structures and construction operations.
- C. Slope banks of excavations deeper than 4 feet to angle of repose or less until shored.
- C. Cut utility trenches wide enough to allow inspection of installed utilities.
- E. Hand trim excavations. Remove loose matter.

END OF SECTION

SECTION 31 2316.13

TRENCHING

PART 3 EXECUTION

1.01 TRENCHING

- A. Slope banks of excavations deeper than 4 feet to angle of repose or less until shored.
- B. Do not interfere with 45 degree bearing splay of foundations.
- C. Cut trenches wide enough to allow inspection of installed utilities.
- D. Hand trim excavations. Remove loose matter.
- E. Remove excavated material that is unsuitable for re-use from site.

1.02 PREPARATION FOR UTILITY PLACEMENT

- A. Cut out soft areas of subgrade not capable of compaction in place. Backfill with general fill.
- B. Compact subgrade to density equal to or greater than requirements for subsequent fill material.

1.03 BACKFILLING

- A. Backfill to contours and elevations indicated using unfrozen materials.
- B. Employ a placement method that does not disturb or damage other work.
- C. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- D. Maintain optimum moisture content of fill materials to attain required compaction density.
- E. Slope grade away from building minimum 2 inches in 10 ft, unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
- F. Correct areas that are over-excavated.
- G. Compaction Density Unless Otherwise Specified or Indicated:
- H. Reshape and re-compact fills subjected to vehicular traffic.

1.04 FIELD QUALITY CONTROL

- A. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D698 ("standard Proctor"), ASTM D1557 ("modified Proctor"), or AASHTO T 180.
- B. If tests indicate work does not meet specified requirements, remove work, replace and retest.

END OF SECTION

SECTION 31 2323

FILL

PART 3 EXECUTION

1.01 FILLING

- A. See geotechnical report for recommendations.
- B. Fill to contours and elevations indicated using unfrozen materials.
- C. Employ a placement method that does not disturb or damage other work.
- D. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Slope grade away from building minimum 2 inches in 10 ft, unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
- G. Correct areas that are over-excavated.
- H. Compaction Density Unless Otherwise Specified or Indicated:
- I. Reshape and re-compact fills subjected to vehicular traffic.

1.02 FIELD QUALITY CONTROL

- A. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D698 ("standard Proctor"), ASTM D1557 ("modified Proctor"), or AASHTO T 180.
- B. If tests indicate work does not meet specified requirements, remove work, replace and retest.

END OF SECTION

**SECTION 32 1313
CONCRETE PAVING**

PART 2 PRODUCTS

1.01 FORM MATERIALS

A. See civil drawings.

END OF SECTION

**SECTION 32 8423
UNDERGROUND SPRINKLERS**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Shop Drawings: Indicate piping layout to water source, location of sleeves under pavement, location and coverage of sprinkler heads, components, plant and landscaping features, site structures, schedule of fittings to be used.
- B. Product Data: Provide component and control system and wiring diagrams.
- C. Samples: Provide one outlet of each type, with housing. Accepted samples may be used in the Work.
- D. Record Documents: Record actual locations of all concealed components piping system.
- E. Maintenance Materials: Provide the following for Owner's use in maintenance of project.

PART 2 PRODUCTS

2.01 IRRIGATION SYSTEM

- A. Electric solenoid controlled underground irrigation system, with low point self drain.
- B. See Landscape Drawings for additional information.

2.02 PIPE MATERIALS

- A. PVC Pipe: ASTM D2241; 200 psi pressure rated upstream from controls, 160 psi downstream; solvent welded sockets.
- B. Copper Tube: ASTM B88 (ASTM B88M), Type K (A); annealed temper.
- C. Copper Pipe: ASTM B42, regular type.
- D. Fittings: Type and style of connection to match pipe.
- E. Pipe Risers at Valves: 160 psi PVC pipe.
- F. Solvent Cement: ASTM D2564 for PVC pipe and fittings.
- G. Solder and Flux: ASTM B32 solder, with suitable flux.
- H. Sleeve Material: PVC.

2.03 OUTLETS

- A. Outlets: Brass construction.
- B. Rotary Type Sprinkler Head: Fixed type with screens; fully adjustable for flow and pressure; size as indicated; with letter or symbol designating degree of arc and arrow indicating center of spray pattern.

2.04 VALVES

- A. Backflow Preventers: Bronze body construction, double check valve type.

2.05 CONTROLS

- A. Controller: Automatic controller, microprocessor solid state control with visible readout display, temporary override feature to bypass cycle for inclement weather, timer for a 4 station system, programmable for 7 days in quarter hour increments, with automatic start and shutdown.
- B. Controller Housing: NEMA 250 Type 3; weatherproof, watertight, with lockable access door.
- C. Valves: Hydraulic; normally open; hydraulic tubing, including required fittings and accessories.
- D. Wire Conductors: Color coded.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install pipe, valves, controls, and outlets in accordance with manufacturer's instructions.

- B. Connect to utilities.
- C. Set outlets and box covers at finish grade elevations.

END OF SECTION

SECTION 32 9300

PLANTS

PART 2 PRODUCTS

1.01 PLANTS

- A. Plants: Species and size identified in plant schedule, grown in climatic conditions similar to those in locality of the work.

1.02 SOIL MATERIALS

- A. Topsoil: Fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, taken from drained site; free of subsoil, clay or impurities, plants, weeds and roots; minimum pH value of 5.4 and maximum 7.0.

1.03 SOIL AMENDMENT MATERIALS

1.04 MULCH MATERIALS

- A. Mulching Material: Wood shavings, free of growth or germination inhibiting ingredients.

1.05 TOP SOIL MIX

- A. A uniform mixture of 1 part peat and 3 parts topsoil by volume.

END OF SECTION

**SECTION 33 0513
MANHOLES AND STRUCTURES**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 MATERIALS

- A. Manhole Sections: Reinforced precast concrete in accordance with ASTM C478 (ASTM C478M), with resilient connectors complying with ASTM C923 (ASTM C923M).
- B. Manhole Sections: ASTM D3753, glass-fiber reinforced polyester with integral steps.
- C. Concrete: As specified in Section 03 3000.

2.02 COMPONENTS

- A. Lid and Frame: ASTM A48/A48M, Class 30B Cast iron construction, machined flat bearing surface, removable lockable lid, closed lid design; live load rating of 300 psf; sealing gasket; lid molded with identifying name ;.
- B. Manhole Steps: Formed galvanized steel rungs; 3/4 inch diameter. Formed integral with manhole sections.
- C. Strap Anchors: Bent steel shape, galvanized to ASTM A123/A123M, Grade specified for applicable material category.

2.03 CONFIGURATION

END OF SECTION

**SECTION 33 1116
SITE WATER UTILITY DISTRIBUTION PIPING**

PART 2 PRODUCTS

1.01 WATER PIPE

A. As indicated in Plumbing and Civil Drawings

1.02 VALVES

A. As indicated in Plumbing and Civil Drawings

END OF SECTION

SECTION 33 3111
SITE SANITARY UTILITY SEWERAGE PIPING

PART 2 PRODUCTS

1.01 SEWER PIPE MATERIALS

- A. Fittings: Same material as pipe molded or formed to suit pipe size and end design, in required tee, bends, elbows, cleanouts, reducers, traps and other configurations required.

END OF SECTION

**SECTION 33 4111
SITE STORM UTILITY DRAINAGE PIPING**

PART 2 PRODUCTS

1.01 SEWER PIPE MATERIALS

- A. As indicated on Civil Drawings.

END OF SECTION

SECTION 33 7119
ELECTRICAL UNDERGROUND DUCTS AND MANHOLES

PART 1 GENERAL

PART 2 PRODUCTS

2.01 CONDUIT AND DUCT

- A. Galvanized Steel Rigid Metal Conduit (RMC): NFPA 70, Type RMC; comply with ANSI C80.1 and list and label as complying with UL 6.
 - 1. Fittings: Comply with NEMA FB 1 and list and label as complying with UL 514B; steel or malleable iron, threaded type.
- B. Rigid Polyvinyl Chloride (PVC) Conduit: NFPA 70, Type PVC; comply with NEMA TC 2 and list and label as complying with UL 651; Schedule 40 unless otherwise indicated; rated for use with conductors rated 90 degrees C.
 - 1. Fittings: Comply with NEMA TC 3 and list and label as complying with UL 651.
 - a. Manufacturer: Same as manufacturer of conduit to be connected.
- C. Polyvinyl Chloride (PVC) Plastic Utilities Duct: Comply with NEMA TC 6&8 and ASTM F512; Type EB-20 listed and labeled as complying with UL 651, suitable for burial with concrete encasement.
 - 1. Fittings: Comply with NEMA TC 9.
 - a. Manufacturer: Same as manufacturer of duct to be connected.
- D. High Density Polyethylene (HDPE) Conduit: NFPA 70, Type HDPE; comply with NEMA TC 7 and list and label as complying with UL 651A; Schedule 40 unless otherwise indicated.
- E. Reinforced Thermosetting Resin Conduit (RTRC) and Fittings: NFPA 70, Type RTRC; list and label as complying with UL 2420 or 2515.

2.02 PRECAST CONCRETE MANHOLES

- A. Description: Precast manhole designed in accordance with ASTM C858, comprising modular, interlocking sections complete with accessories.
- B. Loading: ASTM C857, Class A-16.
- C. Frames and Covers: ASTM A48/A48M; Class 30B gray cast iron, 27 inch size, machine finished with flat bearing surfaces. Provide cover marked ELECTRIC to indicate utility.

2.03 CAST-IN-PLACE MANHOLE ACCESSORIES

- A. Frames and Covers: ASTM A48/A48M; Class 30B gray cast iron, 27 inch size, machine finished with flat bearing surfaces. Provide cover marked ELECTRIC to indicate utility.
- B. Sump Covers: ASTM A48/A48M; Class 30B gray cast iron.

END OF SECTION

**SECTION 33 7900
SITE GROUNDING**

PART 1 GENERAL

PART 2 PRODUCTS

2.01 MATERIALS

- A. Rod Electrodes: Copper.
 - 1. Diameter: 1/2 inch.
 - 2. Length: 5 feet.
- B. Active Electrodes: Metallic salt-filled copper tube electrode.
 - 1. Shape: Straight.
 - 2. Length: 8 feet.
 - 3. Connectors: Provide U-bolt pressure plate.
- C. Exothermic Connections:
- D. Wire: Stranded copper.
 - 1. Mechanical Connectors: Bronze.
- E. Grounding Boxes: Bronze.
- F. Grounding Well Pipe: 8 inch diameter by 24 inch long clay tile pipe with belled end.
- G. Grounding Well Cover: Cast iron with legend "GROUND" embossed on cover.
- H. Treatment Well Liner: 8 inch diameter clay tile perforated pipe.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install rod electrodes in vertical position with bottom at least 5 feet below frost line.

END OF SECTION

SUPPLEMENTARY SPECIAL PROVISIONS

APPENDICES

APPENDIX A
DRAFT MITIGATED NEGATIVE DECLARATION



(619) 446-5460

**DRAFT MITIGATED
NEGATIVE
DECLARATION**

PTS No. 98695
WBA No. 13022.02.02

SCH. N/A

SUBJECT: MISSION HILLS - HILLCREST LIBRARY: SITE DEVELOPMENT PERMIT for the construction of a 15,000 square-foot, one-story, 30-foot tall above grade library over a 30,000 square-foot, two-story underground parking garage at 215 West Washington Street in the Uptown community. The site is bounded by Washington Street to the North, Front Street on the East, a public alley on the West, and Florence Elementary School to the South. Entry into the parking garage will be provided from Front Street. The library's main entry will be on Front Street and lead into a courtyard. Front Street will be widened and extended to a new cul-de-sac at its southern terminus. Curb, gutter, sidewalk, and landscape improvements would be installed along both sides of Front Street cul-de-sac and along the project's West Washington Street frontage. The project will be designed to a minimum of LEED Silver standards. Ancillary work would include traffic control, best management practices for erosion control and storm drain inlet protection, ADA curb ramp installation. The existing office building and parking lot on site will be demolished to allow the new library to be constructed.

Applicant: City of San Diego Public Works Department – Engineering and Capital Projects, Architectural Engineering & Parks Division.

- I. PROJECT DESCRIPTION: See attached Initial Study.
- II. ENVIRONMENTAL SETTING: See attached Initial Study.
- III. DETERMINATION: The City of San Diego conducted an Initial Study which determined that the proposed project could have a significant environmental affect in the following area(s): **Paleontological Resources**. Subsequent revisions in the project proposal create the specific mitigation identified in Section V of this Mitigated Negative Declaration (MND). The project, as revised, now avoids or mitigates the potentially significant environmental effects previously identified, and the preparation of an Environmental Impact Report will not be required.
- IV. DOCUMENTATION: The attached Initial Study documents the reasons to support the above Determination.
- V. MITIGATION, MONITORING AND REPORTING PROGRAM: To ensure that site development would avoid significant environmental impacts, a Mitigation, Monitoring, and Reporting Program (MMRP) is required. Compliance with the mitigation measures shall be the responsibility of the applicant. The mitigation measures are described below.

**A. GENERAL REQUIREMENTS – PART I
Plan Check Phase (prior to permit issuance)**

1. Prior to the issuance of a Notice To Proceed (NTP) for a subdivision, or any construction permits, such as Demolition, Grading or Building, or beginning any construction related activity on-site, the Development Services Department (DSD) Director's Environmental Designee (ED) shall review and approve all Construction Documents (CD), (plans, specification, details, etc.) to ensure the MMRP requirements are incorporated into the design.
2. In addition, the ED shall verify that the MMRP Conditions/Notes that apply ONLY to the construction phases of this project are included VERBATIM, under the heading, "ENVIRONMENTAL/MITIGATION REQUIREMENTS."
3. These notes must be shown within the first three (3) sheets of the construction documents in the format specified for engineering construction document templates as shown on the City website:
<http://www.sandiego.gov/development-services/industry/standtemp.shtml>
4. The **TITLE INDEX SHEET** must also show on which pages the "Environmental/Mitigation Requirements" notes are provided.
5. **SURETY AND COST RECOVERY** – The Development Services Director or City Manager may require appropriate surety instruments or bonds from private Permit Holders to ensure the long term performance or implementation of required mitigation measures or programs. The City is authorized to recover its cost to offset the salary, overhead, and expenses for City personnel and programs to monitor qualifying projects.

B. GENERAL REQUIREMENTS – PART II

Post Plan Check (After permit issuance/Prior to start of construction)

1. **PRE CONSTRUCTION MEETING IS REQUIRED TEN (10) WORKING DAYS PRIOR TO BEGINNING ANY WORK ON THIS PROJECT.** The PERMIT HOLDER/OWNER is responsible to arrange and perform this meeting by contacting the CITY RESIDENT ENGINEER (RE) of the Field Engineering Division and City staff from MITIGATION MONITORING COORDINATION (MMC). Attendees must also include the Permit holder's Representative(s), Job Site Superintendent and the following consultants:

Qualified Paleontologist

Note: Failure of all responsible Permit Holder's representatives and consultants to attend shall require an additional meeting with all parties present.

CONTACT INFORMATION:

- a) The PRIMARY POINT OF CONTACT is the RE at the **Field Engineering Division – 858-627-3200**
- b) For Clarification of ENVIRONMENTAL REQUIREMENTS, it is also required to call **RE and MMC at 858-627-3360**

2. **MMRP COMPLIANCE:** This Project, Project Tracking System (PTS) 98695, shall conform to the mitigation requirements contained in the associated Environmental Document and implemented to the satisfaction of the DSD's Environmental Designee (MMC) and the City Engineer (RE). The requirements may not be reduced or changed but may be annotated (i.e. to explain when and how compliance is being met and location of verifying proof, etc.). Additional clarifying information may also be added to other relevant plan sheets and/or specifications as appropriate (i.e., specific locations, times of monitoring, methodology, etc).

Note: Permit Holder's Representatives must alert RE and MMC if there are any discrepancies in the plans or notes, or any changes due to field conditions. All conflicts must be approved by RE and MMC BEFORE the work is performed.

3. **OTHER AGENCY REQUIREMENTS:** Evidence of compliance with all other agency requirements or permits shall be submitted to the RE and MMC for review and acceptance prior to the beginning of work or within one week of the Permit Holder obtaining documentation of those permits or requirements. Evidence shall include copies of permits, letters of resolution or other documentation issued by the responsible agency.

Not Applicable

4. **MONITORING EXHIBITS:** All consultants are required to submit, to RE and MMC, a monitoring exhibit on a 11x17 reduction of the appropriate construction plan, such as site plan, grading, landscape, etc., marked to clearly show the specific areas including the **LIMIT OF WORK**, scope of that discipline's work, and notes indicating when in the construction schedule that work will be performed. When necessary for clarification, a detailed methodology of how the work will be performed shall be included.

NOTE: Surety and Cost Recovery – When deemed necessary by the Development Services Director or City Manager, additional surety instruments or bonds from the private Permit Holder may be required to ensure the long term performance or implementation of required mitigation measures or programs. The City is authorized to recover its cost to offset the salary, overhead, and expenses for City personnel and programs to monitor qualifying projects.

5. **OTHER SUBMITTALS AND INSPECTIONS:** The Permit Holder/Owner's representative shall submit all required documentation, verification letters, and requests for all associated inspections to the RE and MMC for approval per the following schedule:

Document Submittal/Inspection Checklist

<i>Issue Area</i>	<i>Document submittal</i>	<i>Assoc Inspection/Approvals/ Notes</i>
General Meeting	Consultant Qualification Letters	Prior to Pre-construction
General Construction Meeting	Consultant Const. Monitoring Exhibits	Prior to or at the Pre-

C. SPECIFIC MMRP ISSUE AREA CONDITIONS/REQUIREMENTS

PALEONTOLOGICAL RESOURCES

I. Prior to Permit Issuance or Bid Opening/Bid Award

A. Entitlements Plan Check

1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

B. Letters of Qualification have been submitted to ADD

1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.
3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the Construction Manager and/or Grading Contractor.
 - a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)
The applicant shall submit a letter to MMC acknowledging their responsibility

for the cost of curation associated with all phases of the paleontological monitoring program.

3. Identify Areas to be Monitored

- a. Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11x17) to MMC for approval identifying the areas to be monitored including the delineation of grading/excavation limits. Monitoring shall begin at depths below 10 feet from existing grade or as determined by the PI in consultation with MMC. The determination shall be based on site specific records search data which supports monitoring at depths less than ten feet.
- b. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).
- c. MMC shall notify the PI that the PME has been approved.

4. When Monitoring Will Occur

- a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
- b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.

5. Approval of PME and Construction Schedule

After approval of the PME by MMC, the PI shall submit to MMC written authorization of the PME and Construction Schedule from the CM.

III. During Construction

A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The monitor shall be present full-time during grading/excavation/trenching activities including, but not limited to mainline, laterals, jacking and receiving pits, services and all other appurtenances associated with underground utilities as identified on the PME that could result in impacts to formations with high and/or moderate resource sensitivity. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the PME.**
2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.
3. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion**), and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

C. Determination of Significance

1. The PI shall evaluate the significance of the resource.
 - a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.
 - b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval of the program from MMC, MC and/or RE. PRP and any mitigation must be approved by MMC, RE and/or CM before ground disturbing activities in the area of discovery will be allowed to resume.
 - (1). Note: For pipeline trenching projects only, the PI shall implement the Discovery Process for Pipeline Trenching projects identified below under "D."
 - c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.
 - d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.
 - (1). Note: For Pipeline Trenching Projects Only. If the fossil discovery is limited in size, both in length and depth; the information value is limited and there are no unique fossil features associated with the discovery area, then the discovery should be considered not significant.
 - (2). Note, for Pipeline Trenching Projects Only: If significance cannot be determined, the Final Monitoring Report and Site Record shall identify the discovery as Potentially Significant.

D. Discovery Process for Significant Resources - Pipeline Trenching Projects

The following procedure constitutes adequate mitigation of a significant discovery encountered during pipeline trenching activities including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance.

1. Procedures for documentation, curation and reporting
 - a. One hundred percent of the fossil resources within the trench alignment and width shall be documented in-situ photographically, drawn in plan view (trench and profiles of side walls), recovered from the trench and photographed after cleaning, then analyzed and curated consistent with Society of Invertebrate Paleontology Standards. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact and so documented.

- b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE as indicated in Section VI-A.
- c. The PI shall be responsible for recording (on the appropriate forms for the San Diego Natural History Museum) the resource(s) encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines. The forms shall be submitted to the San Diego Natural History Museum and included in the Final Monitoring Report.
- d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.

IV. Night and/or Weekend Work

- A. If night and/or weekend work is included in the contract
 - 1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting.
 - 2. The following procedures shall be followed.
 - a. No Discoveries
In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSVSR and submit to MMC via the RE via fax by 8AM on the next business day.
 - b. Discoveries
All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction.
 - c. Potentially Significant Discoveries
If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.
 - d. The PI shall immediately contact the RE and MMC, or by 8AM on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.
- B. If night and/or weekend work becomes necessary during the course of construction
 - 1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
 - 2. The RE, or BI, as appropriate, shall notify MMC immediately.
- C. All other procedures described above shall apply, as appropriate.

V. Post Construction

- A. Preparation and Submittal of Draft Monitoring Report
 - 1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring,
 - a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program or Pipeline Trenching Discovery Process shall be included in the Draft Monitoring Report.
 - b. Recording Sites with the San Diego Natural History Museum
The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.

2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
 3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.
 4. MMC shall provide written verification to the PI of the approved report.
 5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.
- B. Handling of Fossil Remains
1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.
- C. Curation of artifacts: Deed of Gift and Acceptance Verification
1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution.
 2. The PI shall submit the Deed of Gift and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
 3. The RE or BI, as appropriate shall obtain signature on the Deed of Gift and shall return to PI with copy submitted to MMC.
 4. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.
- D. Final Monitoring Report(s)
1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC of the approved report.
 2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

VI. PUBLIC REVIEW DISTRIBUTION:

Draft copies or notice of this Mitigated Negative Declaration were distributed to:

City of San Diego
 Councilmember Gloria – District 3
 Mayor’s Office
 City Attorney’s Office
 Shannon Thomas
 Development Services
 Mark Brunette
 Peter Kann
 Engineering and Capital Projects
 Sepi Amirazizi
 Juan Baligad
 Library Dept.
 Government Projects
 Mission Hills Branch Library

Other Groups and Individuals
 Uptown Planners
 Mission Hills Association
 San Diego Natural History Museum

VII. RESULTS OF PUBLIC REVIEW:

- () No comments were received during the public input period.
- () Comments were received but did not address the draft Mitigated Negative Declaration finding or the accuracy/completeness of the Initial Study. No response is necessary. The letters are attached.
- () Comments addressing the findings of the draft Negative Declaration and/or accuracy or completeness of the Initial Study were received during the public input period. The letters and responses follow.

Copies of the draft Mitigated Negative Declaration, and any Initial Study material are available in the office of the Entitlements Division for review, or for purchase at the cost of reproduction.

Mark Brunette, Senior Planner
Development Services Department

November 6, 2015

Date of Draft Report

Analyst: Mark Brunette

Date of Final Report

Attachments: Location Map
 Initial Study Checklist

INITIAL STUDY CHECKLIST

1. Project Title/Project Number:

MISSION HILLS – HILLCREST LIBRARY/98695
2. Lead agency name and address:

City of San Diego
Department of Development Services
1222 First Avenue, MS 501
San Diego, CA 92101
3. Contact person and phone number:

Mark Brunette/ (619) 446-5379
4. Project location:

215 West Washington Street, on the southwest corner of the intersection of West Washington Street and Front Street, in the Uptown Community Plan area. (APN: 444-650-36)
5. Project Applicant/Sponsor's name and address:

City of San Diego Public Works Department – Engineering and Capital Projects,
Architectural Engineering & Parks Division.
6. General Plan designation:

The Uptown Community Plan designates the project site for mixed use development.
7. Zoning:

Mid City Communities Planned District CN-2A (Commercial Node) zone.
8. Description of project (Describe the whole action involved, including but not limited to, later phases of the project, and any secondary, support, or off-site features necessary for its implementation.):

MISSION HILLS - HILLCREST LIBRARY: SITE DEVELOPMENT PERMIT for the construction of a 15,000 square-foot, one-story, 30-foot tall above grade library over a 30,000 square-foot, two-story underground parking garage at 215 West Washington Street in the Uptown community. The site is bounded by Washington Street to the North, Front Street on the East, a public alley on the West, and Florence Elementary School to the South. Entry into the parking garage will be provided from Front Street. The library's main entry will be on Front Street and lead into a courtyard. Front Street will be widened and extended to a new cul-de-sac at its southern terminus. Curb, gutter, sidewalk and landscape improvements would be

installed along both sides of Front Street cul-de-sac. The project will be designed to a minimum of LEED (Leadership in Energy and Environmental Design) Silver standards. Ancillary work would include traffic control, best management practices for erosion control and storm drain inlet protection, ADA curb ramp installation. There is an existing office building, paved parking lot, and landscaping on-site would be removed to allow the new library to be constructed.

The subject property has ground elevations ranging from 285 feet above Mean Sea Level (MSL) along the site's northerly West Washington Street frontage descending to 274 feet above MSL at the southeast corner of the property. The entire project site would be re-graded and redeveloped by the proposed project.

A Site Development Permit is required for proposed building façade deviations to the Mid-City Communities Planned District Ordinance Offsetting Plane Requirements.

Paleontological Resources

Excavation of the library's subterranean garage will require an excavation depth of up to 24 feet below existing grade and would result in soil excavation of approximately 13,000 cubic yards. Since the proposed excavation would exceed a depth of 10 feet and 2,000 cubic yards of excavation in the Lindavista geologic formation (moderate sensitivity rating for discovery of paleontological resources), the project could result in potentially significant impacts to paleontological resources.

To reduce potential impacts on paleontological resources to below a level of significance, all project excavation would be monitored by a qualified paleontologist or paleontological monitor. Any significant paleontological resources encountered would be recovered and curated in accordance with the mitigation monitoring and Reporting Program (MMRP) detailed in Section V.

Surrounding land uses and setting: Briefly describe the project's surroundings:

The site is located on the south side of West Washington Street, which is a commercial corridor in the urbanized Mission Hills area of the Uptown Community. The site is bounded by Washington Street to the North, Front Street on the East, a public alley on the West, and Florence Elementary School to the South. There are existing one, two and three-story commercial and mixed commercial/residential structures in the vicinity of the project site.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):

Not applicable for this project.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|--|--|
| <input type="checkbox"/> Aesthetics
Population/Housing | <input type="checkbox"/> Greenhouse Gas
Emissions | <input type="checkbox"/> |
| <input type="checkbox"/> Agriculture and
Services
Forestry Resources | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Public |
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Land Use/Planning
Transportation/Traffic | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Utilities/Service
System |
| <input type="checkbox"/> Geology/Soils | <input type="checkbox"/> Noise | <input checked="" type="checkbox"/> Mandatory Findings
Significance |

DETERMINATION: (To be completed by Lead Agency)

On the basis of this initial evaluation:

- The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (a) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (b) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required.
- Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or (MITIGATED) NEGATIVE DECLARATION pursuant to applicable standards, and (b)

have been avoided or mitigated pursuant to that earlier EIR or (MITIGATED) NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis.)
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses”, as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or (mitigated) negative declaration. *Section 15063(c)(3)(D)*. In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.
 - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

- c. Mitigation Measures. For effects that are “Less Than Significant With Mitigation Measures Incorporated”, describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion. Please note, all reports and documents mentioned in this document are available for public review in the Entitlements Division on the Fifth Floor of 1222 First Avenue, San Diego.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a. The significance criteria or threshold, if any, used to evaluate each question; and
 - b. The mitigation measure identified, if any, to reduce the impact to less than significant.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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I) -- AESTHETICS – Would the project:

a) Have a substantial adverse effect on a scenic vista?

There are no scenic vistas in the vicinity of the project site that have been designated by the Uptown Community Plan. Therefore, the proposed project would have no significant impacts to public scenic vistas and no mitigation would be required.

b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

See answer to I.a. above. In addition, the project would not damage any existing scenic resources such as trees, rock outcroppings, or historic buildings (Refer to V.a.) as none of these features are located within the boundaries, or in the vicinity, of the proposed project.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

See answer to I.b. above.

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

The project does not include any substantial new or modified light sources and the project would not utilize highly reflective materials. In addition, no substantial sources of light would be generated during project construction, as construction activities would occur during daylight hours. The project would also be subject to the City's Outdoor Lighting Regulations per Municipal Code Section 142.0740.

II) AGRICULTURAL AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. – Would the project:</p>				
<p>a) Converts Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>The project would occur on a developed commercial site in a commercial zone, which is not designated for agricultural use or farmland. In addition, agricultural land is not present in the vicinity of the project.</p>				
<p>b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Refer to II.a.

- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 1220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The project would redevelop an existing commercial property in a commercial zone in an urbanized area of San Diego. In addition, forest land is not present in the vicinity of the project.

- d) Result in the loss of forest land or conversion of forest land to non-forest use?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Refer to II.c.

- e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The project does not propose a change in land use and would not result in the conversion of Farmland since no Farmland exists within, or in the vicinity, of the project boundaries.

III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations – Would the project:

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

The project would replace an existing commercial use with a public library. However, the site is designated for mixed use development in the Uptown Community Plan which permits a library use. Therefore, the project would not negatively impact goals of the applicable air quality plan because the proposed library use is consistent with the air quality assumptions for mixed use development in the community plan EIR. In addition, the proposed library use would not substantially increase emissions into the air beyond the emissions of the existing commercial use. Standard Construction Site Best Management Practices include water sprinkling of excavated soils to reduce dust levels and other measures during the construction of the project. Such measures are enforceable per the San Diego Municipal Code Section 142.0710; therefore, less than significant impacts to air quality would result from the proposed project and no mitigation is required to reduce impacts to a less than significant level.

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| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
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Refer to III.a

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

As described above, construction operations could temporarily increase the emissions of dust and other pollutants. However, construction emissions would be temporary and implementation of Best Management Practices would reduce potential impacts related to construction activities to below a level of significance. Therefore, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under applicable federal or state ambient air quality standards.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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- d) Expose sensitive receptors to substantial pollutant concentrations?

Construction operations could temporarily increase the emissions of harmful pollutants, which could affect sensitive receptors adjacent to the project. However, construction emissions would be temporary and it is anticipated that implementation of construction BMPs would reduce potential impacts related to construction activities to minimal levels. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations.

- e) Create objectionable odors affecting a substantial number of people?

Operation of construction equipment and vehicles could generate odors associated with fuel combustion. However, these odors would dissipate into the atmosphere upon release and would only remain temporarily in proximity to the construction equipment and vehicles. In addition, operation of the library would not create objectionable odors. Therefore, the project would not create odors affecting a substantial number of people

IV. BIOLOGICAL RESOURCES – Would the project:

- a) Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The subject property is currently developed with a commercial building, asphalt parking lot and ornamental landscaping and no sensitive biological resources or habitat is present. The project site is located in an urbanized area and there are no sensitive biological resources in the vicinity of the subject property. Therefore, the proposed project would have no substantial adverse effects on sensitive biological resources or habitat.

- b) Have a substantial adverse effect on any riparian habitat

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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or other community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Refer to IV.a.

- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Refer to IV.a. There are no wetlands present either on or in the vicinity of the project site.

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Refer to IV.a.

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Refer to IV.a. Furthermore, the site is not in or adjacent to an MHPA nor does it contain trees subject to a tree preservation policy.

- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Refer to IV.a and IV.e. The site is not within or adjacent to an MHPA. The project would not conflict with any local conservation plans.

V. CULTURAL RESOURCES – Would the project:

- a) Cause a substantial adverse change in the significance of an historical resource as defined in §15064.5?

The subject property and existing structure on site were evaluated by the City of San Diego Historical Resources Board and the board voted unanimously, at their February 26, 2015 meeting, to not designate the subject property and existing structure on site as a historical resource under any adopted Historic Resources Board Criteria. Therefore, the redevelopment of the subject property would have no impact on a historical resource.

- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

The entire project site has been previously disturbed and does not contain undisturbed native surficial soil, where sensitive archaeological resources could be present. Therefore, redevelopment of the subject property would have no impact on sensitive archaeological resources

- c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The project site is underlain by the Lindavista geologic formation which is moderately sensitive for discovery of paleontological resources. The proposed project would result in an excavation depth of 24 feet and approximately 13,000 cubic yards of soil excavation. City of San Diego CEQA Significance Thresholds for paleontological resources state that when project excavation exceeds a depth of 10 feet and 2,000 cubic yards of soil, which impacts a moderately sensitive geologic formation, paleontological monitoring is required to reduce potentially significant impacts to sensitive paleontological resources to a less than significant level.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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To reduce potential impacts on paleontological resources to below a level of significance all project site excavation would be monitored by a qualified paleontologist or paleontological monitor. Any significant paleontological resources encountered would be recovered and curated in accordance with the Mitigation Monitoring and Reporting Program (MMRP) detailed in Section V.

- d) Disturb any human remains, including those interred outside of formal cemeteries?

No cemeteries, formal or informal, have been identified on or adjacent to the project site. While there is a possibility of encountering human remains during subsequent project construction activities, if remains are found monitoring would be required. In addition, per CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5), if human remains are discovered during construction, work would be required to halt in that area and no soil would be exported off-site until a determination could be made regarding the provenance of the human remains via the County Coroner and other authorities as required.

VI. GEOLOGY AND SOILS – Would the project:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
- i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

The project site is located with City of San Diego Geologic Hazard Category 52 which is characterized as having low risk for geologic hazards and containing a

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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favorable geologic structure. In addition, the project would utilize proper engineering design and standard construction practices in order to ensure that potential impacts in this category based on regional geologic hazards would remain less than significant. Therefore risks from rupture of a known earthquake fault would be below a level of significance.

- | | | | | | |
|-----|--------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|
| ii) | Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|-----|--------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|

See VI.a.i above. The project would be required to utilize proper engineering design and standard construction practices to ensure that the potential for impacts from ground shaking would be below a level of significance.

- | | | | | | |
|------|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| iii) | Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|------|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

See VI.a and b above.

- | | | | | | |
|-----|-------------|--------------------------|--------------------------|-------------------------------------|--------------------------|
| iv) | Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|-----|-------------|--------------------------|--------------------------|-------------------------------------|--------------------------|

See VI.a and b above.

- | | | | | | |
|----|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| b) | Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|----|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Refer to VI.a. All areas that are disturbed by the proposed project would be covered by either, the library structure, paved sidewalks or streets, or landscaping, which would preclude soil erosion or topsoil loss. Additionally, appropriate Best Management Practices would be utilized during project construction to prevent soil erosion. As such, the project would not result in a substantial amount of soil erosion or loss of topsoil.

- | | | | | | |
|----|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| c) | Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|----|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Refer to VI.a. In addition, proper engineering design and utilization of standard construction practices would ensure that the potential impacts would be less than significant.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Refer to VI.a.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Refer to VI.a. In addition, no septic or alternative wastewater systems are proposed and the project would be connected to the existing public sewer infrastructure that exists in the vicinity of the project site.

VII. GREENHOUSE GAS EMISSIONS –

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The City is utilizing data from the California Air Pollution Control Officers Association (CAPCOA) report “CEQA & Climate Change” dated January 2008 as an interim significance threshold to determine whether there is a potential for significant Greenhouse Gas (GHG) impacts and a GHG analysis will be required. The CAPCOA report references a 900 metric ton guideline as a conservative threshold for requiring further analysis and possible mitigation. This emission level is based on the amount of vehicle trips, the typical energy and water use associated with projects, and other factors.

CAPCOA identifies project types that are estimated to emit approximately 900 metric tons of GHG’s annually. This 900 metric ton threshold is roughly equivalent to 35,000 square feet of office space, 11,000 square feet of retail, 50 single family residential units, 70 multi-family residential units and 6,300 square-foot supermarkets.

The new library building would be 15,000 square feet which is less than half of the 35,000 square-foot office use threshold, which is the use type the library most

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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closely approximates. Furthermore, the library would replace an existing approximately 8,000 square-foot office building (a 7,000 square-foot net increase), and is not anticipated to generate more than 900 metric tons of new GHG emissions in comparison to the existing use. Therefore, the project would not exceed the 900 metric ton threshold and would result in a less than significant CEQA Greenhouse Gas impact.

- b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The project as proposed would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing greenhouse gas emission in that it would be constructed in an established urban area with services and facilities available. In addition, the project is consistent with the General Plan.

VIII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:

- a) Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials?

Construction of the project may require the use of hazardous materials (e.g. fuels, lubricants, solvents, etc.) which would require proper storage, handling, use and disposal; however, these conditions would not occur during routine construction within the PROW. Construction specifications would include requirements for the contractor regarding where routine handling or disposal of hazardous materials could occur and what measures to implement in the event of a spill from equipment. Compliance with contract specifications would ensure that potential hazards are minimized to below a level of significance.

- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

A review of the State Water Resources Control Board GeoTracker hazardous materials site database showed no hazardous materials sites on or in the vicinity of the project

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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site. In addition, the public library will not use substantial amounts of hazardous materials; therefore, there would be no impacts from the release of hazardous materials into the environment.

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Refer to VIII. a and b.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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See VIIa-c above.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two mile of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

The subject property is within the Airport Influence Area of the San Diego International Airport Land Use Compatibility Plan (ALUCP). However, the proposed institutional land use and building height are consistent with the ALUCP. Therefore, the project would not introduce any new features that would result in a safety hazard for people residing or working in the area, or create a flight hazard.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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- residing or working in the project area?

The project site is not within proximity of a private airstrip.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction of the proposed project would temporarily affect traffic circulation within the project Area of Potential Effect (APE) and its adjoining roads. However, an approved Traffic Control Plan would be implemented during construction which would allow emergency plans to be employed. Therefore, the project would not physically interfere with and adopted emergency response plan or emergency evacuation plan.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The project site is located in an urbanized area of San Diego and is not located in the vicinity of wildlands that could pose a threat of wildland fires.

IX. HYDROLOGY AND WATER QUALITY - Would the project:

a) Violate any water quality standards or waste discharge requirements?

Potential impacts to existing water quality standards associated with the proposed project would include minimal short-term construction-related erosion sedimentation, but would not include any long term operational storm water impacts. The project would be required to comply with the City's Storm Water Standards Manual and would have to comply with either a Water Pollution Control Plan or Storm Water Pollution Prevention Plan. These plans would prevent or effectively minimize short-term water quality impacts during construction activities. Therefore, the proposed project would not violate any existing water quality standards or discharge requirements.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

The project does not use groundwater, nor would it create a substantial area of new impervious surface that would interfere with groundwater recharge.

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?

There are no streams or rivers on or in the vicinity of the project site. In addition, the project would not increase run off from the site beyond existing conditions. Site drainage would be conveyed through an on-site drainage system into existing public storm drain infrastructure adjacent to the site. The project site would be covered entirely with the library structure, a paved parking lot and street and ornamental landscaping in accordance with City and regional grading and storm water standards. Thus, the project would not substantially alter drainage patterns.

- d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Refer to IX.c.

- e) Create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Refer to IX.c. The project would be required to comply with all local and regional storm water quality standards during construction using approved Best Management Practices (BMPs), which would ensure that water quality is not degraded.

- f) Otherwise substantially degrade water quality?

Refer to IX.c. The project would be required to comply with all local and regional storm water quality standards during construction using approved Best Management Practices (BMPs), which would ensure that water quality is not degraded.

- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

The project does not propose any housing.

- h) Place within a 100-year flood hazard area, structures that would impede or redirect flood flows?

The project does not propose any structures that would impede flood flows as it is not located within a 100-year flood hazard area.

- i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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The proposed project does not include any features that would increase the risk associated with flooding beyond those of existing conditions.

- j) Inundation by seiche, tsunami, or mudflow?

The proposed project does not include any features that would increase the risk associated with inundation by seiche, tsunami, or mudflow beyond those of existing conditions.

X. LAND USE AND PLANNING –

Would the project:

- a) Physically divide an established community?

The project would redevelop an existing commercial site with a public library and would, therefore, not introduce new features that could divide an established community.

- b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed public library use is consistent with the City of San Diego General Plan, Uptown Community Plan and the City of San Diego Land Development Code. The project would not conflict with any applicable land use plan, policy or regulations adopted for the purpose of avoiding or mitigating an environmental effect.

- c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Refer to IV. The project is not within or adjacent to the preserve areas of the City of San Diego Multiple Species Conservation Program and would therefore not conflict with any applicable habitat conservation plans.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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d) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The project site and surrounding areas are not being used for the recovery of mineral resources and are not designed by the General Plan or other local, state or federal land use plan for mineral resources recovery; therefore, the project would not result in the loss of mineral resources.

e) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Refer to X.e

XII. NOISE – Would the project result in:

a) Generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The project would not result in any the generation of operational noise levels in excess of existing standards or existing ambient noise levels in the vicinity of the project.

b) Generation of excessive ground borne vibration or ground borne noise levels?

The project would not result in any the generation of operational ground borne vibration or noise levels in excess of existing standards or ambient levels.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Refer to XII.a-b

- d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above existing without the project?

The proposed library project would result in construction noise, but would be temporary in nature; in addition, the project is required to comply with the San Diego Municipal Code, Chapter 5, Article 9.5, (§59.5.0404 Construction Noise). This section specifies that it is unlawful for any person, between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays (with exception of Columbus Day and Washington’s Birthday), or on Sundays, to erect, construct, demolish, excavate for, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise. In addition, the project would be required to conduct any construction activity so as to not cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 a.m. to 7:00 p.m.

- e) For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport would the project expose people residing or working in the area to excessive noise levels?

The project site is within the Airport Influence Area of the San Diego International Airport Land Use Compatibility Plan, but is outside the airport’s noise impact contour boundaries. The project would not generate substantial operational noise. Compliance with OSHA standards will ensure the project workers would not be exposed to excessive noise levels.

- f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The project site is not located within the vicinity of a private airstrip.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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XIII. POPULATION AND HOUSING –

Would the project:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The project scope does not include the construction of new or extended roads or infrastructure, or new homes and businesses. The project is an infill redevelopment of an existing commercial property in an urbanized community where existing infrastructure is already in place. Therefore, the project would not induce population growth nor require the construction of new infrastructure.

- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No such displacement would result. There is no existing housing within the boundaries of the proposed project.

- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No such displacement would result. There is no existing housing or residents within the boundaries of the project.

XIV. PUBLIC SERVICES

- a) Would the project result in substantial adverse physical impacts associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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order to maintain acceptable service rations, response times or other performance objectives for any of the public services:

i) Fire Protection

The project would not result in adverse physical impacts to fire facilities or adversely affect existing levels of fire services.

ii) Police Protection

The project would not affect existing levels of police protection service and would not require the construction or expansion of a police facility.

iii) Schools

The project would not affect existing levels of public services and would not require the construction or expansion of a school facility.

v) Parks

The project would not affect existing levels of public services and would not require the construction or expansion of a park facility.

vi) Other public facilities

The project would not affect existing levels of public services; therefore, no new or altered government facilities would be required.

XV. RECREATION -

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The project would not adversely affect the availability of and/or need for new or expanded recreational resources.

b) Does the project include recreational facilities or

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Refer to XV.a. The project does not propose recreation facilities nor require the construction or expansion of any such facilities.

XVI. TRANSPORTATION/TRAFFIC –
Would the project?

- a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Construction of the proposed project would temporarily affect traffic circulation within the project Area of Potential Effect (APE) and its adjoining roads. However, an approved Traffic Control Plan would be implemented during construction such that traffic circulation would not be substantially impacted. The proposed library use is consistent with the build-out traffic volumes that are anticipated by the Uptown Community Plan. Therefore, the project would not result in any significant permanent increase in traffic generation beyond what was anticipated by the applicable community plan EIR.

- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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congestion management agency for designated roads or highways?

Construction of the proposed project would temporarily affect traffic circulation within the project Area of Potential Effect (APE) and its adjoining roads. However, an approved Traffic Control Plan would be implemented during construction so that existing cumulative or individual levels of service are minimally impacted. The proposed library use is consistent with the build-out traffic volumes that are anticipated by the Uptown Community Plan. Therefore, the project would not degrade levels of service on the surrounding system beyond what was anticipated by the applicable community plan EIR. Therefore, the project would not result in any significant permanent increase in traffic generation or permanent reduction in level of service beyond what is anticipated by the applicable community plan.

- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Refer to XVI.c. In addition, the project would not result in traffic safety risks or a change to air traffic patterns because the project would provide required visibility clearance areas, and the proposed structure would not exceed 30 feet in height and is not located in an airport approach or safety zone.

- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The project would not create a permanent increase in hazards resulting from design features and would reduce temporary hazards due to construction to a less than significant level through a Traffic Control Plan. The project does not propose any change in land use that would adversely affect existing land uses in the area.

- e) Result in inadequate emergency access?

Construction of the proposed project would temporarily affect traffic circulation within the project Area of Potential Effect (APE) and its adjoining roads. However, an approved Traffic Control Plan would be implemented during construction such that emergency access would not be substantially impacted. The project site is located adjacent to Washington and Front Streets which would provide adequate emergency access after the project is completed. Therefore, the project would not result in inadequate emergency access.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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- f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The project would temporarily impact circulation during construction activities relative to traffic, pedestrians, public transit and bicycles. However, the preparation of a Traffic Control Plan would ensure that any disruption to these services would not be significant. New sidewalks will be provided along Front Street and Washington Street. The existing bus stop on Washington Street will remain in place.

XVII. UTILITIES AND SERVICE

SYSTEMS – Would the project:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Construction of the proposed project would not exceed the wastewater treatment requirements of the Regional Water Quality Control Board.

- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Construction of the proposed project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities.

- c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Construction of the proposed project would not increase the runoff rate from the site in accordance with regional storm water standards. Therefore, the project would not

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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require the construction of new storm water drainage facilities or expansion of existing facilities.

- d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Construction of the proposed project would not increase the demand for water as it is an infill redevelopment project which proposes a land use that would not significantly increase the water usage beyond that of the existing office building on-site.

- e) Result in a determination by the wastewater treatment provided which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Refer to XVII.c

- f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Construction of the project would result in the removal of an existing office building and parking lot, but otherwise would not generate a significant increase in operational waste. Project waste would be disposed of in accordance with all applicable local and state regulations pertaining to solid waste including the permitted capacity of the landfill serving the project area. Demolition or construction materials which can be recycled shall comply with the City's Construction and Demolition Debris Ordinance. Operation of the project would not generate waste and, therefore, would not affect the permitted capacity of the landfill serving the project area.

- g) Comply with federal, state, and local statutes and regulation related to solid waste?

Refer to XVII.f. Any solid waste generated during construction related activities would be recycled or disposed of in accordance with all applicable local, state and federal regulations.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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XVIII. MANDATORY FINDINGS OF SIGNIFICANCE -

- a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

The proposed project would not impact any sensitive biological resources and the project would not be located within or adjacent to the Multi Habitat Planning Area (MHPA) of the MSCP. With respect to cultural resources, mitigation for archaeology is not required as there would be no impacts to archaeological resources. Mitigation to reduce potentially significant impacts to paleontological resources to a less than significant level has been incorporated into the MND. Please see Section V of the MND for further details on all mitigation requirements. As a result, project implementation would not result in a significant impact to these resources.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable futures projects)?

Since the project is a standalone single phase infill redevelopment project, and is consistent with the underlying community plan, it would not have cumulatively considerable or incremental impacts. All significant project impacts are reduced to

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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a less than significant level through project mitigation. Please see Section V of the MND for further details on all mitigation requirements. As a result, project implementation would not result in any individually limited, but cumulatively significant environmental impacts.

- c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?
- | | | | |
|--------------------------|-------------------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|-------------------------------------|--------------------------|--------------------------|

As stated previously, potentially significant impacts have been identified for paleontological resources. However, mitigation has been included in Section V of this MND to reduce impacts to below a level of significance. As such, project implementation would not result in substantial adverse impacts on human beings.

INITIAL STUDY CHECKLIST

REFERENCES

I. AESTHETICS / NEIGHBORHOOD CHARACTER

- City of San Diego General Plan; City of San Diego Land Development Municipal Code
- Community Plan.
- Local Coastal Plan.

II. AGRICULTURAL RESOURCES & FOREST RESOURCES

- City of San Diego General Plan.
- U.S. Department of Agriculture, Soil Survey - San Diego Area, California, Part I and II, 1973.
- California Agricultural Land Evaluation and Site Assessment Model (1997)
- Site Specific Report:

III. AIR QUALITY

- California Clean Air Act Guidelines (Indirect Source Control Programs) 1990.
- Regional Air Quality Strategies (RAQS) - APCD.
- Site Specific Report:

IV. BIOLOGY

- City of San Diego, Multiple Species Conservation Program (MSCP), Subarea Plan, 1997
- City of San Diego, MSCP, "Vegetation Communities with Sensitive Species and Vernal Pools" Maps, 1996.
- City of San Diego, MSCP, "Multiple Habitat Planning Area" maps, 1997.
- Community Plan - Resource Element.
- California Department of Fish and Game, California Natural Diversity Database, "State and Federally-listed Endangered, Threatened, and Rare Plants of California," January 2001.
- California Department of Fish & Game, California Natural Diversity Database, "State and Federally-listed Endangered and Threatened Animals of California," January 2001.
- City of San Diego Land Development Code Biology Guidelines.
- Site Specific Report:

V. CULTURAL RESOURCES (INCLUDES HISTORICAL RESOURCES)

City of San Diego Historical Resources Guidelines.

City of San Diego Archaeology Library.

Historical Resources Board List.

Community Historical Survey:

Site Specific Reports:

VI. GEOLOGY/SOILS

City of San Diego Seismic Safety Study.

U.S. Department of Agriculture Soil Survey - San Diego Area, California, Part I and II, December 1973 and Part III, 1975.

Site Specific Report(s):

VII. GREENHOUSE GAS EMISSIONS

Site Specific Report:

VIII. HAZARDS AND HAZARDOUS MATERIALS

San Diego County Hazardous Materials Environmental Assessment Listing,

San Diego County Hazardous Materials Management Division

FAA Determination

State Assessment and Mitigation, Unauthorized Release Listing, Public Use Authorized.

Airport Land Use Compatibility Plan.

Site Specific Report:

IX. HYDROLOGY/WATER QUALITY

Flood Insurance Rate Map (FIRM).

Federal Emergency Management Agency (FEMA), National Flood Insurance Program - Flood Boundary and Floodway Map.

Clean Water Act Section 303(b) list, http://www.swrcb.ca.gov/tmdl/303d_lists.html.

Site Specific Reports:

X. LAND USE AND PLANNING

City of San Diego General Plan.

Community Plan.

Airport Land Use Compatibility Plan

City of San Diego Zoning Maps

FAA Determination

XI. MINERAL RESOURCES

California Department of Conservation - Division of Mines and Geology, Mineral Land Classification.

Division of Mines and Geology, Special Report 153 - Significant Resources Maps.

Site Specific Report:

XII. NOISE

Community Plan

San Diego International Airport - Lindbergh Field CNEL Maps.

Brown Field Airport Master Plan CNEL Maps.

Montgomery Field CNEL Maps.

San Diego Association of Governments - San Diego Regional Average Weekday Traffic Volumes.

San Diego Metropolitan Area Average Weekday Traffic Volume Maps, SANDAG.

City of San Diego General Plan.

Site Specific Report:

XIII. PALEONTOLOGICAL RESOURCES

City of San Diego Paleontological Guidelines.

Deméré, Thomas A., and Stephen L. Walsh, "Paleontological Resources City of San Diego," Department of Paleontology San Diego Natural History Museum, 1996.

Kennedy, Michael P., and Gary L. Peterson, "Geology of the San Diego Metropolitan Area, California. Del Mar, La Jolla, Point Loma, La Mesa, Poway, and SW 1/4 Escondido 7 1/2 Minute Quadrangles," California Division of Mines and Geology Bulletin 200, Sacramento, 1975.

Kennedy, Michael P., and Siang S. Tan, "Geology of National City, Imperial Beach and Otay Mesa Quadrangles, Southern San Diego Metropolitan Area, California," Map Sheet 29, 1977.

Site Specific Report:

XIV. POPULATION / HOUSING

- City of San Diego General Plan.
- Community Plan.
- Series 11 Population Forecasts, SANDAG.
- Other:

XV. PUBLIC SERVICES

- City of San Diego General Plan.
- Community Plan.

XVI. RECREATIONAL RESOURCES

- City of San Diego General Plan.
- Community Plan.
- Department of Park and Recreation
- City of San Diego - San Diego Regional Bicycling Map
- Additional Resources:

XVII. TRANSPORTATION / CIRCULATION

- City of San Diego General Plan.
- Community Plan.
- San Diego Metropolitan Area Average Weekday Traffic Volume Maps, SANDAG.
- San Diego Region Weekday Traffic Volumes, SANDAG.
- Site Specific Report:

XVIII. UTILITIES

- City of San Diego General Plan.
- Community Plan.

XIX. WATER CONSERVATION

- City of San Diego General Plan.
- Community Plan.
- Sunset Magazine, New Western Garden Book. Rev. ed. Menlo Park, CA: Sunset Magazine.

APPENDIX B

FIRE HYDRANT METER PROGRAM

CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS	NUMBER DI 55.27	DEPARTMENT Water Department
SUBJECT FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)	PAGE 1 OF 10	EFFECTIVE DATE October 15, 2002
	SUPERSEDES DI 55.27	DATED April 21, 2000

1. **PURPOSE**

1.1 To establish a Departmental policy and procedure for issuance, proper usage and charges for fire hydrant meters.

2. **AUTHORITY**

- 2.1 All authorities and references shall be current versions and revisions.
- 2.2 San Diego Municipal Code (NC) Chapter VI, Article 7, Sections 67.14 and 67.15
- 2.3 Code of Federal Regulations, Safe Drinking Water Act of 1986
- 2.4 California Code of Regulations, Titles 17 and 22
- 2.5 California State Penal Code, Section 498B.0
- 2.6 State of California Water Code, Section 110, 500-6, and 520-23
- 2.7 Water Department Director

Reference

- 2.8 State of California Guidance Manual for Cross Connection Programs
- 2.9 American Water Works Association Manual M-14, Recommended Practice for Backflow Prevention
- 2.10 American Water Works Association Standards for Water Meters
- 2.11 U.S.C. Foundation for Cross Connection Control and Hydraulic Research Manual

3. **DEFINITIONS**

3.1 **Fire Hydrant Meter:** A portable water meter which is connected to a fire hydrant for the purpose of temporary use. (These meters are sometimes referred to as Construction Meters.)

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3.2 **Temporary Water Use:** Water provided to the customer for no longer than twelve (12) months.

3.3 **Backflow Preventor:** A Reduced Pressure Principal Assembly connected to the outlet side of a Fire Hydrant Meter.

4. **POLICY**

4.1 The Water Department shall collect a deposit from every customer requiring a fire hydrant meter and appurtenances prior to providing the meter and appurtenances (see Section 7.1 regarding the Fees and Deposit Schedule). The deposit is refundable upon the termination of use and return of equipment and appurtenances in good working condition.

4.2 Fire hydrant meters will have a 2 ½" swivel connection between the meter and fire hydrant. The meter shall not be connected to the 4" port on the hydrant. All Fire Hydrant Meters issued shall have a Reduced Pressure Principle Assembly (RP) as part of the installation. Spanner wrenches are the only tool allowed to turn on water at the fire hydrant.

4.3 The use of private hydrant meters on City hydrants is prohibited, with exceptions as noted below. All private fire hydrant meters are to be phased out of the City of San Diego. All customers who wish to continue to use their own fire hydrant meters must adhere to the following conditions:

a. Meters shall meet all City specifications and American Water Works Association (AWWA) standards.

b. Customers currently using private fire hydrant meters in the City of San Diego water system will be allowed to continue using the meter under the following conditions:

1. The customer must submit a current certificate of accuracy and calibration results for private meters and private backflows annually to the City of San Diego, Water Department, Meter Shop.

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2. The meter must be properly identifiable with a clearly labeled serial number on the body of the fire hydrant meter. The serial number shall be plainly stamped on the register lid and the main casing. Serial numbers shall be visible from the top of the meter casing and the numbers shall be stamped on the top of the inlet casing flange.
3. All meters shall be locked to the fire hydrant by the Water Department, Meter Section (see Section 4.7).
4. All meters shall be read by the Water Department, Meter Section (see Section 4.7).
5. All meters shall be relocated by the Water Department, Meter Section (see Section 4.7).
6. These meters shall be tested on the anniversary of the original test date and proof of testing will be submitted to the Water Department, Meter Shop, on a yearly basis. If not tested, the meter will not be allowed for use in the City of San Diego.
7. All private fire hydrant meters shall have backflow devices attached when installed.
8. The customer must maintain and repair their own private meters and private backflows.
9. The customer must provide current test and calibration results to the Water Department, Meter Shop after any repairs.
10. When private meters are damaged beyond repair, these private meters will be replaced by City owned fire hydrant meters.

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11. When a private meter malfunctions, the customer will be notified and the meter will be removed by the City and returned to the customer for repairs. Testing and calibration results shall be given to the City prior to any re-installation.
12. The register shall be hermetically sealed straight reading and shall be readable from the inlet side. Registration shall be in hundred cubic feet.
13. The outlet shall have a 2 ½ “National Standards Tested (NST) fire hydrant male coupling.
14. Private fire hydrant meters shall not be transferable from one contracting company to another (i.e. if a company goes out of business or is bought out by another company).

4.4 All fire hydrant meters and appurtenances shall be installed, relocated and removed by the City of San Diego, Water Department. All City owned fire hydrant meters and appurtenances shall be maintained by the City of San Diego, Water Department, Meter Services.

4.5 If any fire hydrant meter is used in violation of this Department Instruction, the violation will be reported to the Code Compliance Section for investigation and appropriate action. Any customer using a fire hydrant meter in violation of the requirements set forth above is subject to fines or penalties pursuant to the Municipal Code, Section 67.15 and Section 67.37.

4.6 **Conditions and Processes for Issuance of a Fire Hydrant Meter**

Process for Issuance

- a. Fire hydrant meters shall only be used for the following purposes:
 1. Temporary irrigation purposes not to exceed one year.

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2. Construction and maintenance related activities (see Tab 2).

- b. No customer inside or outside the boundaries of the City of San Diego Water Department shall resell any portion of the water delivered through a fire hydrant by the City of San Diego Water Department.
- c. The City of San Diego allows for the issuance of a temporary fire hydrant meter for a period not to exceed 12 months (365 days). An extension can only be granted in writing from the Water Department Director for up to 90 additional days. A written request for an extension by the consumer must be submitted at least 30 days prior to the 12 month period ending. No extension shall be granted to any customer with a delinquent account with the Water Department. No further extensions shall be granted.
- d. Any customer requesting the issuance of a fire hydrant meter shall file an application with the Meter Section. The customer must complete a "Fire Hydrant Meter Application" (Tab 1) which includes the name of the company, the party responsible for payment, Social Security number and/or California ID, requested location of the meter (a detailed map signifying an exact location), local contact person, local phone number, a contractor's license (or a business license), description of specific water use, duration of use at the site and full name and address of the person responsible for payment.
- e. At the time of the application the customer will pay their fees according to the schedule set forth in the Rate Book of Fees and Charges, located in the City Clerk's Office. All fees must be paid by check, money order or cashiers check, made payable to the City Treasurer. Cash will not be accepted.
- f. No fire hydrant meters shall be furnished or relocated for any customer with a delinquent account with the Water Department.
- g. After the fees have been paid and an account has been created, the

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meter shall be installed within 48 hours (by the second business day). For an additional fee, at overtime rates, meters can be installed within 24 hours (within one business day).

4.7 Relocation of Existing Fire Hydrant Meters

- a. The customer shall call the Fire Hydrant Meter Hotline (herein referred to as "Hotline"), a minimum of 24 hours in advance, to request the relocation of a meter. A fee will be charged to the existing account, which must be current before a work order is generated for the meter's relocation.
- b. The customer will supply in writing the address where the meter is to be relocated (map page, cross street, etc). The customer must update the original Fire Hydrant Meter Application with any changes as it applies to the new location.
- c. Fire hydrant meters shall be read on a monthly basis. While fire hydrant meters and backflow devices are in service, commodity, base fee and damage charges, if applicable, will be billed to the customer on a monthly basis. If the account becomes delinquent, the meter will be removed.

4.8 Disconnection of Fire Hydrant Meter

- a. After ten (10) months a "Notice of Discontinuation of Service" (Tab 3) will be issued to the site and the address of record to notify the customer of the date of discontinuance of service. An extension can only be granted in writing from the Water Department Director for up to 90 additional days (as stated in Section 4.6C) and a copy of the extension shall be forwarded to the Meter Shop Supervisor. If an extension has not been approved, the meter will be removed after twelve (12) months of use.
- b. Upon completion of the project the customer will notify the Meter Services office via the Hotline to request the removal of the fire hydrant meter and appurtenances. A work order will be generated

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for removal of the meter.

- c. Meter Section staff will remove the meter and backflow prevention assembly and return it to the Meter Shop. Once returned to the Meter Shop the meter and backflow will be tested for accuracy and functionality.
- d. Meter Section Staff will contact and notify Customer Services of the final read and any charges resulting from damages to the meter and backflow or its appurtenance. These charges will be added on the customer's final bill and will be sent to the address of record. Any customer who has an outstanding balance will not receive additional meters.
- e. Outstanding balances due may be deducted from deposits and any balances refunded to the customer. Any outstanding balances will be turned over to the City Treasurer for collection. Outstanding balances may also be transferred to any other existing accounts.

5. **EXCEPTIONS**

- 5.1 Any request for exceptions to this policy shall be presented, in writing, to the Customer Support Deputy Director, or his/her designee for consideration.

6. **MOBILE METER**

- 6.1 Mobile meters will be allowed on a case by case basis. All mobile meters will be protected by an approved backflow assembly and the minimum requirement will be a Reduced Pressure Principal Assembly. The two types of Mobile Meters are vehicle mounted and floating meters. Each style of meters has separate guidelines that shall be followed for the customer to retain service and are described below:
 - a) **Vehicle Mounted Meters:** Customer applies for and receives a City owned Fire Hydrant Meter from the Meter Shop. The customer mounts the meter on the vehicle and brings it to the Meter Shop for

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inspection. After installation is approved by the Meter Shop the vehicle and meter shall be brought to the Meter Shop on a monthly basis for meter reading and on a quarterly basis for testing of the backflow assembly. Meters mounted at the owner's expense shall have the one year contract expiration waived and shall have meter or backflow changed if either fails.

- b) **Floating Meters:** Floating Meters are meters that are not mounted to a vehicle. **(Note: All floating meters shall have an approved backflow assembly attached.)** The customer shall submit an application and a letter explaining the need for a floating meter to the Meter Shop. The Fire Hydrant Meter Administrator, after a thorough review of the needs of the customer, (i.e. number of jobsites per day, City contract work, lack of mounting area on work vehicle, etc.), may issue a floating meter. At the time of issue, it will be necessary for the customer to complete and sign the "Floating Fire Hydrant Meter Agreement" which states the following:

- 1) The meter will be brought to the Meter Shop at 2797 Caminito Chollas, San Diego on the third week of each month for the monthly read by Meter Shop personnel.
- 2) Every other month the meter will be read and the backflow will be tested. This date will be determined by the start date of the agreement.

If any of the conditions stated above are not met the Meter Shop has the right to cancel the contract for floating meter use and close the account associated with the meter. The Meter Shop will also exercise the right to refuse the issuance of another floating meter to the company in question.

Any Fire Hydrant Meter using reclaimed water shall not be allowed use again with any potable water supply. The customer shall incur the cost of replacing the meter and backflow device in this instance.

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7. **FEE AND DEPOSIT SCHEDULES**

7.1 **Fees and Deposit Schedules:** The fees and deposits, as listed in the Rate Book of Fees and Charges, on file with the Office of the City Clerk, are based on actual reimbursement of costs of services performed, equipment and materials. These deposits and fees will be amended, as needed, based on actual costs. Deposits, will be refunded at the end of the use of the fire hydrant meter, upon return of equipment in good working condition and all outstanding balances on account are paid. Deposits can also be used to cover outstanding balances.

All fees for equipment, installation, testing, relocation and other costs related to this program are subject to change without prior notification. The Mayor and Council will be notified of any future changes.

8. **UNAUTHORIZED USE OF WATER FROM A HYDRANT**

8.1 Use of water from any fire hydrant without a properly issued and installed fire hydrant meter is theft of City property. Customers who use water for unauthorized purposes or without a City of San Diego issued meter will be prosecuted.

8.2 If any unauthorized connection, disconnection or relocation of a fire hydrant meter, or other connection device is made by anyone other than authorized Water Department personnel, the person making the connection will be prosecuted for a violation of San Diego Municipal Code, Section 67.15. In the case of a second offense, the customer's fire hydrant meter shall be confiscated and/or the deposit will be forfeited.

8.3 Unauthorized water use shall be billed to the responsible party. Water use charges shall be based on meter readings, or estimates when meter readings are not available.

8.4 In case of unauthorized water use, the customer shall be billed for all applicable charges as if proper authorization for the water use had been obtained, including but not limited to bi-monthly service charges, installation charges and removal charges.

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- 8.5 If damage occurs to Water Department property (i.e. fire hydrant meter, backflow, various appurtenances), the cost of repairs or replacements will be charged to the customer of record (applicant).

**Larry Gardner
Water Department Director**

- Tabs: 1. Fire Hydrant Meter Application
2. Construction & Maintenance Related Activities With No Return To Sewer
3. Notice of Discontinuation of Service

APPENDIX

Administering Division: Customer Support Division

Subject Index: Construction Meters
Fire Hydrant
Fire Hydrant Meter Program
Meters, Floating or Vehicle Mounted
Mobile Meter
Program, Fire Hydrant Meter

Distribution: DI Manual Holders



Application for Fire Hydrant Meter (EXHIBIT A)

(For Office Use Only)

METER SHOP (619) 527-7449

NS REQ	FACH
DATE	BY

Meter Information

Application Date	Requested Install Date:
------------------	-------------------------

Fire Hydrant Location: (Attach Detailed Map//Thomas Bros. Map Location or Construction drawing.) Zip:	T.B.	G.B. (CITY USE)
Specific Use of Water:		
Any Return to Sewer or Storm Drain, if so, explain:		
Estimated Duration of Meter Use:	<input type="checkbox"/>	Check Box if Reclaimed Water

Company Information

Company Name:			
Mailing Address:			
City:	State:	Zip:	Phone: ()
*Business license#		*Contractor license#	
A Copy of the Contractor's license OR Business License is required at the time of meter issuance.			
Name and Title of Billing Agent: <small>(PERSON IN ACCOUNTS PAYABLE)</small>			Phone: ()
Site Contact Name and Title:			Phone: ()
Responsible Party Name:			Title:
Cal ID#			Phone: ()
Signature:		Date:	
Guarantees Payment of all Charges Resulting from the use of this Meter. Insures that employees of this Organization understand the proper use of Fire Hydrant Meter			

Fire Hydrant Meter Removal Request	Requested Removal Date:
Provide Current Meter Location if Different from Above:	
Signature:	Title: Date:
Phone: ()	Pager: ()

City Meter	Private Meter
Contract Acct #:	Deposit Amount: \$ 936.00 Fees Amount: \$ 62.00
Meter Serial #	Meter Size: 05 Meter Make and Style: 6-7
Backflow #	Backflow Size: Backflow Make and Style:
Name:	Signature: Date:

WATER USES WITHOUT ANTICIPATED CHARGES FOR RETURN TO SEWER

Auto Detailing

Backfilling

Combination Cleaners (Vactors)

Compaction

Concrete Cutters

Construction Trailers

Cross Connection Testing

Dust Control

Flushing Water Mains

Hydro Blasting

Hydro Seeing

Irrigation (for establishing irrigation only; not continuing irrigation)

Mixing Concrete

Mobile Car Washing

Special Events

Street Sweeping

Water Tanks

Water Trucks

Window Washing

Note:

1. If there is any return to sewer or storm drain, then sewer and/or storm drain fees will be charges.

Date

Name of Responsible Party
Company Name and Address
Account Number: _____

Subject: Discontinuation of Fire Hydrant Meter Service

Dear Water Department Customer:

The authorization for use of Fire Hydrant Meter # _____, located at *(Meter Location Address)* ends in 60 days and will be removed on or after *(Date Authorization Expires)*. Extension requests for an additional 90 days must be submitted in writing for consideration 30 days prior to the discontinuation date. If you require an extension, please contact the Water Department, or mail your request for an extension to:

City of San Diego
Water Department
Attention: Meter Services
2797 Caminito Chollas
San Diego, CA 92105-5097

Should you have any questions regarding this matter, please call the Fire Hydrant Hotline at (619) _____ - _____.

Sincerely,

Water Department

APPENDIX C

MATERIALS TYPICALLY ACCEPTED BY CERTIFICATE OF COMPLIANCE

Materials Typically Accepted by Certificate of Compliance

1. Soil amendment
2. Fiber mulch
3. PVC or PE pipe up to 16 inch diameter
4. Stabilizing emulsion
5. Lime
6. Preformed elastomeric joint seal
7. Plain and fabric reinforced elastomeric bearing pads
8. Steel reinforced elastomeric bearing pads
9. Waterstops (Special Condition)
10. Epoxy coated bar reinforcement
11. Plain and reinforcing steel
12. Structural steel
13. Structural timber and lumber
14. Treated timber and lumber
15. Lumber and timber
16. Aluminum pipe and aluminum pipe arch
17. Corrugated steel pipe and corrugated steel pipe arch
18. Structural metal plate pipe arches and pipe arches
19. Perforated steel pipe
20. Aluminum underdrain pipe
21. Aluminum or steel entrance tapers, pipe downdrains, reducers, coupling bands and slip joints
22. Metal target plates
23. Paint (traffic striping)
24. Conductors
25. Painting of electrical equipment
26. Electrical components
27. Engineering fabric
28. Portland Cement
29. PCC admixtures
30. Minor concrete, asphalt
31. Asphalt (oil)
32. Liquid asphalt emulsion
33. Epoxy

APPENDIX D

SAMPLE CITY INVOICE

City of San Diego, Field Engineering Div., 9485 Aero Drive, SD CA 92123		Contractor's Name:	
Project Name:		Contractor's Address:	
Work Order No or Job Order No.			
City Purchase Order No.		Contractor's Phone #:	Invoice No.
Resident Engineer (RE):		Contractor's fax #:	Invoice Date:
RE Phone#:	Fax#:	Contact Name:	Billing Period: (to

Item #	Item Description	Contract Authorization				Previous Totals To Date		This Estimate		Totals to Date	
		Unit	Price	Qty	Extension	%/QTY	Amount	% / QTY	Amount	% / QTY	Amount
1					\$ -		\$ -		\$ -	0.00%	\$ -
2					\$ -		\$ -		\$ -	0.00%	\$ -
3					\$ -		\$ -		\$ -	0.00%	\$ -
4					\$ -		\$ -		\$ -	0.00%	\$ -
5					\$ -		\$ -		\$ -	0.00%	\$ -
6					\$ -		\$ -		\$ -	0.00%	\$ -
7					\$ -		\$ -		\$ -	0.00%	\$ -
8					\$ -		\$ -		\$ -	0.00%	\$ -
9					\$ -		\$ -		\$ -	0.00%	\$ -
10					\$ -		\$ -		\$ -	0.00%	\$ -
11					\$ -		\$ -		\$ -	0.00%	\$ -
12					\$ -		\$ -		\$ -	0.00%	\$ -
13					\$ -		\$ -		\$ -	0.00%	\$ -
14					\$ -		\$ -		\$ -	0.00%	\$ -
15					\$ -		\$ -		\$ -	0.00%	\$ -
16					\$ -		\$ -		\$ -	0.00%	\$ -
17	Field Orders				\$ -		\$ -		\$ -	0.00%	\$ -
18					\$ -		\$ -		\$ -	0.00%	\$ -
CHANGE ORDER No.					\$ -		\$ -		\$ -	0.00%	\$ -
Total Authorized Amount (including approved Change Order)					\$ -		\$ -		\$ -	Total Billed	\$ -

SUMMARY

A. Original Contract Amount	\$ -
B. Approved Change Order #00 Thru #00	\$ -
C. Total Authorized Amount (A+B)	\$ -
D. Total Billed to Date	\$ -
E. Less Total Retention (5% of D)	\$ -
F. Less Total Previous Payments	\$ -
G. Payment Due Less Retention	\$0.00
H. Remaining Authorized Amount	\$0.00

I certify that the materials
have been received by me in
the quality and quantity specified

Resident Engineer

Construction Engineer

Retention and/or Escrow Payment Schedule

Total Retention Required as of this billing (Item E)	\$0.00
Previous Retention Withheld in PO or in Escrow	\$0.00
Add'l Amt to Withhold in PO/Transfer in Escrow:	\$0.00
Amt to Release to Contractor from PO/Escrow:	

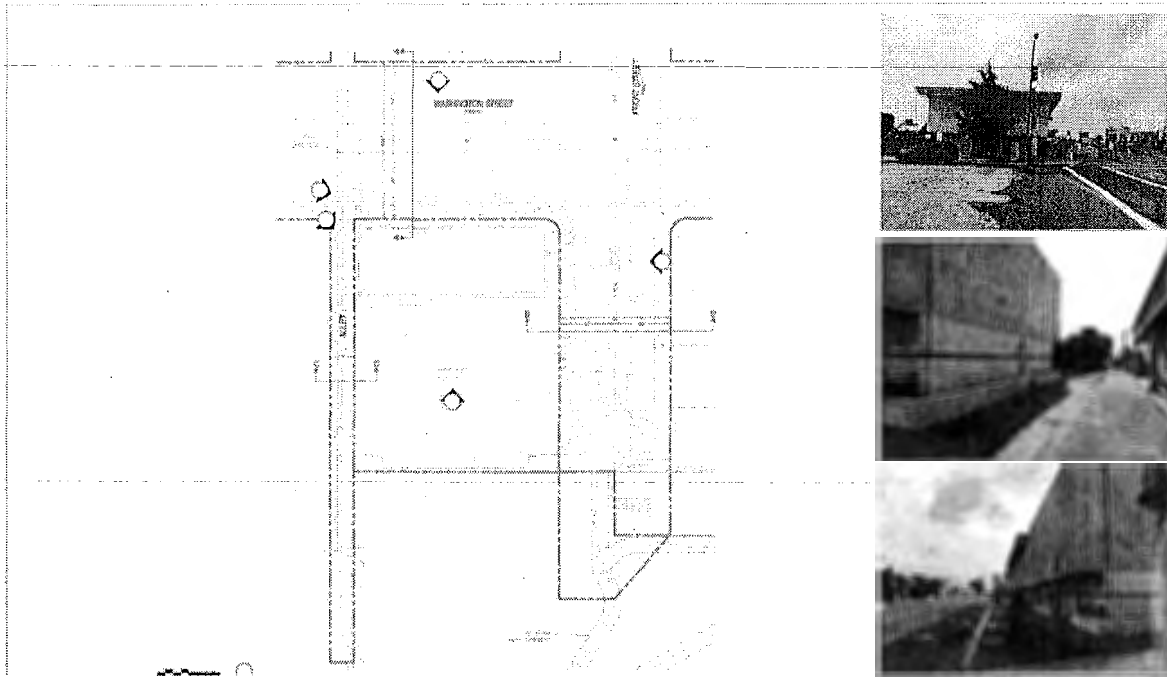
Contractor Signature and Date: _____

APPENDIX E
LOCATION MAP

LOCATION MAP



LOCATION MAP



APPENDIX F
ADJACENT PROJECTS



APPENDIX G
HYDROSTATIC DISCHARGE FORM

Hydrostatic Discharge Requirements Certification (Discharge Events ≥ 325,850 gpd)

All discharge activities related to this project comply with the Regional Water Quality Control Board (RWQCB) Order No. R9-2010-0003, General Permit for Discharges of Hydrostatic Test Water and Potable Water to Surface Water and Storm Drains as referenced by (http://www.waterboards.ca.gov/sandiego/board_decisions/adopted_orders/2010/R9-2010-0003.pdf), and as follows:

Discharged water has been dechlorinated to below **0.1** (mg/l) level; and effluent has been maintained between **6 and 9** (pH) based on:

Is Discharge Within Limits?

Comment/Action Taken

Event #	Discharge Date	Item Tested	Duration	Amount (gpd)	Description of the Proposed Discharge	Method and Test Result	Is Discharge Within Limits?		Comment/Action Taken
							YES	NO	
		Chlorine							
		pH							
		Chlorine							
		pH							
		Chlorine							
		pH							
		Chlorine							
		pH							

Qualified Personnel Conducting Tests (Print Name):

SAP No.(s):

***Signed:**

Project Name:

* By signing, I hereby certify and affirm under penalty of perjury that all of the statements and conditions for hydrostatic discharge events are correct.

Have any thresholds been exceeded? Per Order No. R9-2010-0003, would this be a reportable discharge and must be reported **within 24 hours** of the event? [Reportable discharge would include violation of maximum gallons per day, any upset which exceeds any effluent limit]

APPENDIX H
HAZARDOUS LABEL/FORMS

**HAZARDOUS
WASTE**

STATE AND FEDERAL LAW PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST POLICE, OR PUBLIC SAFETY
AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY
OR THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES

GENERATOR NAME _____

ADDRESS _____ 24 HR. PHONE () _____

CITY _____ STATE _____ ZIP _____

EPA ID NO. _____ MANIFEST DOCUMENT NO. _____

EPA WASTE NO. _____ CA WASTE NO. _____ ACCUMULATION START DATE _____

CONTENTS, COMPOSITION _____

PROPER DOT SHIPPING NAME _____

TECHNICAL NAME (S) _____

UN/NA NO. WITH PREFIX _____

PHYSICAL STATE | HAZARDOUS PROPERTIES FLAMMABLE TOXIC
 SOLID LIQUID CORROSIVE REACTIVE OTHER _____

HANDLE WITH CARE!
CONTAINS HAZARDOUS OR TOXIC WASTES

INCIDENT/RELEASE ASSESSMENT FORM ¹

If you have an emergency, Call 911

Handlers of hazardous materials are required to report releases. The following is a tool to be used for assessing if a release is reportable. Additionally, a non-reportable release incident form is provided to document why a release is not reported (see back).

Questions for Incident Assessment:

	YES	NO
1. Was anyone killed or injured, or did they require medical care or admitted to a hospital for observation?	<input type="checkbox"/>	<input type="checkbox"/>
2. Did anyone, other than employees in the immediate area of the release, evacuate?	<input type="checkbox"/>	<input type="checkbox"/>
3. Did the release cause off-site damage to public or private property?	<input type="checkbox"/>	<input type="checkbox"/>
4. Is the release greater than or equal to a reportable quantity (RQ)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Was there an uncontrolled or unpermitted release to the air?	<input type="checkbox"/>	<input type="checkbox"/>
6. Did an uncontrolled or unpermitted release escape secondary containment, or extend into any sewers, storm water conveyance systems, utility vaults and conduits, wetlands, waterways, public roads, or off site?	<input type="checkbox"/>	<input type="checkbox"/>
7. Will control, containment, decontamination, and/or clean up require the assistance of federal, state, county, or municipal response elements?	<input type="checkbox"/>	<input type="checkbox"/>
8. Was the release or threatened release involving an unknown material or contains an unknown hazardous constituent?	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the incident a threatened release (a condition creating a substantial probability of harm that requires immediate action to prevent, reduce, or mitigate damages to persons, property, or the environment)?	<input type="checkbox"/>	<input type="checkbox"/>
10. Is there an increased potential for secondary effects including fire, explosion, line rupture, equipment failure, or other outcomes that may endanger or cause exposure to employees, the general public, or the environment?	<input type="checkbox"/>	<input type="checkbox"/>

If the answer is YES to any of the above questions – report the release to the California Office of Emergency Services at 800-852-7550 and the local CUPA daytime: (619) 338-2284, after hours: (858) 565-5255. Note: other state and federal agencies may require notification depending on the circumstances.

Call 911 in an emergency

If all answers are NO, complete a Non Reportable Release Incident Form (page 2 of 2) and keep readily available. Documenting why a “no” response was made to each question will serve useful in the event questions are asked in the future, and to justify not reporting to an outside regulatory agency.

If in doubt, report the release.

¹ This document is a guide for accessing when hazardous materials release reporting is required by Chapter 6.95 of the California Health and Safety Code. It does not replace good judgment, Chapter 6.95, or other state or federal release reporting requirements.

NON REPORTABLE RELEASE INCIDENT FORM

1. RELEASE AND RESPONSE DESCRIPTION

Incident # _____

Date/Time Discovered _____	Date/Time Discharge _____	Discharge Stopped <input type="checkbox"/> Yes <input type="checkbox"/> No
Incident Date / Time:		
Incident Business / Site Name:		
Incident Address:		
Other Locators (Bldg, Room, Oil Field, Lease, Well #, GIS)		
Please describe the incident and indicate specific causes and area affected. Photos Attached?: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Indicate actions to be taken to prevent similar releases from occurring in the future.		

2. ADMINISTRATIVE INFORMATION

Supervisor in charge at time of incident:	Phone:
Contact Person:	Phone:

3. CHEMICAL INFORMATION

Chemical	Quantity <input type="checkbox"/> GAL <input type="checkbox"/> LBS <input type="checkbox"/> FT ³
Chemical	Quantity <input type="checkbox"/> GAL <input type="checkbox"/> LBS <input type="checkbox"/> FT ³
Chemical	Quantity <input type="checkbox"/> GAL <input type="checkbox"/> LBS <input type="checkbox"/> FT ³
Clean-Up Procedures & Timeline:	
Completed By:	Phone:
Print Name:	Title:

EMERGENCY RELEASE FOLLOW - UP NOTICE REPORTING FORM

A	BUSINESS NAME	FACILITY EMERGENCY CONTACT & PHONE NUMBER () -
B	INCIDENT DATE MO DAY YR	TIME OES NOTIFIED (use 24 hr time)
C	INCIDENT ADDRESS LOCATION	CITY / COMMUNITY COUNTY ZIP
D	CHEMICAL OR TRADE NAME (print or type)	CAS Number
E	CHECK IF CHEMICAL IS LISTED IN 40 CFR 355, APPENDIX A <input type="checkbox"/>	CHECK IF RELEASE REQUIRES NOTIFICATION UNDER 42 U.S.C. Section 9603 (a) <input type="checkbox"/>
F	PHYSICAL STATE CONTAINED <input type="checkbox"/> SOLID <input type="checkbox"/> LIQUID <input type="checkbox"/> GAS	PHYSICAL STATE RELEASED <input type="checkbox"/> SOLID <input type="checkbox"/> LIQUID <input type="checkbox"/> GAS
G	ENVIRONMENTAL CONTAMINATION <input type="checkbox"/> AIR <input type="checkbox"/> WATER <input type="checkbox"/> GROUND <input type="checkbox"/> OTHER	QUANTITY RELEASED TIME OF RELEASE DURATION OF RELEASE — DAYS — HOURS — MINUTES
H	ACTIONS TAKEN	
I	KNOWN OR ANTICIPATED HEALTH EFFECTS (Use the comments section for addition information) <input type="checkbox"/> ACUTE OR IMMEDIATE (explain) _____ <input type="checkbox"/> CHRONIC OR DELAYED (explain) _____ <input type="checkbox"/> NOTKNOWN (explain) _____	
J	ADVICE REGARDING MEDICAL ATTENTION NECESSARY FOR EXPOSED INDIVIDUALS	
K	COMMENTS (INDICATE SECTION (A - G) AND ITEM WITH COMMENTS OR ADDITIONAL INFORMATION)	
L	CERTIFICATION: I certify under penalty of law that I have personally examined and I am familiar with the information submitted and believe the submitted information is true, accurate, and complete. REPORTING FACILITY REPRESENTATIVE (print or type) _____ SIGNATURE OF REPORTING FACILITY REPRESENTATIVE _____ DATE: _____	

EMERGENCY RELEASE FOLLOW-UP NOTICE REPORTING FORM INSTRUCTIONS

GENERAL INFORMATION:

Chapter 6.95 of Division 20 of the California Health and Safety Code requires that written emergency release follow-up notices prepared pursuant to 42 U.S.C. § 11004, be submitted using this reporting form. Non-permitted releases of reportable quantities of Extremely Hazardous Substances (listed in 40 CFR 355, appendix A) or of chemicals that require release reporting under section 103(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 [42 U.S.C. § 9603(a)] must be reported on the form, as soon as practicable, but no later than 30 days, following a release. The written follow-up report is required in addition to the verbal notification.

BASIC INSTRUCTIONS:

- The form, when filled out, reports follow-up information required by 42 U.S.C § 11004. Ensure that all information requested by the form is provided as completely as possible.
- If the incident involves reportable releases of more than one chemical, prepare one report form for each chemical released.
- If the incident involves a series of separate releases of chemical(s) at different times, the releases should be reported on separate reporting forms.

SPECIFIC INSTRUCTIONS:

Block A: Enter the name of the business and the name and phone number of a contact person who can provide detailed facility information concerning the release.

Block B: Enter the date of the incident and the time that verbal notification was made to OES. The OES control number is provided to the caller by OES at the time verbal notification is made. Enter this control number in the space provided.

Block C: Provide information pertaining to the location where the release occurred. Include the street address, the city or community, the county and the zip code.

Block D: Provide information concerning the specific chemical that was released. Include the chemical or trade name and the Chemical Abstract Service (CAS) number. Check all categories that apply. Provide best available information on quantity, time and duration of the release.

Block E: Indicate all actions taken to respond to and contain the release as specified in 42 U.S.C. § 11004(c).

Block F: Check the categories that apply to the health effects that occurred or could result from the release. Provide an explanation or description of the effects in the space provided. Use Block H for additional comments/information if necessary to meet requirements specified in 42 U.S.C. § 11004(c).

Block G: Include information on the type of medical attention required for exposure to the chemical released. Indicate when and how this information was made available to individuals exposed and to medical personnel, if appropriate for the incident, as specified in 42 U.S.C. § 11004(c).

Block H: List any additional pertinent information.

Block I: Print or type the name of the facility representative submitting the report. Include the official signature and the date that the form was prepared.

MAIL THE COMPLETED REPORT TO:

**State Emergency Response Commission (SERC)
Attn: Section 304 Reports
Hazardous Materials Unit
3650 Schriever Avenue
Mather, CA 95655**

NOTE: Authority cited: Sections 25503, 25503.1 and 25507.1, Health and Safety Code. Reference: Sections 25503(b)(4), 25503.1, 25507.1, 25518 and 25520, Health and Safety Code.

Request for Proposal (Rev. July 2015)

Appendix H - Hazardous Label/Forms

Mission Hills / Hillcrest Library Design - Build Contract

APPENDIX I
SAMPLE OF PUBLIC NOTICES



PROJECT NAME

PROJECT NAME

The work will consist of:

- *Edit this information:* The construction work will include pot holing in the northbound curb lane of Torrey Pines Road between Coast Walk and Princess Street.

How your neighborhood may be impacted:

- *Edit this information:* Traffic delays due to lane closure.
- Two-way traffic will be maintained at all times.

Anticipated Construction Schedule

- *Edit this information:* The project upgrades for the entire neighborhood have been ongoing and now are scheduled to start on your street.
- The entire neighborhood project started in ____ and is anticipated to be complete in ____.

Hours and Days of Operation

- *Edit this information:* Monday to Friday (7:30 a.m. to 4 p.m.)

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- *Edit this information:* Monday to Friday (7:30 a.m. to 4 p.m.)

For questions related to this work

Call: (619) 533-4207

Email: engineering@sandiego.gov

Visit: sandiego.gov/CIP

For questions related to this work

Call: (619) 533-4207

Email: engineering@sandiego.gov

Visit: sandiego.gov/CIP



This information is available in alternative formats upon request.



This information is available in alternative formats upon request.

APPENDIX J
CONSTRUCTION STANDARDS AND SPECIFICATION GUIDELINE FROM
FACILITIES DIVISION

CITY OF SAN DIEGO
MEMORANDUM

DATE: February 13, 2015

TO: Distribution

FROM: John Montoya, Sr. Building Maintenance Supervisor, Public Works,
Facilities Division

SUBJECT: New Construction Standards and Specification Guideline from Facilities Division.

The following are the most recent requests for the A & E Specifications to be entered into the Specification Manual from the Carpenter Shop, Roofing Shop, Lock Shop, Paint Shop, HVAC Shop, Plumbing Shop, Electrical Shop, of Public Works / Facilities Division.

Division 1 General Requirements

Public Works / Facilities Division requires review of all plans or designs for new or improvement projects to City owned Buildings. Facilities Division would like review of project submittals before approval by design team. City consultants should also check with us of any improvement work is that is being requested so we can share any building history which would be of value.

Project Officer or RE is to fill out and submit Facility Record Form: REA-111 to Auditors Department prior to project completion by contractor. **It is recommended this be done at 80% Project completion.**

Identified Funding or WBS numbers will be opened to our Department 2113 before any Plan Review, Project Walk- Thru or Inspections can take place by Public Works, Facilities Division

Division 2 Site work

Division 3 Concrete

Division 4 Masonry

Division 5 Metals

Division 6 Wood and Plastics

Division 7 Thermal and Moisture Protection

Roofing:

Option 1.

Roof material and specifications on ¼” to 3” per foot roof slope.

No gravel roofs are to be installed on any City Facility, Exterior gutters are to be used in place of internal or boxed in gutters, drip edge metal flashings should be installed over the edge of the gutter and the gutter should be sloped to the down spout.

Facilities Division uses a Class “A” four-ply mineral surfaced fiberglass built-up roof system. The first ply is a fiberglass base sheet that may be nailed or mopped in place with hot asphalt. The following plies consist of two layers of Glass Ply mopped in place. The final layer is one Ply of hot mopped Mineral Surfaced Modified SBS Bitumen Cap sheet product with a Fire Retardant rating. Roofing system shall meet Title 24 and Cool Roof Ratings.

Installation specifications shall meet Manufacturers Application Instructions.

- When the roof is complete, there shall be 4 layers of roofing material at all locations on the roof.
- All roof jacks will be primed and properly fastened in place
- All fasteners should be galvanized or suitable to application.
- Asphalt should meet ASTM requirements and be applied at a minimum of 400 degrees
- All flashing and roof jacks should be minimum 24 gauge galvanized metal
- Roof drains will be cast iron with leaf strainer and minimum 3 inch outlet or comparable to existing.
- All roof mastic will meet minimum ICBO standard and asbestos free.
- Cant strips will be installed at 90 degree roof to wall areas
- All roof sheathing will be minimum 1/2 inch CDX plywood
- All pipes and duct work will be supported off the roof with redwood blocks or pressure treated lumber.
- All HVAC units will be lifted off their platforms and roofing material applied and a minimum 24 gauge cap install on the platform, then the unit set back down.
- All completed roof shall have designated Walkway Pads for future preventative maintenance.

Option 2.

Roof material and specifications on ¼” to 3” per foot roof slope:

Facilities Division also uses a torch down application. This system is designed to be applied with a propane torch. Dibiten is the preferred brand name of this type material. One minimum layer of 28-pound fiberglass base sheet is mechanically fastened. A second layer shall consist of a mid-ply Dibiten APP Poly 4 smooth, and then a minimum one layer of Dibiten poly 4.5 FR granular modified bitumen membrane is torch applied with a minimum 4 inch lap and a minimum 6 inch

end lap. This product should be applied according to the manufactures specifications and precautions for fire protection. Roofing system shall meet Title 24 and Cool Roof Ratings.

Option 3.

Roof material and specifications on ¼” to 3” per foot roof slope:

Facilities Division also uses Single Ply membranes. This system is designed to be applied with a heat welding application. Single Ply roofing include TPO and PVC. Membrane is suitable for use in all types of systems: Mechanically Attached, Ballast Applied, and or Fully Adhered. TPO or PVC shall consist of a minimum of 60 Mil Membrane and Installed to Manufacturers Specifications.

Roof material for 4 inch per foot slope and greater:

Facilities Division uses a dimensional architectural grade shingle with a minimum 30 year guarantee. Minimum 30-pound felt paper is applied on a new roof or one that has been removed and the shingles are to applied to a plywood substrate. If the shingles are to be applied over an existing shingle roof, the roof should be cleaned, any high edges of the old roof removed, and then a minimum of 30-pound underlayment felt applied before the new shingles are installed. All roof shingles will be nailed with galvanized roofing nails with a minimum 7/8 inch for new roofs and 1 1/4 inch for re-roof.

Wood Shake Shingles:

Wood shake shingles are not preferred or recommended in the City but if they are to be used, Facilities Division requires that all wood the shingles be treated with a Class “A” fire retardant coating and a medium grade wood shingle.

Gutters:

If gutters and down spouts are installed in new construction, gutters will be protected by leaf screens or approved methods to prevent leaves from accumulation as well as splash blocks to prevent ground erosion and improper run off.

Roof Tie off Points

All new roofs will be equipped with proper tie off points for fall protection according to OSHA requirements.

Roof Labor Warranty

Labor Warranties shall be a minimum of 3 years up to 5 years recommended.

All Flat roofs will be flood tested before City accepts Roof.

Any questions please contact Roofing Building Maintenance Supervisor James (Andre) Hart at 619-525-8554

Division 8 Doors and Windows

1. Doors and frames

- (A) All hollow metal doors will be 16ga exterior, 18ga interiors. Doors will be a honeycomb-core, full edge seam welded with sealed tops.
- (B) Exterior doors that swing out should have non-removable pin type hinges.
- (C) Double doors with panic exit devices should have a mullion between doors.
- (D) Wood doors should be wood stave core, minimum 1 3/4 in. thick by 3-0 x 7-0.
- (E) Door not to exceed 8-0 in height.
- (F) Door stiles should be wide enough to accommodate heavy-duty mortise type locks.
- (G) Steel frames (jambs) will be 14ga. galvanized exterior, 16ga. cold rolled interior. Reinforce all hinge pockets with additional hinge reinforcement straps for high traffic areas.
- (H) Provide roof overhangs at exterior doors or recess entries for weather protection.
- (I) Slope concrete walkways away from doors and set thresholds in mastics for exterior doorways.
- (J) Near coastal areas, and in other applicable corrosive environments doors and frames should be fiberglass.
- (K) All doors will have full mortised hinges, or a continuous hinge. Half surface hinges are not acceptable.

2. Storefronts

- (A) Storefronts should have minimum 4" framing and maximum size stiles.
- (B) Storefront doors should be minimum 1 3/4 inch thick by 3'-0 by 6'-8" or 7'-0".
- (C) Provide cylinders keyed to city wide system, (existing system is Best Access Systems)
- (D) Doors not to exceed 8'0" in. height.

3. Windows

- (A) Glazing for windows should be minimum 3/16" thick.
- (B) Operable windows should have secure locking devices and be as vandal resistant as possible.
- (C) Provide window screening for operable windows.

4. Hardware:

DOOR HARDWARE SPECIFICATION GUIDELINE

Edit Date: Feb.
2015

The City of San Diego Lock Shop maintains the following hardware and is currently stocking replacement parts. The products listed herein are to be used without substitution on new construction and modernization projects unless products are listed in this package as an alternate.

It is the intent of this booklet to provide guidelines for the architect's specification section 08710, for product groups and the hardware schedule. It remains the architect's responsibility to coordinate these products to meet the applicable building codes, life safety codes, and ADA requirements.

Section 08710 Door Hardware preamble must specify the following:

Door and Frame prep

Before hardware installation, verify that all doors and frames are properly prepared to receive the specified hardware. Hollow metal frames shall be prepared for ANSI strike plates per A115.1-2 (4-7/8" high), hinge preps will be mortised and reinforced with a minimum of 10 gauge reinforcement material; minimum of 14 gauge reinforcement material for closer. Hollow metal doors shall be properly prepared and reinforced with a minimum of 16 gauge material for either mortised or cylindrical locks as specified. It is preferred that all hollow metal doors receiving door closers have 14 gauge reinforcement. If this is not possible, the use of sex bolts is mandatory. Wood doors shall be factory prepared to receive the scheduled hardware.

Hardware installation

The manufacturer's representative for the locking devices and closing devices must be inspected and approve, in writing, prior to the installation of their product. Hardware installed incorrectly must be reported to the architect prior to the architect final punch list.

Hanging Devices

Description	Manufacturer	Model/Series	Finish
Mortise Hinge	McKinney	55860 TA 2714 26D NRP at reverse bevel door locks	US 32D
Alternate	Stanley		
Full Surface Hinge	McKinney	57717B TA2714 26D NRP. Use for retrofit doors as appropriate	US 32D
Alternate	Stanley		
Continuous Hinge	Pemko	For high traffic doors	628
Alternate	Markar		
Pivot Hinge	Rixon	180 626 Offset Top Pivot M19 626 Intermediate Pivot	US26D
Alternate	Dorma	75120 626 Offset Top Pivot 75220 626 Intermediate Pivot	

Securing Devices

Description	Manufacturer	Model/Series	Finish
Mortise Lock Set	Best	45H x J Escutcheon lever as selected by architect	626
Lock Function		Room Type	
A		Entrance Lock	
R		Classroom Function	
D		Storeroom Function	
N		Passage	
L		Privacy	

Provide lock functions as required for project as appropriate

No Alternate

Lock Set	Best	93K x D Rose, lever as	626
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		selected by architect	
Lock Function		Lock Type	
AB		Entrance Lock 9K37 AB 53 626	
R		Classroom Function 9K37 RD4D 53 626	
D		Storeroom Function 9K37D14D 53 626	
N		Passage 9K30N14d 53 626	
L		Privacy 9K30L14D 53 626	

Provide lock functions as required for project as appropriate

No Alternate

Cylinders	Best	Mortise 1E74 x RP3 x cam required	626
No Alternate			
Key System	Best	See bullets below	626

- Removable interchangeable core
- 7-pin Best "Patented/Standard" Existing Best key system
- 7-pin Best "Patented Peaks/CorMax" New Construction
- Best key system
- 2 keys per lockset
- All cylinder and cores must be manufactured by BEST
- All cores are to be keyed into the existing Best Master key system
- Provide all locksets and cylinders with construction cores for contractor use Permanent cores provided at project completion

No Alternate

Lock Function

Deadbolt Lock/single & cylinder 2 3/4 " BS	8T37KSTK 626
Deadbolt Lock/single & cylinder 2 3/8 " BS	7T27KSTK 626

Exit Device	Precision	See bullets below	630
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- 2100 Series Rim x 4900 Trim (single door)
- 2800 Series Concealed Vertical Rod
- 2300 Series Mortise
 - Use Escut. w/lever 4900 where applicable
 - Lever handle shall match lockset design
 - Exits with cylinder dogging at all non rated devices
 - Provide "FL" fire rated devices at label openings

No Alternates

Flush Bolts	Trimco	See bullets below	626
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Use automatic flush bolts where required by fire code.

- Use automatic flush bolts where required by fire code.

- Provide coordinator and brackets as required to meet fire door

Alternate	Rockwood	3917-12-626 Manual Flush bolts	626
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Coordinator	Trimco	Mounting Brackets as required	600
Alternate	Rockwood		

Closing Device

Closer	LCN	See bullets below	689
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- 4040XP RW/PA TBSRT
- 4040XP SHCNS TBSRT
- 1461 RW/PA TBSRT
- All door frames to be reinforced
- Provide “SNB” Sex nuts and bolts as needed
- 35-40-EN

Alternate	Sargent		
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Automatic Operators Electro-mechanical

Automatic Operator	Stanley	Magic Force Full Energy	689
	Dorma		689

Stops and Holders

Door Stop	Trimco	Allow for max swing of doors. Backing required at wall stops	630 626
Alternate	Rockwood		
Overhead Stop and Holder	Glynn & Johnson		630
Alternate	Sargent		

Accessories

Pull	Trimco		630
Alternate	Rockwood		
Push Plate	Trimco		630
Alternate	Rockwood		
Kick Plate	Trimco		630
Alternate	Rockwood		

Armor Plate	Trimco		630
Alternate	Rockwood		
Threshold	Pemko	Furnished as detailed on drawings if shown	628
Alternate			
Door Sweep	Pemko	345V	628
Alternate			
Smoke Seal	Pemko	S88 (verify color)	
Alternate			
Weather Seal	Pemko	303_S (at head/Jambs)	628
Alternate			
Astragal	Pemko	357 SP	600
Alternate			

Miscellaneous

Manual Key Control	Telkee	Aristocrat wall mounted AWC series Dual tag system. Key capability to accept all keyed locksets plus 50% expansion.
Stand Alone Electronic Lock	Schlage C100 Trilogy DL2700	626 626

- A. Deadbolts will be solid stainless steel (without internal riveted actuator), when deadbolt is extended 1", at least 2" will remain in the lock case.
- B. All levers will be cast solid levers, hollow levers will not be allowed.
- C. Cylindrical lock sets may be used only on interior non-high-traffic openings. Locks will have a replaceable sheer lug which when broken will disable the lever. Clutch mechanisms will not be allowed. Locks will have 7 pin interchangeable cores. Cylindrical locks are not to be used on exterior doors.
- D. All doors and hardware must meet Americans with Disabilities Act and Title 24
- E. Approved manufactures are Best Access Systems or Folger Adams with Best Lock.
- F. Doors in the following locations will have locks which are ANSI series 1000 Grade 1 SECURITY and Grade 1 OPERATIONAL. Locks will meet UL 437 requirements.
 - 1- rooms with narcotics
 - 2- rooms that contain an armory
 - 3- Exterior doors for Police facilities
 - 4- Exterior doors for Court facilities
 - 5- Doors to Judges Chambers
 - 6- Any exterior door which could be in a remote location or subject to high vandalism.

5. Keys and keying

- A. All cylinders will be Best 7-pin, interchangeable core and keyed into an existing factory-registered Grand Master key System. All seven pins to be operational.
- B. Furnish permanent cores to City Lock shop for final installation unless provided by manufacturer.
- C. Temporary cores (construction cores) will be installed by Contractor for security purposes. Temporary cores will be keyed alike and interchangeable with Best cores. Cores provided by manufacturer.
- D. Contractor will provide to the City Lock shop copies of Control key and Operating key upon completion.
- E. All keys and cores will have visual key control.
- F. All keys will be stamped "City of San Diego", and "Do Not duplicate".
- G. The Electric Meter Room will have S.D.G. & E. lock installed. The cylinder will be keyed to Schlage key way VTQP AA-10. Three keys are provided with lock. All keys are to be turned over to the City of San Diego Lock shop at completion of the project. The contractor will obtain lock from any contracted S. D.G. & E. Locksmith for installation.

Any Questions, Please Contact Carpenter Supervisor Martin Sorrell 619-525-8550 or Lock shop at 619-525-8552

Access Control: Facilities Division has no responsibility or vendor recommendation for these security systems. These systems will be maintained by building occupant or department.

Painting:
Division 9 Painting & Finishes

- 1. All work will be done in accordance with all applicable codes and regulations.
- 2. All work will entail the highest degree of craftsmanship as it pertains to the preparation, and application processes.
- 3. All surfaces to be coated will receive no less than one complete coat of primer and two coats of finish.
- 4. On most projects and where required, Brick and Masonry surfaces at ground level or where accessible, will receive a non-sacrificial Anti Graffiti coating.
- 5. Flat paints and finishes will only be used for ceilings, and other areas that are permanently out of reach.
- 6. Doors will be coated with finishes providing a final sheen of semi-gloss or greater.
- 7. Painting of steps and stairways shall meet ADA and all Safety codes.
- 8. All primers will be of the highest quality and the correct product for the intended

application.

9. Before removal of paint on older facilities, facility shall be tested for lead and or asbestos.
10. All projects upon completion shall have walkthrough and punch list shall be completed before sign off of any project.
11. All coatings used will conform to the following guidelines:

(Production grade materials are NOT acceptable)

Acrylic/Latex, water base paints

Products will be:

1. Acrylic resin
2. Ethylene glycol (EG) free
3. Tinted with 100% VOC free tints
4. No less than 35% solids by volume ($\pm 2\%$) and 57% volume by weight ($\pm 2\%$).
5. No less than 20 % prime pigments
6. All paints will have anti-microbial qualities
7. Max VOC = 40 g/l

Oil based enamels

Products will be:

1. Ethylene Glycol free
2. Silicone Alkyd resin
3. Tinted with 100% VOC free tints
4. No less than 45% solids by volume ($\pm 2\%$) and 64% volume by weight ($\pm 2\%$).
5. No less than 24 % prime pigments
6. Max VOC = 400g/l

Waterborne Acrylic Urethane

Products will be:

1. Ethylene Glycol free
2. Acrylic Urethane resin
3. Tinted with 100% VOC free tints
4. No less than 40% solids by volume ($\pm 2\%$) and 51% volume by weight ($\pm 2\%$).
5. No less than 19 % prime pigments
6. Max VOC = 0 g/l

Waterborne Alkyd Enamel

Products will be:

1. Ethylene Glycol free
2. Waterborne Alkyd resin
3. Tinted with 100% VOC free tints
4. No less than 42% solids by volume ($\pm 2\%$) and 55% volume by weight ($\pm 2\%$).
5. No less than 23 % prime pigments
6. All paints will have anti-microbial qualities
7. Max VOC =50 g/l

Submittals shall be reviewed and approved by City paint shop or facilities staffs before materials are ordered.

- Before removal of paint on older facilities, facility shall be tested for lead and or asbestos.
- All projects upon completion shall have walkthrough and punch list shall be completed before sign off of any project.

Any Questions, Please Contact Paint Supervisor David Mills at 619-525-8546

Division 10 Specialties

Division 11 Equipment

Division 12 Furnishings

Division 13 Special Construction

Fire Suppression and Supervisory Systems

- 1 Fire Detection and Alarm Systems
 1. Fire Alarm Systems
 2. Smoke Detectors
 3. Heat Detectors
 4. Flame Detectors

- 5. Manual Station, Bells, AMD Horns
- 6. Voice Alarm Systems
- 7. Radio Alarm Systems
- 8. Telegraph Systems

- 2 Automatic Sprinkler Systems
 - 1. Wet pipe sprinkler system
 - 2. Dry pipe sprinkler system
 - 3. Deluge sprinkler system
 - 4. Pre-action sprinkler system

- 3 Water Spray Systems
 - 1 Foam Water Sprinkler Systems
 - 2 Standpipe and Hose Systems
 - 3 Fire Pumps
 - 4 Water Supply Systems
 - 5 Fire Hydrants
 - 6 Fixed Dry Chemical Extinguishing Systems
 - 7 Halogenated Agent Extinguishing Systems
 - 8 Carbon Dioxide Extinguishing Systems
 - 9 Portable Fire Extinguisher
 - 10 Fire Doors and Dampers

Design requirements can be found in the following codes:

- National Fire Protection Association (NFPA)
- OSHA
- Basic Building Code (BOCA)
- Standard Building Code
- Uniform Building Code

Inspection Testing and Maintenance see:

NFPA Inspections, testing and, maintenance manual for details and references.

All Inspections, testing, and maintenance should have:

- 1. Visual Inspection
- 2. Test
- 3. Maintenance
- 4. Record Keeping on appropriate forms and copies of each
 - 1 Annual TEST + MAINTENANCE FORM
 - 2 Semi-Annual TEST + MAINTENANCE FORM
 - 3 5-Year TEST + MAINTENANCE FORM

Copies must be sent to:

1. Local Fire Marshall
2. Building Manager or Facilities Division Coordinator
3. Fire Suppression Coordinator

Any questions please contact Assist. Civil Engineer Scott Lee at 619-525-8583

Division 14 Conveying Systems/ Elevators

- 1.1 Proprietary equipment of any elevator/escalator equipment will not be allowed in City conveyance system.
- 1.2 Diagnostic Tools and Software Manual:
 - 2 Should elevator/escalator controls require special maintenance equipment or tools, the elevator contractor will provide to the City, all required diagnostic tools and all supporting software documentation required for the complete maintenance of the control and dispatch system and all related elevator/escalator parts. Periodic upgrades and/or calibrations to the diagnostic tools will be provided as required. Elevator contractors will identify and list the type and description of function of the diagnostic tool(s) and control components requiring such tools and submit to the City before acceptance of the elevator/escalator.
 - 3 Diagnostic tools, whether hand-held or built into the control system, will not require recharging or reprogramming. Should recharging, re-calibrating, reprogramming or upgrading and any repair or if replacement of the diagnostic tool should be required, the contractor will provide these services indefinitely to the City immediately upon request at no additional cost for the lifetime of the equipment.
- 1.3 Submittals: As-built wiring diagrams, operating and maintenance manuals will be provided at the machine room, and one set provided to Facilities Division. Other sets will be provided for the facility as required.
- 1.4 Door Opening and Control Device:
 1. Multiple Infrared Light Beam Electronic Sensing Device: Provide new multiple infrared light beam electronic sensing device securely and rigidly mounted on the car between the car and hoist way doors. The sensing device will have a minimum of 40 infrared beam sensors spaced evenly from the floor sill to the header jamb. When the car and hoist way doors are closing, the interruption of the light beam will cause the doors to reverse automatically to the full-open position and the doors to remain open as long as the light beams are interrupted; or, when the doors are in the open position, the interruption of the light beam will cause the doors to remain open as long as the light beams are interrupted. The time interval for the initiation of the door closing operation after light beams are reestablished will be adjustable. The sensing device will have an audible obstruction alarm which can be disabled.

2. Nudging Action: In the event of an obstructed light beam is operated for a predetermined time interval (15 - 20 seconds) after automatic door closing has been initiated, a buzzer will sound and the doors will close with a maximum of 2.5 foot-pounds kinetic energy and at reduced speed. Timers will be adjustable.

3. Variable Timing Features: In the event the light beam is interrupted while the doors are opening or after the doors are fully open, the time that the doors remain open after the beam has been reestablished will be reduced to an adjustable time between one and two seconds, depending upon whether a landing call or a car call predominated. This time will be a minimum time that the doors remain open if the beam is interrupted and reestablished before the door is full open.
- 1.5 Provide door restrictive opening devices.
- 1.6 No equipment, wiring and conduits that are not related to the elevator will be installed in the elevator hoist way and machine room.
- 1.7 Provide one set each of vinyl-covered elevator protective pads for the elevator of the same size.
- 1.8 Provide three sets of all operational keys for the elevator.
- 1.9 Hydraulic elevators will be provided with emergency power system that will activate in the event of power failure and provide power to the hydraulic elevator and close the elevator doors, lowers the elevator to the designated landing, opens the doors allowing the passengers to exit, and then close the doors leaving the elevator at rest. The elevator doors can be re-opened from inside the elevator only if necessary. Upon resumption of power the emergency lowering device will automatically reset itself and the elevator will return to normal service.
- 1.10 The elevator contractor will provide all labor, parts, materials and equipment in order to furnish a complete preventive maintenance service to regularly and systematically examine the elevator equipment and provide the necessary repair and/or replacement for the duration of one year from acceptance of elevator operation.

Any questions please contact Assoc. Civil Engineer Josh Lahmann at 619-525-8567

Division 15 Mechanical

Plumbing: - - - - -

All City public buildings should be designed to have minimum of 3 women's toilets and 2 sinks. Men's restroom should have minimum 2 toilets, 2 urinals, and 2 sinks.

All facilities will have an accessible Pipe chase with enough clearance to perform basic maintenance and repair work. A floor drain, hose bib, lighting, and power outlet will be in the pipe chase.

Materials Recommended for City Facilities

Underground Plumbing:

Underground Drain, Waste, Vent (DWV) plumbing: Where code permits all DWV plumbing should be Schedule 40 PVC or Cast-iron pipe

All underground water lines should be Schedule 80 PVC. Avoid installing waterlines under foundation slab. When it is an absolute must underground waterlines under foundation slab should be Copper "L" or Copper "K".

All underground gas lines should be yellow poly-pipe. No underground gas pipe under foundation slab

All Ball Valves installed should be Apollo Full Port and Domestic

Above Ground Plumbing:

Above Ground Drain, Waste, Vent Plumbing at Comfort Stations should be Schedule 40 PVC where code permits or Cast-Iron Pipe. At other Facilities ABS, PVC, or Cast-iron.

Above ground Water lines should be Copper "L" or Copper "K"

Above ground Gas lines should be galvanized pipe and fittings

All vent penetrations are to have a vandal proof cap installed on roof

Ball valves to be installed on every branch line of hot and cold water systems with stainless steel access panels.

Fixtures Recommended for City Facilities Comfort Stations:

Toilets: Acorn Dura Ware 2100 or 2105- 1.28 gpf with concealed hydraulic Sloan flush valve (in pipe tunnel) with 3" push button

Lavatories: Acorn Dura Ware

Faucets: Chicago #333-665

Urinals: Acorn Dura-Ware 2158 -.125 gpf or .5 gpf with concealed Sloan Hydraulic Flush Valve with 3" push button

Floor Drains: Zurn or Smith- ALL floor drains should be min 3" waste line

Water Pressure Regulators: Wilkins Model 600XL

Flushometer: Sloan

Drinking Fountains: Haws Hi/Lo when pedestal installed use HAWS 3500 or 3500D

Hose bibs: Acorn Sill Cocks- every bathroom should have aAcorn hosebib with no handle for maintenance

All Hardware to be Stainless Steel (All thread, nuts, uni-strut, etc.)

Clean-Outs- Each fixture should have its own full size clean-out wye on vent then reduce vent as needed.

Drinking Fountain Sand Traps-

1. 2" PVC drain with Long Sweep 90 degree elbow connection to fountain drain and wye clean out inside of actual Drinking Fountain.
2. Water shut off and hose bib should be also installed inside of drinking fountain
3. 9 ½" x 16" concrete yard box set on red brick foundation
4. Sand trap should carry a minimum of 6" of sand below drain line exiting Sand Trap
5. Main water shut off outside of pad in a concrete yard box mandatory
6. Check Drawing

Outside and Inside Showers at Comfort Stations- should be plumbed in with a minimum 3" drain line and drain into an approved Sand Trap with easy access lid for pumping out.

Plumbing Fixtures Recommended for all other City Facilities:

Sensor Auto Flush- TOTO or Zurn

Toilets- American Standard, Kohler, TOTO

Lavatories- American Standard Lucerne preferred

Faucets- 4"Centers Moen in staff areas only. Public areas use Chicago 3300-ABCP self-closing ADA

Urinals- American Standard Washbrook preferred, Kohler

Floor Drains- Zurn, Smith

Slop Sinks – American Standard or Kohler

Kitchen Sink Faucets- Moen or Chicago (Commercial Grade)

Stainless Steel Sinks- Elkay ADA approved

Water Heaters – RUUD or AO Smith

Drinking Fountains- Haws High/Lo ADA approved

Circulation Pumps- Bell and Gosset or Grundfos

Hose Bibs- Acorn Sill Cocks

Ball Valves- Apollo full port and Domestic

Clean-outs- Clean-outs on all sink, floor drains, and shower fixtures

It is the contractors responsibility to verify all new and existing waste lines are clear before and after construction. Existing waste lines might need video inspection and hydro jetting.

All vent penetrations to have vandal proof cap on roof.

Any questions please contact Plumber Supervisor Victor Lopez at 619-525-8547

HVAC:

- 1.1.10_ The HVAC crew will assist the Project Engineer during the construction phase and the final walk through as needed. The City Facilities Division HVAC representative will be in discussions with the Architect and Mechanical Consultant during the first design stages of a facility. *An Independence Commissioning Agent shall be assigned to the project in the design stage (recommend no later than 10% design) Commissioning Agent will be involved during the project. Commissioning Agent will perform point to point commission reports, with at least two hard copies and electronic copies to the City.*

- 1.1.11_ Only the newest models of HVAC equipment and Building Automation Systems will be used. When the designed Automation system or Mechanical Equipment is not of the newest version or design, the most recent version and model will be installed as per the current title 24 requirements.
- 1.1.12_ All Mechanical submittals will be reviewed thru Facilities Division Electrical crew.
- 1.1.13_ The Manufactures representative will provide personnel, training on the operation and maintenance of the HVAC equipment, to the City HVAC personnel.
- 1.1.14_ Technical manuals for the HVAC system and components will be provided to the Facility Maintenance Division HVAC Representative. Minimum of 2 copies will be provided in paper form, and electronic word or and excel.
- 1.1.15_ Use of underground Chilled Water and Hot Water piping will not incorporate PVC pipe wrapped in PVC jacket. Brazed Copper pipe with PVC jacket is acceptable. Brazed joints are preferred not soft solder. Copper type L is preferred and long radius elbows.
- 1.1.16_ No refrigerant lines will be installed below grade or within a concrete slab. Unless accepttcal access is provided and approved by HVAC shop Personnel.
- 1.1.17_ No HVAC (Heating, Ventilating & Air Conditioning) duct will be installed below grade or incased within or under a concrete slab.
- 1.1.18_ All fresh air openings for HVAC system will not be located at ground level, below grade, or within 10 feet of the buildings sewer vents, exhaust vents or storm drain venting. (Per Sec. 317.6 Uniform Mechanical Code) asc
- 1.1.18_ A/C package units installed on City roofs will be down flow type only.
- 1.1.20_ All ductwork will have exterior insulation, due to previous building air quality issues. Use or mechanical binding such as wire wrap around the insulation to prevent insulation from becoming lose will be used, tape should not be considered the only source of binding of insulation to duct work. All duct work is to meet or exceed the current title 24
- 1.1.21_ When natural gas is available at the street; natural gas will be used for all HVAC equipment.
- 1.1.22_ HVAC unit's-5 ton (60,000 BTUs) or over, will be three-phase power when available.
- 1.1.23_ Energy efficient design will be incorporated with variable speed pumps. Chiller compressors should be in-closed, in a way as to minimize sound travel. **When a Chiller is incorporated in the design** a central boiler will be used for supplying the facility heating hot water and a scroll chiller will be used for supplying the facility-chilled water system.
- 1.1.24_ Floor zones will have there own temperature control and independent fan system for controlling the environment independent of neighboring zones.
- 1.1.25_ Whenever possible, a scroll compressor with the maximum available warranty years offered, will be specified. When water source heat pumps are specified, a minimum of five years for the warranty on the compressor will be required. **Minimum compressor warranty even if optional to be no less than 5 years provided by either manufacture or installing contractor. This includes Recip., scroll and semi hermitic compressors.**
- 1.1.26_ Extended warranties (five yrs.) will be used for A/C compressors 5 ton and over.
- 1.1.27_ Package units, 7 1/2 Tons or larger, will have multiple compressors or capacity unloaders for energy savings.
- 1.1.28_ All refrigerators will be free standing, no built in units or combination units.
- 1.1.29_ All temperature controls in gyms must be incased or covered by a metal guard box.
- 1.1.30_ VAV System's 5 ton and over, will be either chilled water or multiple compressor system,

with an adequate airflow bypass. A static bypass damper sensor will be used when a bypass damper is used in a multizone vav system application

- 1.1.31 HVAC systems will use a 365-day time clock, or its equivalent, with battery back up. Features to include Holiday and Daylight Savings Programming. This type of Time clock should be used if a Building Automation System is not installed.
- 1.1.32 Safe and unobstructed access to all HVAC equipment will be provided, for maintenance & repair purposes. Equipment above ceilings should have clear access to all panels and filter removal. Equipment on roofs or equipment areas will have the needed clearance to remove filters and access all panels for service and repair. This clause is for all moving and control components of the HVAC system being installed.
- 1.1.33 Manufacturers minimum clearances will be met, for installation of all equipment. Boiler access for maintenance should include clear service areas for tube punching front and back of service panels not less than the length of the Boiler is long. This will allow for use of tube punching rods.
- 1.1.34 All control wire colors will conform to the equipments color schedule or mechanical wiring diagrams.
- 1.1.35 All terminal blocks and termination points, of the control wiring, will be labeled and identified as to match the submitted drawings & schematics.
- 1.1.36 Only standard size filters to be used, no custom sizes air filters. Standard should be considered as being a stock size air filter. Use of MERV rating 13 should be considered in a 2 inch air filter for the equipment when a 2 inch air filter is in the design. MERV 8 when 1 inch is being used or as design or manufactories specifications.
- 1.1.37 All air filters, and water strainers, will be installed, to maintain easy access for maintenance purposes. If equipment, such as air handlers, fan coils, split systems or heat pumps are installed above ceiling, the use of a T-bar filter housing should be used. The need to remove ceiling tiles to access filters should be avoided.
- 1.1.38 The City of San Diego HVAC Shop personnel, for compatibility of existing Building Management System control will identify standardization of the Energy Management Systems or Building Automation Systems. Example: Trane Voyager package roof tops with a Trane Building Automation system interfacing with the Trane A/C units.
- 1.1.39 There will be 100% compatibility between the Building Automation system and the HVAC equipment. No specialized interfacing between equipment and controls will be used to communicate between the HVAC Equipment and Building Automation System. ***Avoid the use of Gateways.*** This creates two or more separate control systems within one building. Example, Johnson Controls Metasys as workstation and air handler control, which communicates to McQuay Open Protocol panel which, communicates with Lonworks to communicate with Heat Pumps and Chiller. This is a three party control system, which is not acceptable!
- 1.1.40 The Building Automation System must have the capability to perform demand limiting from the factory and will be able to receive information from a pulse meter supplied by the Utilities Company ***or City real time monitoring system (Tritium).***
- 1.1.41 When a P.C. is specified to accompany the Building Automation System, it should be considered supplied by the department IT staff of the building IT staff where it is being installed (such as a Library). All required software for the system for setup, programming, and daily operations will be provided and the software discs will be given

to the HVAC Supervisor. If the software for install is used for initial setup and start up, than this software is to be supplied from the controls company and to be considered to be registered for the life of the control system, no less than 10 years.

- 1.1.42_ Control systems for consideration. Use of WEB Based systems or being in the cloud will be reviewed by City HVAC Supervisor before acceptance for install or design. Control system access should have no added cost to the City or the HVAC Shop. Re-accruing monthly service charge systems should not be considered for install. Use of Intranet (City owned IP Network) systems will be considered for install providing the control system is approved by City IT department. Computers (laptop or desktop) will be reviewed and be considered to be supplied by City IT department associated with the building department contact. Software and Licensing will be provided as a joint effort between City IT and controls contractor, if required. Trend and Alarm data will be stored onsite for a minimum of 30 days and accessed by PC either onsite or remotely. Remotely is preferred method.
- 1.1.43_ The Building Automation System software will be Windows compatible, i.e. windows 7, with compatible communication software programs preferred by the manufacturer, such as Pro Comm. Plus or Hyper Terminal in Windows. Licensed software must be provided by the installing controls company for at least 3 City owned laptops with Windows 7. The automation system must communicate with the Cities HVAC Shop monitoring system site. (PC's, /Laptops)
- 1.1.44_ The Use of Software for a graphical application on a local PC is acceptable but must not require a specialized security key connected to any PC or LAN devices. If a key is required for access of the control system, no less than 4 keys will be provided to HVAC Shop and one for the local workstation for a total of 5 keys.
- 1.1.45_ On site work station requirements for DDC control systems. Specialized software or security cards or chips should not be used this provides extra expenses to the City. The local operating system PC should be an off the shelf type product and current within its design year of start up. No special built PC should be accepted. A local printer will be supplied by installing contractor (such as an ink jet color printer with extra ink cartages as replacement for one time) for the use of system alarms and user login printing.
- 1.1.46_ The control system should be completely independent in operation and not dependant of other devices within its DDC network. If a loss of communication occurs with the LAN, HVAC Equipment (i.e. rooftop units, air handlers, fans, exhaust fans, chillers boilers and pumps), should operate in occupied mode based on last settings if communication is lost with the work station or daily scheduler if so supplied.
- 1.1.47_ Building Automation System will be stand-alone. Stand alone should be considered as not requiring a PC or computer work station to be running on the work site. Equipment end devices will not be dependent of a PC to receive Time of Day Schedule, Holidays or On-Off control. Equipment should be able to start without needing personnel to turn something on in the event of a power failure.
- 1.1.48_ Building Automation System end devices controlling equipment such as Fans and Pumps must have Hand-Off-Auto capability. This includes relays, VFD's or any component that uses on-off control.
- 1.1.49_ Water and Air Flow switches if used in equipment must be approved by equipment manufacture. These devices must also be compatible with Building Automation System. Water flow proving switch, use thermal flow sensors as primary option, use of paddle

switch as a proving method should be consider for review. The length of the neck of the piping (this is where the paddle is usually connected to the control switch) should not exceed the diameter of the pipe it is being installed in.

- 1.1.50_ Local PC must be equipped to accomplish a full back-up of PC. Scheduled control system full back up to be performed every month, automatically, without over-writing the previous months back up should be considered as a very desirable option.
- 1.1.51_ Chillers less than 100 tons should be considered as air cooled condensing only. Use of compressor silencing will be incorporated in the design such as sound blankets. Where condenser coils are exposed to the open side the use of storm guards will be used. Multi staged chillers will incorporate balance compressor run hours. Use of electronic TXV will be used.
- 1.1.52_ When a new mechanical design is being considered for installation, such as a design new to San Diego, this should first be brought to the attention of the HVAC shop Supervisor for review. HVAC shop Supervisor should be given first right of refusal of a design before it is brought up in a design consideration and at first conceptual thought before our attempts are too late to reconsider a design. When a new design concept is approved by the HVAC Supervisor for install, then the design will include extensive training for City HVAC maintenance staff and extended warrantees will be included against not only the products but the design and installation.
- 1.1.53_ Boilers to be standardized with most common units, Preferred brands are; Ajax, Rapak, and Laars
- 1.1.54_ All new pool boiler piping installations shall be CPVC with hangers and supports according to currents building and mechanical codes and title 24.

Any questions please contact HVAC Supervisor Alfonso Jordan at 619-525-8549

Division 16 Electrical

PART 1

1 P.V.C.

- 1.1.1 All conduits in the ground will be P.V.C. schedule #40, (minimum) 3/4 inch or larger in diameter.
- 1.1.2 All P.V.C. will be buried below ground level and NEVER be in a concrete slab or concrete floor.
- 1.1.3 All stub-ups in P.V.C. will be changed to E.M.T. in walls. Exceptions are outside block walls can be P.V.C. No flexible conduit will be used.

1.2 E.M.T. Conduit

- 1.2.1 All wiring inside the building will be in E.M.T. conduit.
- 1.2.2 All E.M.T. connector, coupling, and other fittings will be non- cast steel compression

type.

1.2.3 No BX or MC cables allowed.

1.3 Rigid Conduit

1.3.1 All conduit exposed on salt air to be PVC coated.

1.3.2 All conduits exposed below 4 feet of finish grade on walls shall be rigid conduit.

1.4 Flexible Steel Conduit

1.4.1 Only on motor connection and fixture tails, not over 6 feet in length.

1.5 Boxes

1.5.1 Any exposed wiring device box will be cast iron only. No cast aluminum.

1.5.2 Any exposed light fixture junction boxes will be cast iron only. No cast aluminum.

1.5.3 All outdoor outlets will be installed in a recessed stainless steel box with a flush, lockable cover with a 20 amp G.F.C.I. receptacle and on a separate circuit. For gazebos and outside public areas.

1.5.4 Inside wiring device boxes and junction boxes will be at least 4" square by 1 1/8 inch deep.

1.5.5 Electrical, phone, and data floor boxes will be brass type (RFB style Walker) with tamper – proof screw cap only. All brass covers will be flush with the floor. Floor monuments are not acceptable.

1.5.6 Flat wiring will not be used.

Wire

1.6.1 All wiring will be stranded, copper THHN type, including all #12 A.W. wire.

1.6.2 Minimum wiring size will be #12 A.W.G. stranded.

1.6.3 One neutral for every one circuit pulled. No sharing on neutral wires anywhere.

Marking and Names Plates

1.7.1 Name plates: Furnish and install a minimum size of 1" high and 3" wide by 3/32" thick matte white (for normal power) and red (for emergency power) laminated phenolic nameplates with 1/4" white characters engraved in the plastic for all items of electrical equipment including, but not limited to switchboards, panel boards, automatic transfer switches, motor control centers, feeder circuit breakers, relays, time switches, disconnect switches, exposed pull or junction boxes, and all control equipment. Name plates will be attached with 2 cadmium-plated screws. Adhesive attachment will not be acceptable. Punch strip tape type name plates with card holders in any form are prohibited.

- 1.7.2 Provide wire marker on each conductor in electrical panel pull box, outlet, and junction box. This includes all disconnects and connections. *If more than one neutral conductor is present, mark each related circuit and panel number.
- 1.7.3 Label outside of all cover plates of wiring devices and junction boxes with circuit and panel number. Each branch circuit device cover plate will be labeled (engraved or silk screen) to indicate the branch circuit and panel number. Devices will include, but not be limited to, the following: toggle switches, dimmer switches and receptacle.

Grounding

- 1.8.1 All raceways will include a full size green insulated ground wire terminated at each outlet box, device enclosure, etc. and connected back at the panel boards, switchboard or cabinet on the appropriate ground bus.
- 1.8.2 The green insulated ground (bond) wire will be spliced together within the outlet box. A green insulated bonding jumper will be provided from the splice to the box body. Attachment to the box body will be provided using a tapped #10-32 x 3/8" screw minimum. A green insulated bonding jumper will be provided from the splice to the receptacle ground screw even with self grounding receptacles. **Devices and Cover Plates**

1.9.1 Wall switches - 20 AMP 120v/277v Industrial Type Specify:

- a. Hubbell: HBL 1221 or equal.
- b. Decorator Type: Hubbell DS 120-20 amp

1.9.2 Duplex Receptacle 20 AMP 120v/277v Industrial Type Specify:

- a. Hubbell - (20 AMP) # HBL 5362 or equal.
- b. Decorator Type DR 20DR

1.9.3 All devices are to have clamp style side/ back connections for stranded wire only. All receptacles shall be pigtailed out so only one Color wire, a neutral wire, and a ground wire is connected to the back of the receptacles.

1.9.4 All receptacles and switches on emergency power will be RED.

1.9.5 All receptacles in public areas shall be tamper-proof.

- a. Hubbell - HBL 8300SGA
- b. Decorator Type DR20TR

PART 2

2.1.0 Hand Dryers

2.1 Install at least one hand dryer 2000 watt in each restroom. City Standard is the 120 volt Semi Flush World hand dryer 120 volt semi-flush. In pipe chase applications, use 120 volt Fastair, model HO3.

2.2.0 Exit Signs

2.2.1 All exit signs will have LED lighting Components and the voltage being 120v or the 277v series, Atomic exits signs are no longer used due to hazardous waste issues.

2.2.2 L.E.D. exit signs are good, and the battery need to last 3 to 5 years.

2.3.0 Emergency Battery Systems

2.3.1 The number on chose is to use the emergency lighting wall pack that are battery operated and comes equipped with a self testing mode. The second option would be an emergency lighting inverter which would be of a specific manufacture that would be considered City Standards Is the Myers Illuminator E series light inverters for emergency lighting with front access terminal batteries. Do not use emergency ballast in light fixtures for a emergency lighting system.

2.4.0 Low Voltage System for Title 24

2.4.1 Avoid low voltage programmable systems. If a system must be installed use it for only large rooms over 5000 feet, in all other areas use normal switching methods, and use only the City Standards type Cooper Green Gate lighting inverters with touch screen and software. Use Tork Time clock 7200ZL for outdoor lighting controls. Also, all software manuals and training to program the lighting system must be given to Facilities Division Electricians no later than on the final walk thru. Training to program the system must be given to Facilities Division Electrician no later than on final walk thru.

PART 3

3.1.0 Light Fixtures

3.1.1 Reduce the number of decorative and display light fixtures where possible.

3.1.2 Light fixtures will be high quality, long lasting, brand name, Energy Efficient and made in the U.S.A., with easy to replace lamps. The number of different types of fixtures must be kept to a minimum and the ease of re-lamping must be a major consideration in fixture selection.

3.1.3 Standard 4 foot LED fixtures are most desirable in the general area.

3.1.4 Metal Halide, indirect light fixtures are no longer used in high ceiling such as Gym lighting for baskets courts. The six lamp T5 fluorescent lights are now the standards.

3.1.5 All recessed cans shall be LED type fixture.

3.1.6 Do not use low voltage light fixtures. For example: fixtures that take MR16 lamps.

3.2.0 Outside Light Fixtures

3.2.1 All outside light fixtures will have polycarbonate lenses and vandal resistant screws. City Standard is Kenall S-711 LED and or for restroom/ comfort station. For inside lighting use the Kenall H-1212 LED type.

- 3.2.2 Install light fixtures for library sign, book drop and all outside door openings.
- 3.2.3 Wall mounted light fixtures will be used for general outside area for security and safety.
- 3.2.4 Libraries will be well lit inside and out. For security purposes.
- 3.2.5 Avoid small light fixtures in steps, use pole or wall lights.
- 3.2.6 Avoid tree lights that are mounted above the ground (i.e., Pacific Beach Library).
- 3.2.7 Avoid in ground lights (i.e., Mira Mesa Library) because of water resistance issues. If it is necessary use only brand name City Standard Hydrel.
- 3.2.8 Avoid low voltage light fixtures. Example: fixtures that require MR16 lamps.
- 3.2.9 Heavy duty mounting will be needed for all outside light fixtures.
- 3.2.10 Parking lot pole light are necessary in all parking lots.
- 3.2.11 We encourage wall mounted light fixtures on the building.
- 3.2.12 All exterior building lighting will have separate circuits from exterior pole lighting.

3.3.0 Time Clocks

- 3.3.1 All time clocks will be City Standard Tork Electronic Astronomical, 40 amp contact. No substitutions.
- 3.3.2 Lighting contractor will be necessary if more than 2 circuits for outside lights. Install hand, off, automatic switch or bypass switch for testing during the day for outside lights. Photo cells on parking lot light fixtures are not allowed.
- 3.3.3 Inside lights will be on lighting contractor controlled by separate time clock or switches.

3.4.0 Lamps

- 3.4.1 In new buildings provide a spare case of lamps for every type used, including M.H., incandescent, H.P.S., L.P.S. and fluorescent lamps. Provide no later than final walk thru.
- 3.4.2 Do not use incandescent lamps.
- 3.4.3 Low pressure sodium lamp are use only in parking lot lights.

- 3.4.4 When possible install LED or Fluorescent lamps
- 3.4.5 Standardize with 4 foot fluorescent energy 32 watt cool white T-8 lamps.
- 3.4.6 Use brand name electronic ballast, 5 year warranty. GE, Advance... etc.
- 3.4.7 Reduce the number of decorative and display lamps.
- 3.4.8 Provide fixture location that allows easy lamp replacement, this is a major problem.
- 3.4.9 Brand name lamps are a must.
- 3.4.10 Outside lamps will be LED (general lighting) LED (signs) and LED (for security).

PART 4

4.1.0 Conduits, Raceways and Boxes

- 4.1.1 All Flexible conduits will have a green ground wire. It will only be used for motor connections, fixture tails, or used in existing walls (6" or less). Non-metallic or sealtite will be used in damp locations and machinery rooms.
- 4.1.2 Conduit run above suspended ceilings will be supported from the building structure independently and will be run with sufficient clearance from the ceiling system to permit the tiles to be removed and to allow full access to the space above.
- 4.1.3 Roof top conduits (rigid steel) will be neatly grouped and installed parallel to the building lines. Support for conduit shall be rubber sleepers with unistrut on top.
- 4.1.4 Home runs will be a minimum of 3/4" conduit. 1/2" can be used to supply a single termination (e.g., conduit going from switch box to single light fixture).
- 4.1.5 Junction and Switch boxes shall be a minimum of 4" square in size and a minimum of 2-1/8" deep.

4.2.0 Wires and Conductors:

- 4.2.1 All insulation in AWG sizes 8 and below will be impregnated with color according to the following:

<u>480/277 volts</u>		<u>208/120 volts</u>
Phase A	Brown	Black
Phase B	Orange	Red
Phase C	Yellow	Blue
Neutral	Gray	White
Ground	Green	Green

Where color other than black is not an integral part of insulation use 3M No. 35 tapes in the same color code to identify both ends of conductors No. 6 and larger. Use other colors as required to identify control or other special circuits. Ground conductor will have green insulation for 1/0 or smaller conductors, green tapes on other colors of insulation are NOT acceptable. All neutral wires shall be white with phase stripe running along entire length.

4.3.1 Light fixtures commonly used by the City of San Diego:

4.3.2 Indoor/Outdoor

1. Gym light fixture- Six lamp T-5 fluorescent light fixtures controlled by barrel switches.
2. Compact fluorescent - Eclipse 26 watt CMK series or equal to. Must be a low profile 15x15 square.
3. Ceiling mount fluorescent - Kenall, No. H1212L.C., 13X 2 – 120 volt 4 pin 26w fluorescent.

4.3.3 Outdoor Security Lighting

1. Kendell S-711 LED is preferred and the Kendell H-1212 LED is also preferred, Eclipse also as described above.
2. Cooper Wall PAC 40-80 watt
3. In ground – Hydrel Co. Only (Tree lights). Must place at least two inches of gravel around fixture for drainage.

4.4.0 Switchgear and Electrical Panels

4.4.1 A. Supply 25% spare breaker space in all panels and copper bus.

- B. Provide 25% more ampacity for electric panels above calculated load requirements.
- C. Provide a 3/4 inch conduit for each three spares or spaces in all flush mounted power or lighting panel boards. Route conduit to accessible space above the ceiling.
- D. All panels will have bolt on breaker, copper buss, and full size neutral-ground bar.
- E. Main Switch and all circuit breakers will be supplied with a name plate adjacent to each device as specified under Marking and Name plates.
- F. Fusible Switches: (heavy duty) switches, with fuses of classes and current ratings indicated. See Section Fuses for specifications. Where current limiting fuses are indicated, provide switches with non-interchangeable feature suitable only for current limiting type fuses. Each fusible disconnect switch will be equipped with a blown fuse indicator module.

4.4.2 Fuses

- A. Fuses will be low peak RK1 class ARC rejection type.
- B. Fuses serving motor loads will be dual element with a minimum time delay of 10 seconds at 125 percent rating. Fuses will be current limiting time delay type with interrupting capacity of 200,000 ampere RMS symmetrical minimum.
- C. Fuses will be Bussman or Gould low peak, only.
Provide spare fuses in the amount of ten percent of each size and type installed, but not

less than three; delivered to the Owner upon final acceptance of the project. Provide and install fuse cabinet in the electrical room for storing these extra fuses.

- D. Install 24 X 18" metal frame in the electrical room and include a "one line" electrical diagram of the building.

4.4.3 Transformers:

- A. Attach incoming and outgoing conduits to the transformer case with approximately 18 inches of flexible conduit to reduce noise transmission. Provide separate grounding jumper when using flexible conduit.
- B. Maintain a minimum of 1'-0" free air space between transformer and walls.
- C. All transformers will have name plates showing its rating, circuit number it is fed from and panel it is feeding.
- D. Install transformers on seismic style vibration isolator pads (feet).

4.4.4 Generators, Motors, Controllers and Fire Alarms

- A. Generator KW rating must be at least 10% more than calculated load for future use requirements. Kohler generators only. Documentation and repair manuals will be supplied.
- B. Motors will be energy efficient with sealed bearings.
- C. Programmable logic controller (PLC): The contractor will furnish, to the City a licensed copy of the software for the PLC and all files and hard copies of the ladder logic with reference documentation.
- D. Fire Alarms: Use only Edwards, Notify, or Simplex fire alarms.

PART 5

Designs, Submittals and Final Walk-Thru

5.1 Design

The architects' electrical engineer must consult with the City of San Diego's Facilities Division personnel during the design phase and throughout the project. The City staff has developed standards that must be incorporated into the plans and specifications. Please route thru General Services/ Facilities Division, Electrical Crew. M.S. 20, Phone 525-8524.

5.2 Submittals

All electrical submittals will be reviewed thru Facilities Division Electrical crew. All comments will be in writing within five days. This is very important to us in Maintenance so that we get the item that is equal or spec. out. Especially light fixture, switches, recept. and electrical equipment.

5.3 Final Walk Thru

All manuals and training on all electrical system will be done at this time, which includes, but

not limited to: testing of emergency systems, time clocks, lights, and exhaust fans. Provide one set of blue prints, spec book, and submittals.

5.4 Manual and Documentation

The Contractor will furnish operation and maintenance manuals for each electrical system and for each piece of equipment. The complete manual, bound in hardback binders, or and approved equivalent will be provided to the Owner's Representative. The number of copies will be as indicated in Division 1. One manual will be furnished prior to the time that the system or equipment tests are performed to the electrical shop:

City of San Diego
Public works / Facilities Division
Electrical Section MS# 20
San Diego, CA 92102

The remaining manuals will be furnished before the contract is completed. The following identification will be inscribed on the cover; the words OPERATING AND MAINTENANCE MANUAL, the name and location of the building, the name of the Contractor, and the contract number.

The manual will include the names, address, and the telephone numbers of each Subcontractor installing equipment and systems, and of the local representatives for each item of equipment and each system. The manual will have a table of contents and be assembled to conform to the table of contents with tab sheets placed before instructions covering each subject. The instruction sheets will be legible with large sheets of drawings folded in. The manual will include, but not limited to, the following:

- A. System layout showing components.
- B. Devices and controls.
- C. Wiring and control diagrams showing operation and control of each component.
- D. Sequence of operation describing start-up, operation, and shutdown.
- E. Functional description of the principal system components.
- F. Installation instructions.
- G. Maintenance and overhaul instructions.
- H. Lubrication schedule including type, grade, temperature range, and frequency.
- I. Safety precautions, diagrams and illustrations.

Training:

User staff and maintenance personnel will be thoroughly trained (minimum of 4 hours) in the use of each electrical system or major piece of equipment installed. This training will be provided as a part of the Contractors bid to supply the system or equipment. Additional training requirements, will be as specified in the subsequent sections of Division 16.

It will be the responsibility of the Contractor to provide equipment with the proper electrical characteristics for the electrical service provided. All necessary electrical components to provide

a complete system will be furnished.

Any Questions, Please Contact Electrical Supervisor Walter Hegard at 525-8548.

APPENDIX K

MISSION HILLS/HILLCREST LIBRARY PUBLIC STREET DEDICATION

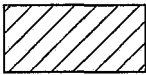
BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS
THE CENTERLINE OF THE ALLEY PER MAP 15777.
I.E. N 0°02'46"E

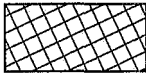
ASSESSORS' PARCEL NO.

444-650-36

LEGEND:



INDICATES PUBLIC STREET DEDICATION



INDICATES PUBLIC ACCESS EASEMENT

PARCEL "A" AREA = 400.00 SQ. FT.

PARCEL "B" AREA = 164.63' SQ. FT.

PARCEL "C" AREA = 499.20 SQ. FT.

PARCEL "D" AREA = 362.65 SQ. FT.



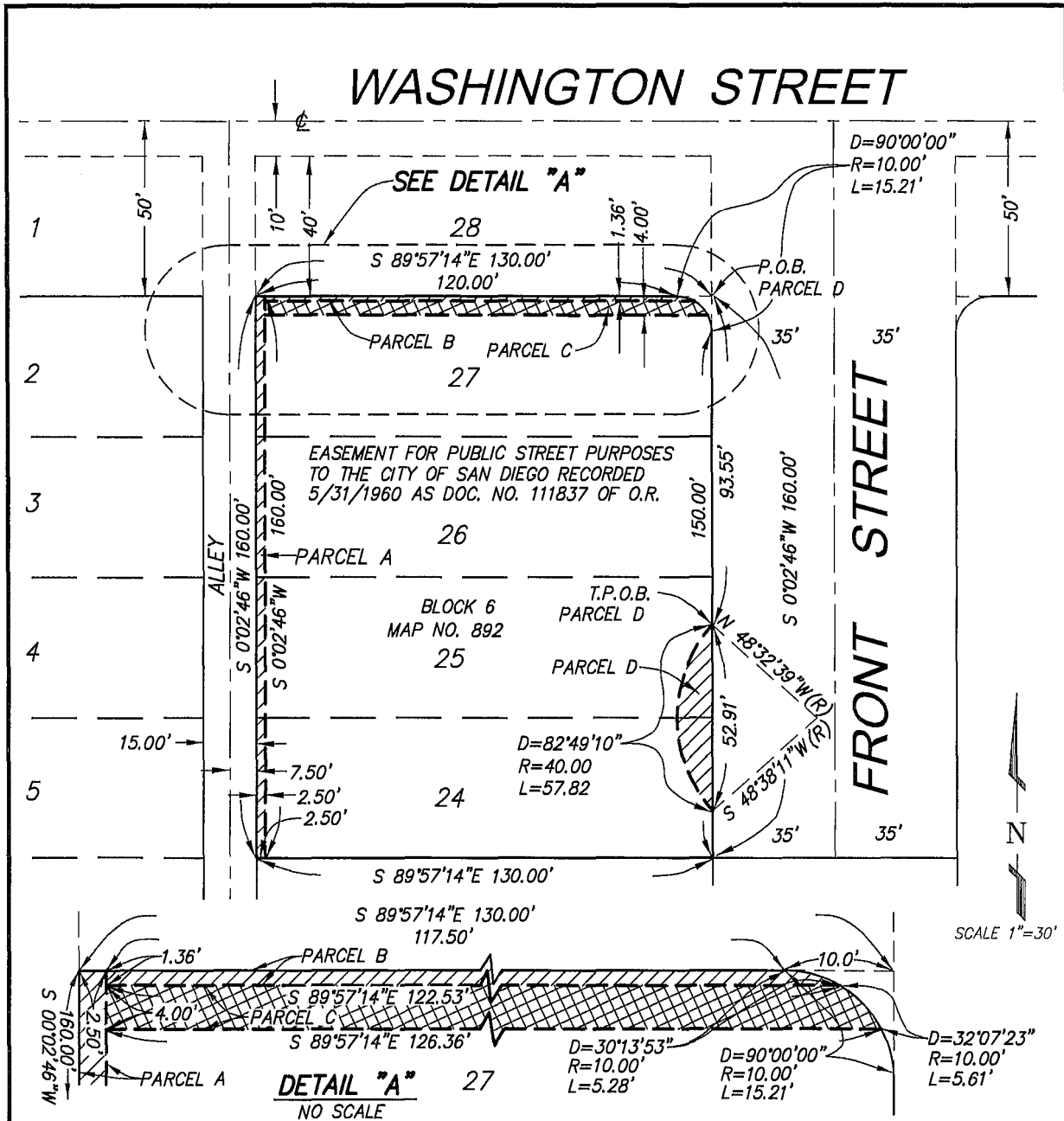
DALE KEITH BREWER L.S. 5653 DATE
EXPIRES 09-30-15

PUBLIC STREET DEDICATION

IN PORTIONS OF LOTS 24, 25, 26, 27 OF BLOCK 6 OF MAP NO. 892

DESCRIPTION	BY	APPROVED	DATE	FILMED	CITY OF SAN DIEGO, CALIFORNIA	I.O. NO.
ORIGINAL	LSC				SHEET 1 OF 2 SHEETS	P.T.S. NO.
					FOR CITY ENGINEER	NAD 83 COORDS.
					DATE	LAMBERT COORDINATES

WASHINGTON STREET



DALE KEITH BREWER L.S. 5653 DATE
EXPIRES 09-30-15

PUBLIC STREET DEDICATION

IN PORTIONS OF LOTS 24, 25, 26, 27 OF BLOCK 6 OF MAP NO. 892

DESCRIPTION	BY	APPROVED	DATE	FILMED	CITY OF SAN DIEGO, CALIFORNIA	I.O. NO.
ORIGINAL	LSC				SHEET 2 OF 2 SHEETS	P.T.S. NO.
					FOR CITY ENGINEER	NAD 83 COORDS.
					DATE	LAMBERT COORDINATES

APPENDIX L

MISSION HILLS/HILLCREST LIBRARY LEED CHECKLIST 2015



LEED 2009 for New Construction and Major Renovations

Mission Hills-Hillcrest Library - Prepared by DGP - September 2, 2015

Project Checklist

19 1 6 Sustainable Sites Possible Points: 26

Y	?	N			
Y			Prereq 1	Construction Activity Pollution Prevention	
1			Credit 1	Site Selection	1
5			Credit 2	Development Density and Community Connectivity	5
	1		Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
3			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
	2		Credit 4.4	Alternative Transportation—Parking Capacity	2
	1		Credit 5.1	Site Development—Protect or Restore Habitat	1
	1		Credit 5.2	Site Development—Maximize Open Space	1
	1		Credit 6.1	Stormwater Design—Quantity Control	1
1			Credit 6.2	Stormwater Design—Quality Control	1
1			Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
	1		Credit 8	Light Pollution Reduction	1

4 0 6 Water Efficiency Possible Points: 10

Y	?	N			
			Prereq 1	Water Use Reduction—20% Reduction	
2	2		Credit 1	Water Efficient Landscaping	2 to 4
	2		Credit 2	Innovative Wastewater Technologies	2
2	2		Credit 3	Water Use Reduction	2 to 4

31 0 4 Energy and Atmosphere Possible Points: 35

Y	?	N			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
17	2		Credit 1	Optimize Energy Performance	1 to 19
7			Credit 2	On-Site Renewable Energy	1 to 7
2			Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
1	2		Credit 5	Measurement and Verification	3
2			Credit 6	Green Power	2

6 0 8 Materials and Resources Possible Points: 14

Y	?	N			
			Prereq 1	Storage and Collection of Recyclables	
	3		Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
	1		Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2
	2		Credit 3	Materials Reuse	1 to 2

Materials and Resources, Continued

Y	?	N			
2			Credit 4	Recycled Content	1 to 2
2			Credit 5	Regional Materials	1 to 2
		1	Credit 6	Rapidly Renewable Materials	1
		1	Credit 7	Certified Wood	1

11 2 2 Indoor Environmental Quality Possible Points: 15

Y	?	N			
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
		1	Credit 1	Outdoor Air Delivery Monitoring	1
1			Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
		1	Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
	1		Credit 8.1	Daylight and Views—Daylight	1
	1		Credit 8.2	Daylight and Views—Views	1

5 0 1 Innovation and Design Process Possible Points: 6

Y	?	N			
1			Credit 1.1	Exemplary Performance: Double Green Power (EAc6)	1
1			Credit 1.2	Exemplary Performance: 100% of parking covered (SSc7.1)	1
		1	Credit 1.3	Exemplary Performance: Optimize Energy Perf - 50% (EAc1)	1
1			Credit 1.4	Exemplary Performance: On-site Renewable Energy -15% (EAc2)	1
1			Credit 1.5	Innovation in Design: Green Cleaning Program (Owner)	1
1			Credit 2	LEED Accredited Professional	1

1 1 2 Regional Priority Credits Possible Points: 4

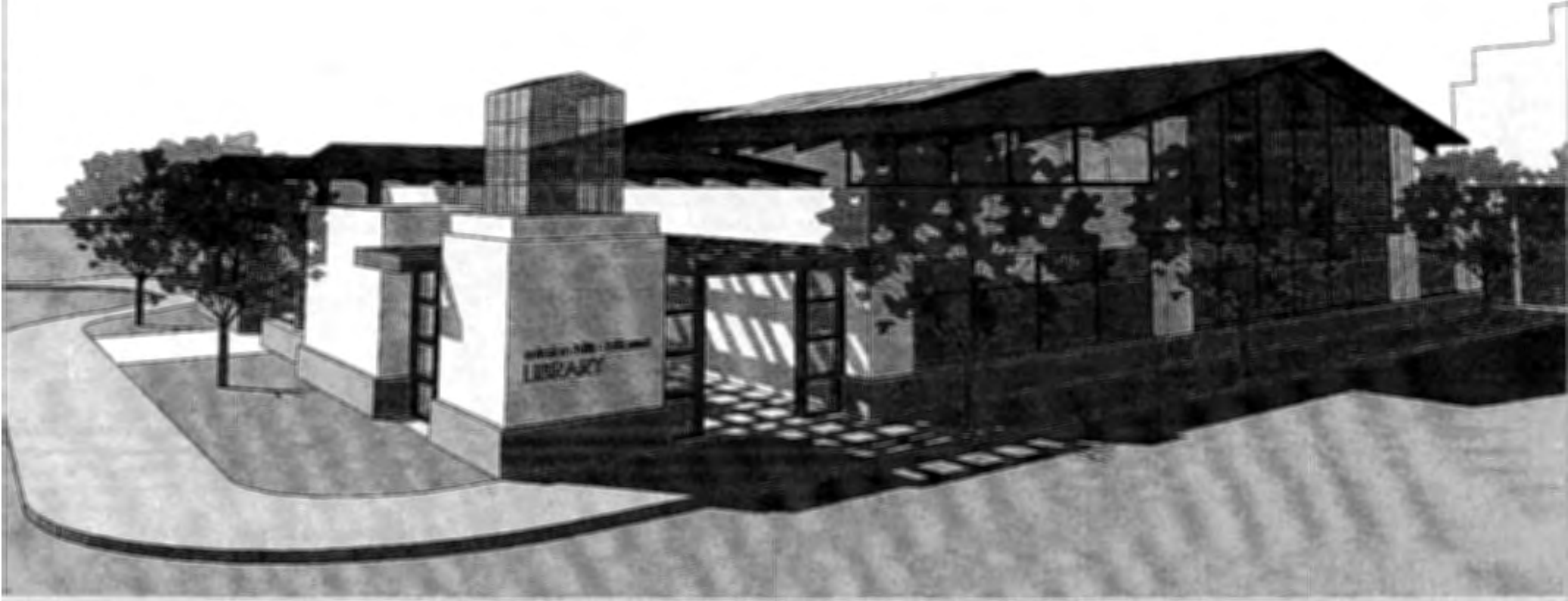
Y	?	N			
1			Credit 1.1	Regional Priority: Renewable Energy, EAc2 (1%) (Zip: 92103)	1
	1		Credit 1.2	Regional Priority: Daylight, EQ8.1	1
		1	Credit 1.3	Regional Priority: WEC2 or WEC3 (40%) or MRC1.1	1
		1	Credit 1.4	Regional Priority: SSc5.2 - Site Dev., Maximize Open Space	1

77 4 29 Total Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

APPENDIX M

MISSION HILLS/HILLCREST LIBRARY ENERGY PERFORMANCE PLATT



Mission Hills/Hillcrest Branch Library

Energy Performance Analysis

September 1, 2015

Architects Mosher Drew

City of San Diego



BRUMMITT ENERGY
ASSOCIATES INC

Contents

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Photovoltaic (PV) & Net Zero Energy	5
3. Daylight and Views (LEED IEQc8.1 & IEQc8.2)	6
Appendix A: Current Design Energy Model Assumptions	7
Appendix B: Design Features	8
Appendix C: Schedules of Operation	9

Disclaimer: Brummitt Energy Associates, Inc. makes no guarantee that energy savings will be achieved as estimated, except that services or work product were performed pursuant to generally accepted standards of practice in effect at the time of performance. Any recommendations which may be made are for the consideration of the architect and engineers; they are not to be used instead of, or as a replacement for, licensed design. Many factors in the construction and operation of the building will affect the energy use, which are outside of Brummitt’s ability to control. This report is based on our understanding of the building design at this time. These results are subject to change with changes to the current design.

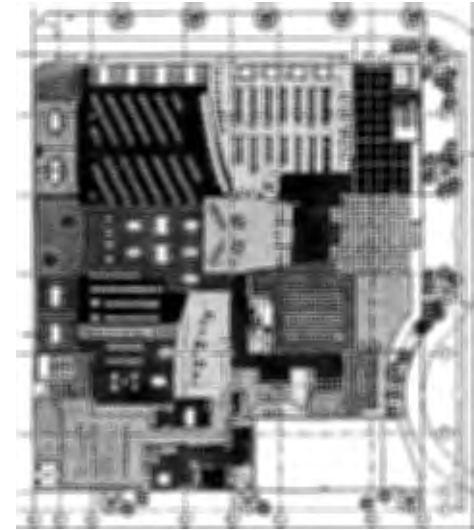
1. Executive Summary

The Mission Hills/Hillcrest Branch Library is a new ~15,800sf public Library located in Hillcrest, San Diego, CA. The project includes 2 levels of subterranean parking. This report provides a review of the current design and evaluates if the energy performance requirements and goals set by the City of San Diego are likely to be met.

Energy Performance Requirements and Goals

The Mission Hills/Hillcrest Branch Library is required to meet the City of San Diego's Sustainable Building Policy requirements, which include the following energy conservation goals:

- Exceed California's Title 24 building energy code by at least 15%.
- Generate a minimum of 15% of the electricity needed for the project using renewable technologies (when site factors allow for a reasonable payback).
 - *Note: the City defines reasonable payback to be less than 10 years (incentives should be included).*
- Achieve LEED-Silver Certification
- Purchase energy efficient equipment (Energy Star).



Floorplan

Summary of Results

- The design exceeds California's Title 24-2013 building energy code by 25%.
- The 28 kW DC PV system is sized to generate $\geq 15\%$ of the electricity needed for the Mission Hills/Hillcrest Branch Library.
- LEED NC 2009 points:
 - EAp2, Minimum Energy Performance: the design meets and exceeds the EAp2 threshold of 10% better than the Baseline.
 - EAc1, Optimize Energy performance: the design, including the 28 kW PV system, is expected to earn 17 points for EAc1.
 - EAc2, On-site Renewable Energy: the 28 kW PV system is expected to earn:
 - 7 EAc2 points
 - 1 ID point
 - 1 Regional Priority Credit
 - IEQc8 Daylight & Views. The design is expected to earn:
 - 1 point for IEQc8.1, Daylight
 - 1 Regional Priority Credit for Daylight
 - 1 point for IEQc8.2, Views

2. Energy Performance Results

Energy Performance Compliance Software

The CA Energy Commission (CEC) requires that as of April 2015 the software that is used to show compliance with Title 24-2013 part 6 uses the CBECC-Com engine. The CEC currently does not recognize Variable Refrigerant Flow HVAC systems, nor can the current version of CBECC-Com model VRF systems; instead the VRF units have to be modeled as neutral efficient Split-DX systems. As a result of this limitation, the Title 24 results do not accurately represent the Library's design.

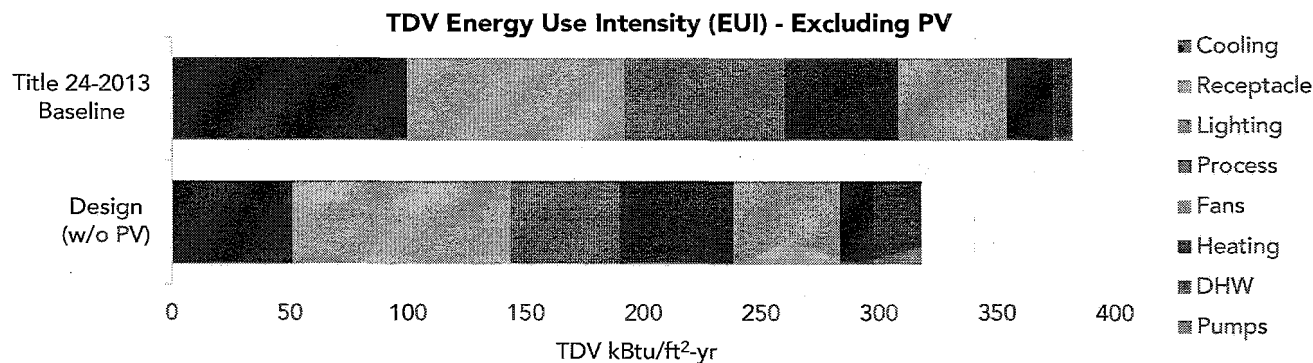
EnergyPro v5, which is used to calculate the LEED NC 2009 Energy Performance does have the capability of modeling VRF systems.

Title 24-2013 part 6 Energy Performance Compliance Results

The Title 24 energy performance of the current design as described in Appendix A: Current Design Energy Model Assumptions on page 7 is listed below:

- ✓ 25% better than Title 24-2013 part 6, exceeding the City of San Diego's Sustainable Building Policy requirement of 15%.

The following graph shows the Title 24-2013 part 6 Energy performance, excluding PV. Note that Title 24 uses Time Depend Value (TDV) Energy use Intensity (EUI) to show compliance.

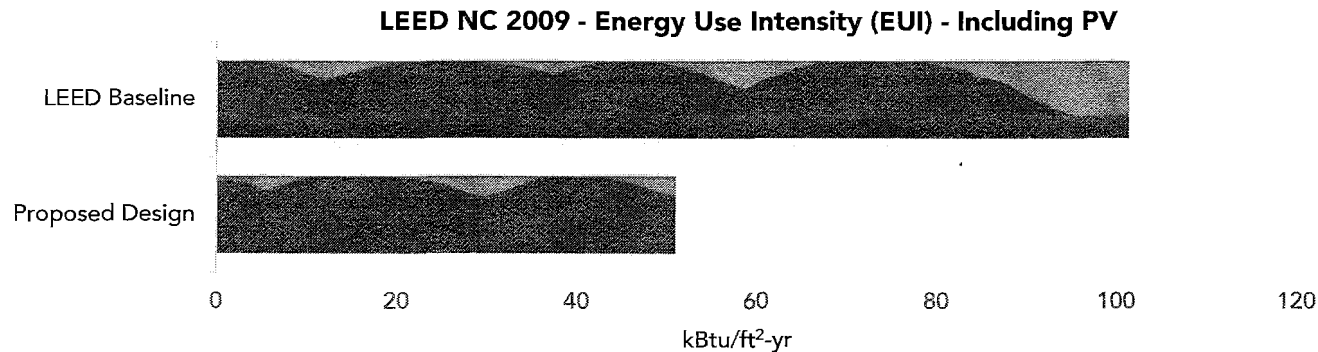


LEED NC 2009 EAp2, EAc1 & EAc2 Results

The LEED EAp2/EAc1 energy cost performance of the current design as described in Appendix A: Current Design Energy Model Assumptions on page 7 is listed below:

- ✓ 40% better than the LEED EAp2 Baseline (which for this project is based on Title 24-2005)
 - This includes a 28 kW DC PV System, sized to offset 15% of the electricity need of the project to satisfy the City’s requirement.
 - This would earn:
 - 17 points for LEED EAc1, Optimize Energy Performance
 - 7 points for LEED EAc2, On-site Renewable Energy + 1 ID Point
 - 1 Regional Priority Credit Point for EAc2, On-site Renewable Energy

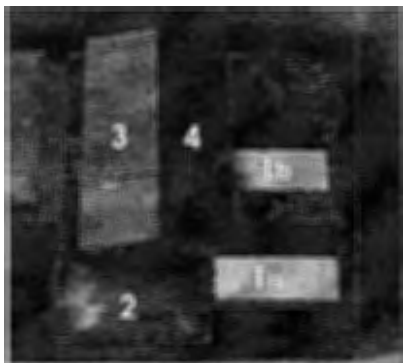
The following graph shows the LEED NC 2009 EAp2/EAc1 Energy Performance. Note that LEED NC 2009 uses Title 24-2005 to determine the Baseline and includes all energy uses on-site (including but not limited to renewable energy (PV), elevators, parking lighting and ventilation, site lighting).



Photovoltaic (PV) & Net Zero Energy

The current design as described in Appendix A: Current Design Energy Model Assumptions on page 7 of this report includes a PV system sized to satisfy the City's requirement of producing a minimum of 15% of the project's annual electricity need from renewable technologies.

If the project's goal would be to achieve Net Zero Energy Capable (NZE Capable), the estimated required PV system size to achieve this goal would be ~185 kW STE DC.



The image to the left shows the Mission Hills/Hillcrest Branch Library roof's annual radiation map. The radiation map shows the solar energy potential of the roof areas and is an excellent tool in identifying the roof areas most suitable for PV.

The sloped roofs facing south have the greatest solar energy potential and would be the optimum location for a photovoltaic system. Other roof areas that could be used for PV are the flat roof on the south and the sloped roofs facing west and east.

Note that if the project's goal is to achieve NZEC, all available roof area might be needed to fit the PV system.

If the project would install a PV system sized for NZEC, the following EAc1 & EAc2 points would be earned:

- 19 points for LEED EAc1, Optimize Energy Performance + 1 ID Point
- 7 points for LEED EAc2, On-site Renewable Energy + 1 ID Point
- 1 Regional Priority Credit Point for EAc2, On-site Renewable Energy

3. Daylight and Views (LEED IEQc8.1 & IEQc8.2)

The Mission Hills/Hillcrest Branch Library project has the potential to earn the both the Daylight (IEQc8.1) and the Views (IEQc8.2) points. Note that if the Daylight (IEQc8.1) points is earned, one additional Regional Priority Credit will also be earned based on the projects location.

LEED NC 2009 Daylight and Views – Possible Points:

- 1 points for IEQc8.1, Daylight
- 1 points for IEQc8.2, Views
- 1 Regional Priority Credit Point for IEQc8.1, Daylight

Note that in addition to creating a comfortable and beautiful spaces for the occupants, daylight harvesting is crucial in achieving an energy efficient design. Studies have shown that an effective daylight design, coupled with automatic daylighting controls, can reduce the hours that lights are on by 20-60%.

Appendix A: Current Design Energy Model Assumptions

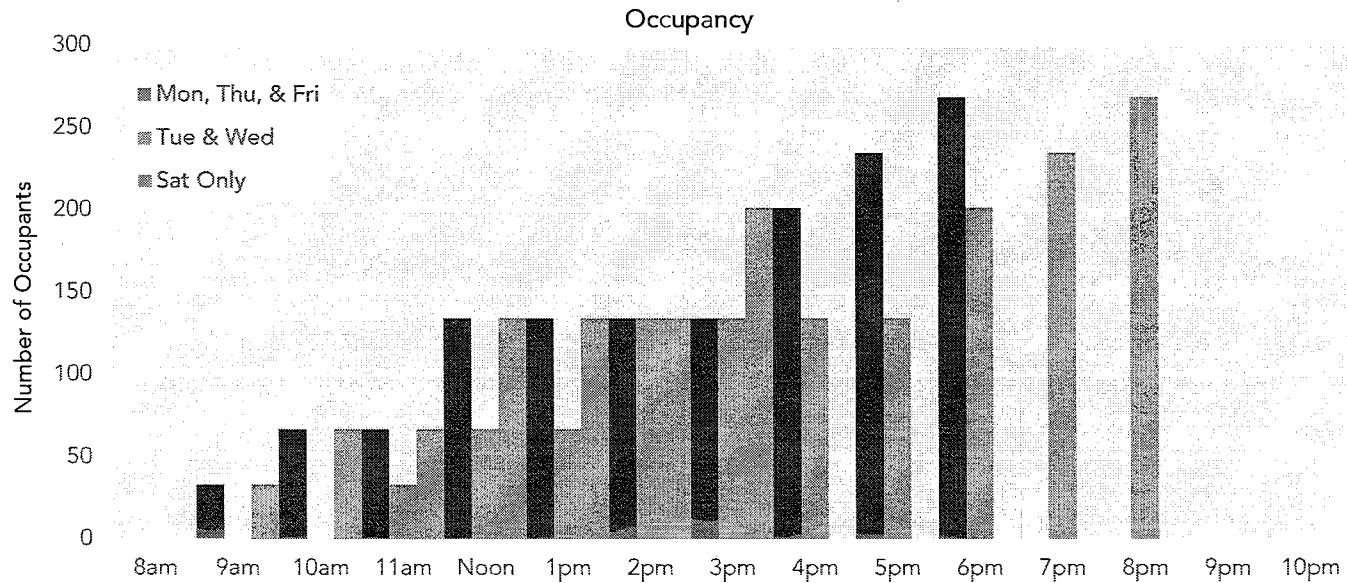
To better estimate the real-world energy consumption of the Mission Hills/Hillcrest Branch Library, the operating hours listed below have been used instead of Title 24 standard operating hours. The operating schedules used in the energy analysis are included in Appendix C.

Hours of Operation (based upon expected branch hours after November 8th, 2014)

Mon	Tue	Wed	Thu	Fri	Sat	Sun
9:30am – 6pm	11:30am – 8pm	11:30am – 8pm	9:30am – 6pm	9:30am – 6pm	9:30am – 3pm	CLOSED

Number of Occupants

The following charts shows both the operating hours adjusted as described above and the occupant diversity, i.e. the number of occupants for each hour of the day, as used in the energy analysis.



Appendix B: Design Features

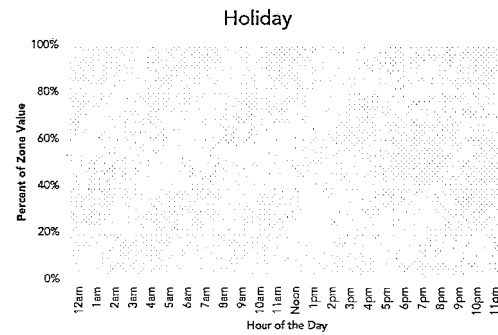
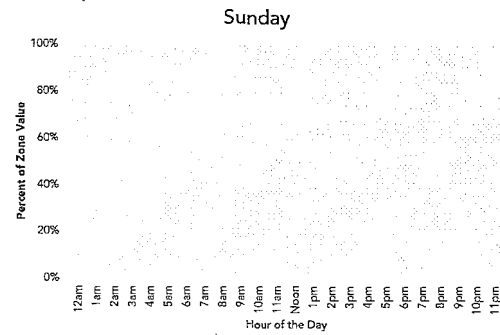
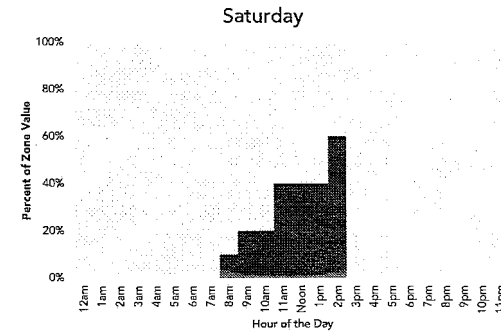
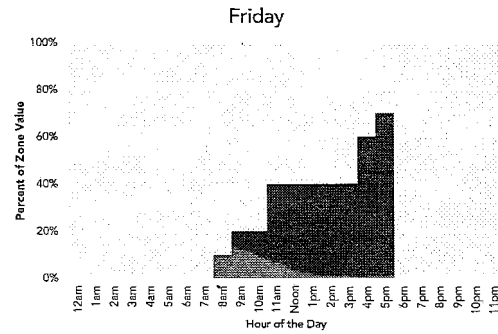
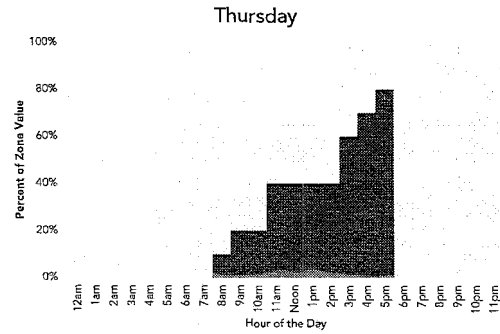
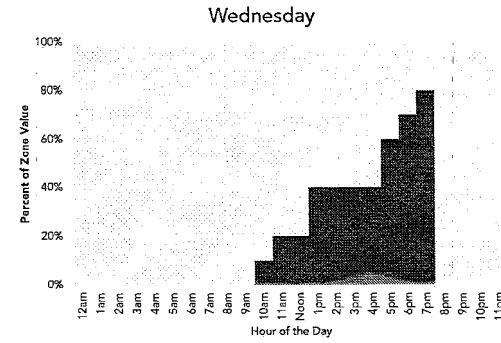
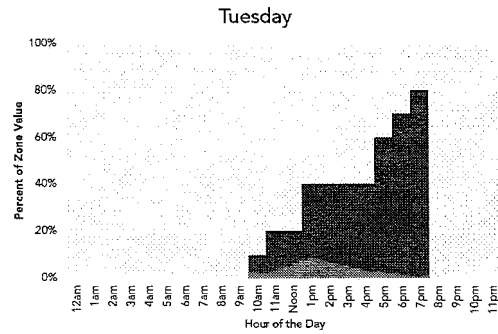
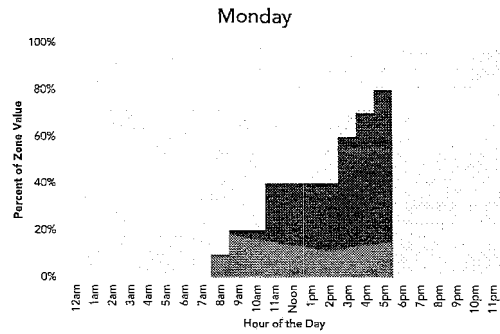
The following tables provide a list of the floor area, envelope, mechanical, and electrical design features included in the provided energy model. The contents of these tables should be verified by the design team to ensure consistency with the actual design.

Bldg. Feature	Proposed Design
Floor Area	Main Library: ~15,800sf Subterranean Parking Garage: ~34,900 sf
Energy Rates	Electricity: SDG&E AL-TOU Secondary ~\$0.20/kWh blended rate
Indoor Temperature Set-points	Heating 70° Cooling 72°
Walls	R-19 batt in 6" metal stud + R-4 continuous insulation – U = 0.105
Flat Roof	3" (R-17.4) continuous insulation above metal deck - U = 0.05 Cool roof membrane
Sloped Roof	R-30 batt insulation between metal trusses/purlins - U = 0.063 Standing seam metal roof
Floor	Uninsulated 12" concrete slab above parking + carpet U = 0.269
Glazing	PPG SolarBan 60 Clear on all elevations U = 0.29 / SHGC = 0.38 / VT = 70%
Folding Glass Door	NanaWall SL70 - Double IG low-E Clear: U = 0.390 / SHGC = 0.270
Receptacle Loads	Title 24 default Receptacle Loads for each occupancy type
Data/Server Loads	2.0 kW total
Elevator	40 HP, usage is based on expected number off occupants and building usage

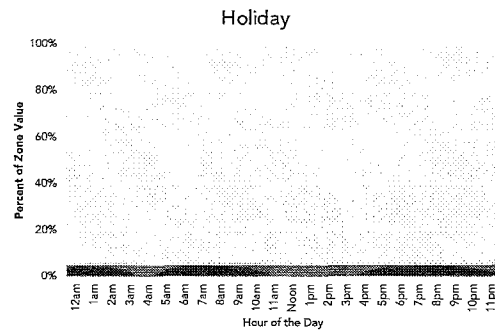
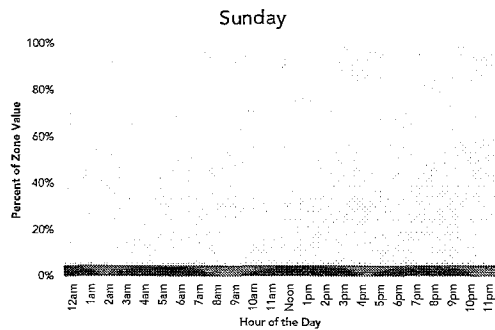
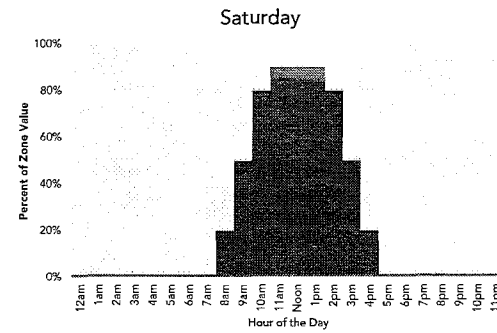
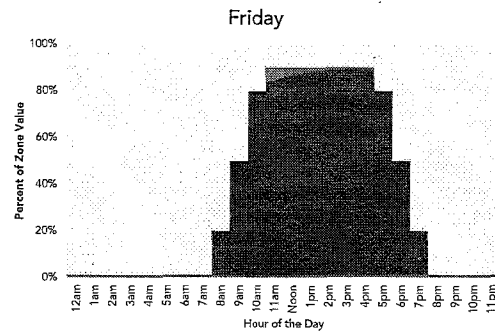
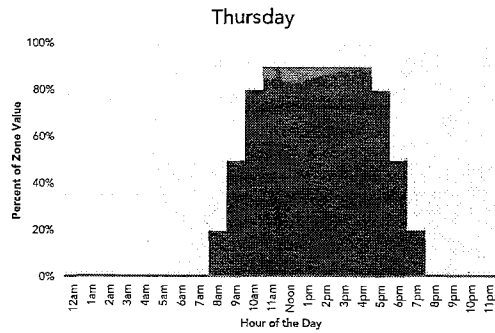
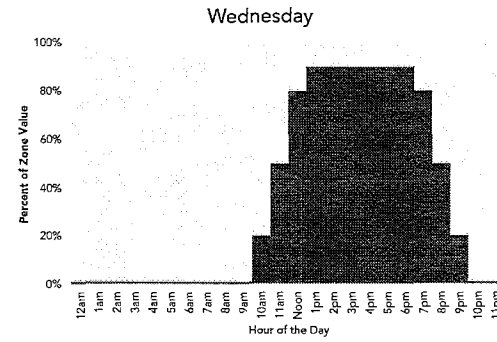
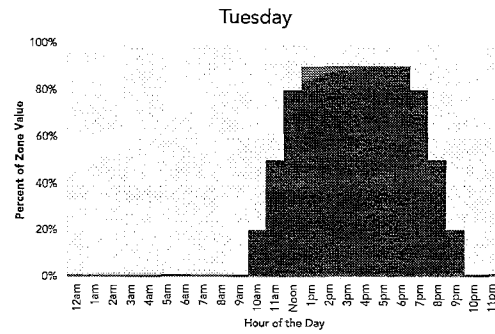
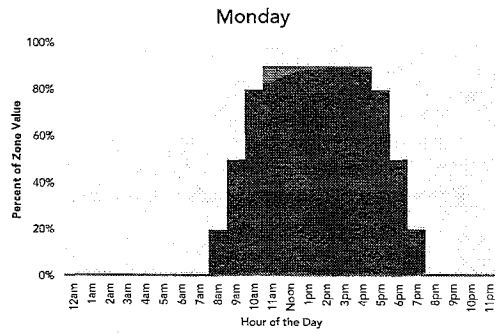
Bldg. Feature	Proposed Design
Window Frame	Metal frame, no thermal break
Overhangs & Side Fins	As Designed
Skylights	Kalwall: U = 0.29 / SHGC = 0.28 / VT = 70%
Interior Lighting Power Density (LPD)	Library Design Target LPD = 0.80 w/sf Parking Garage design target LPD = 0.2 w/sf
Exterior Lighting	Design Target 1,500 Watt
HVAC	Library: VRF System Data/Server Rooms: Split-DX
Outside Air Supply	Variable Speed Supply Fan
Parking Garage Ventilation	Variable Speed Exhaust Fan CO sensor control
Domestic Hot Water (DHW)	Electric Resistance Water Heater
Solar Hot Water	No Solar Hot Water system
PV	28 kW DC system (15% of electricity use) ~1,350 kWh/kW

Appendix C: Schedules of Operation

Library - Occupants

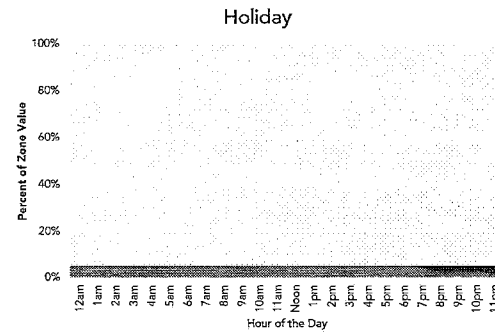
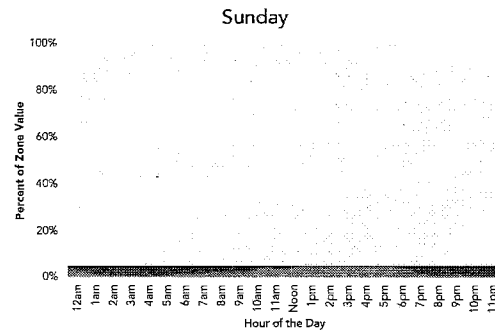
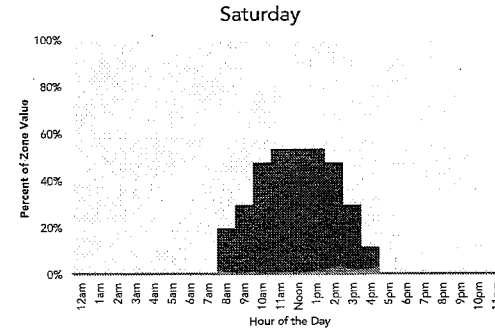
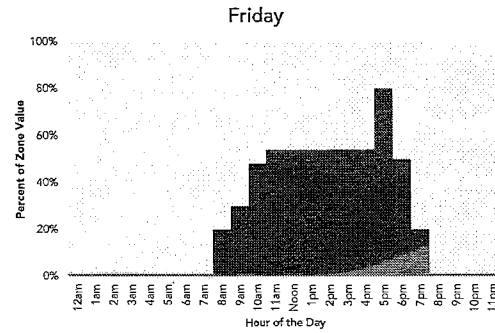
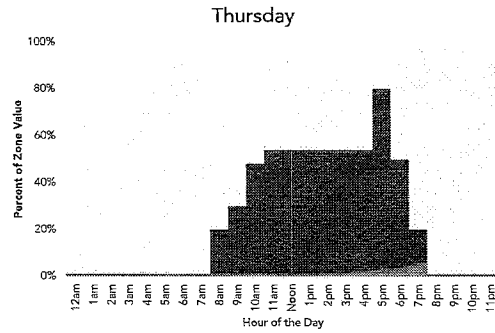
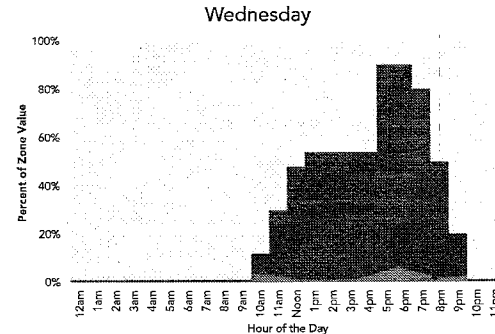
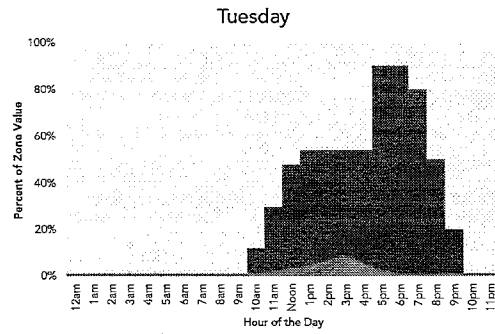
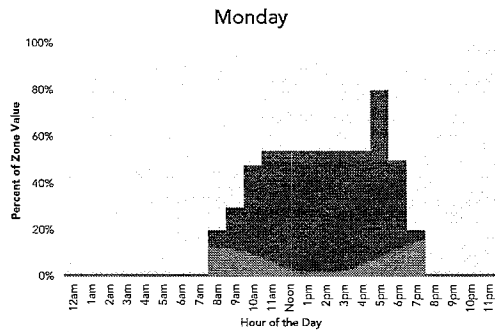


Library - Lighting



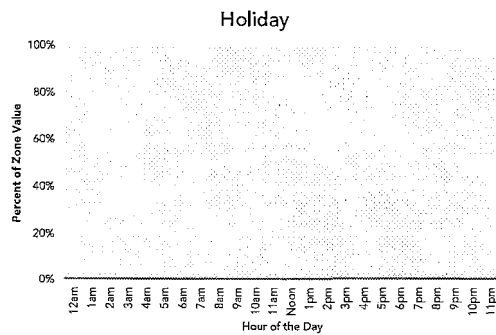
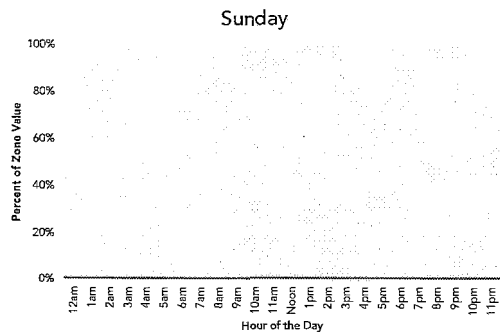
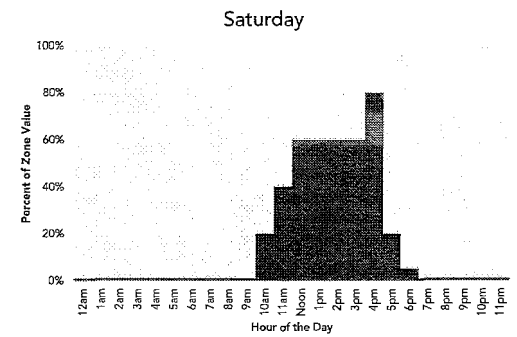
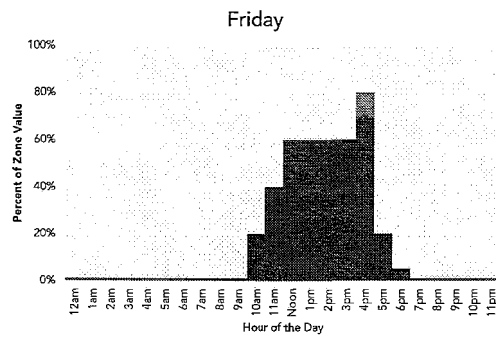
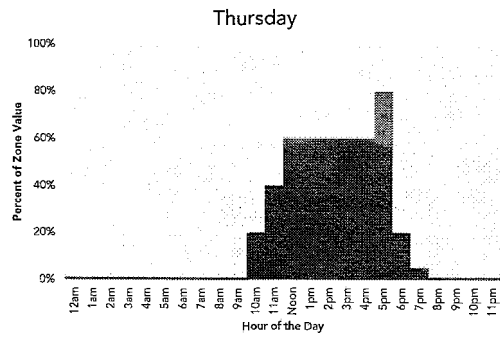
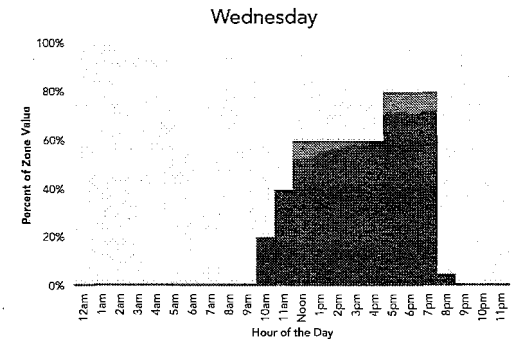
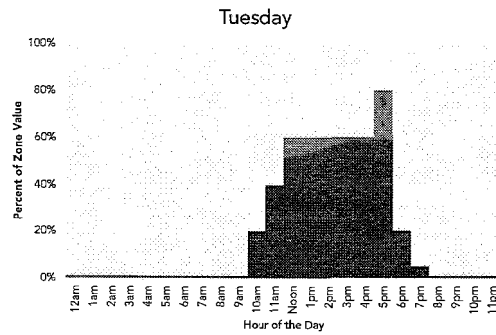
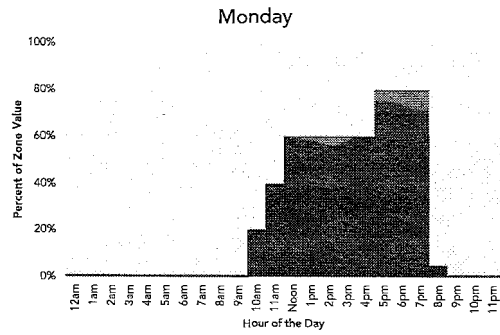
Mission Hills/Hillcrest Branch Library: Energy Performance Analysis

Library - Lighting (Daylighting)



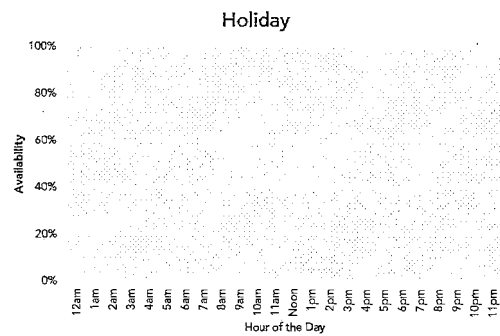
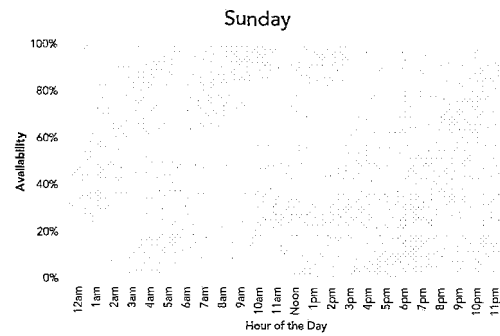
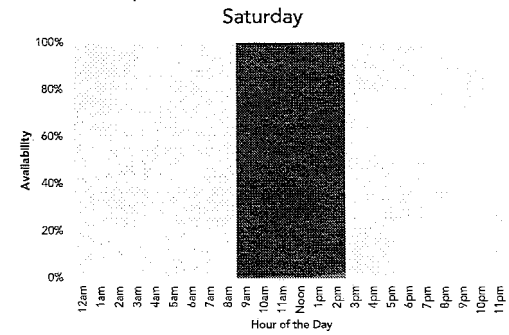
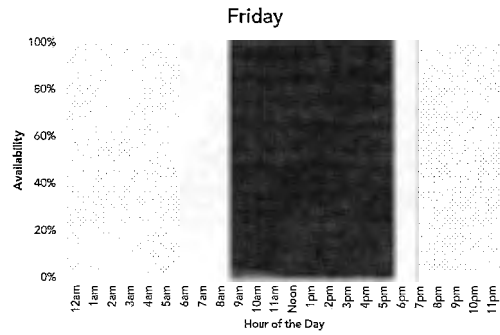
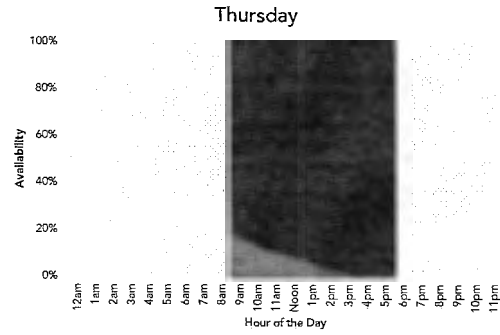
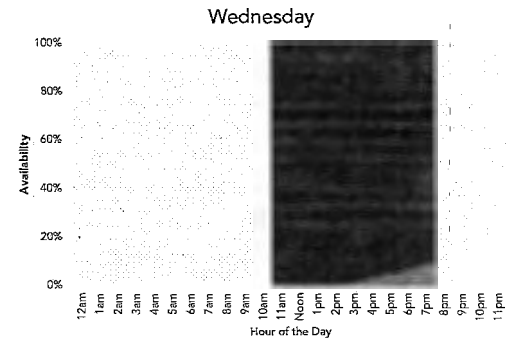
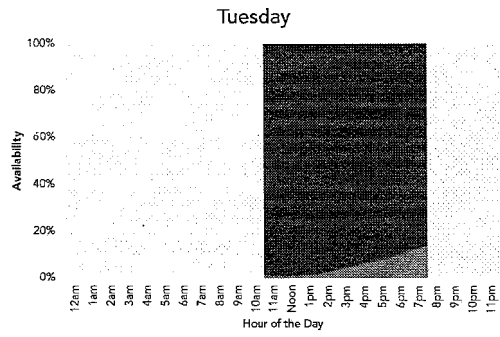
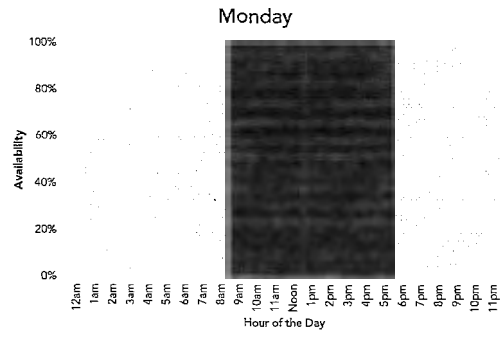
Mission Hills/Hillcrest Branch Library: Energy Performance Analysis

Library - Receptacle & Process

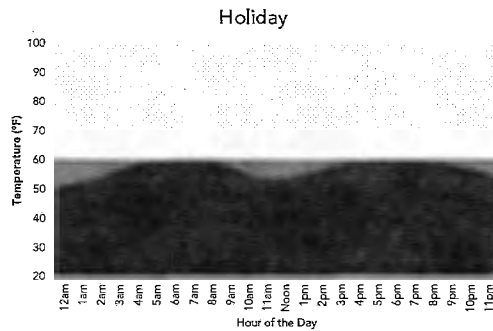
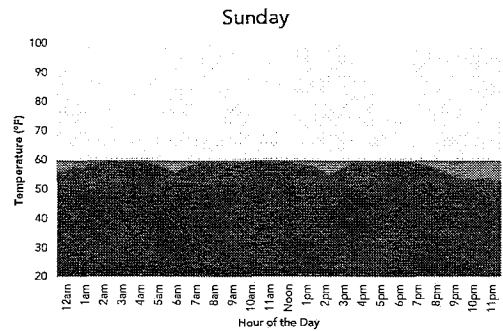
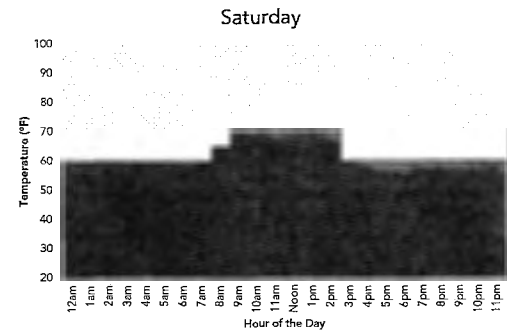
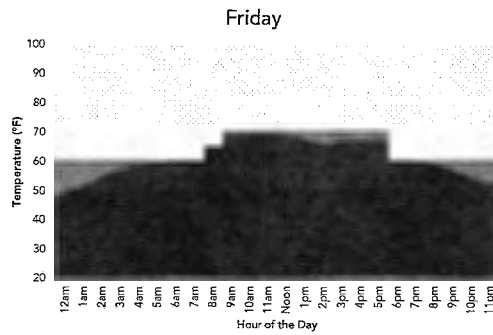
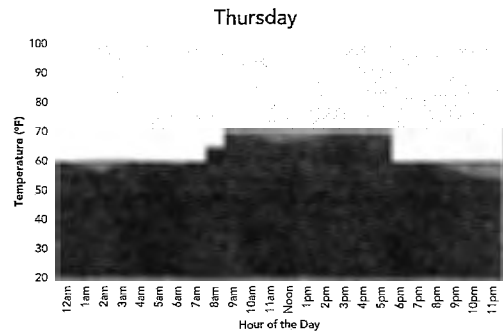
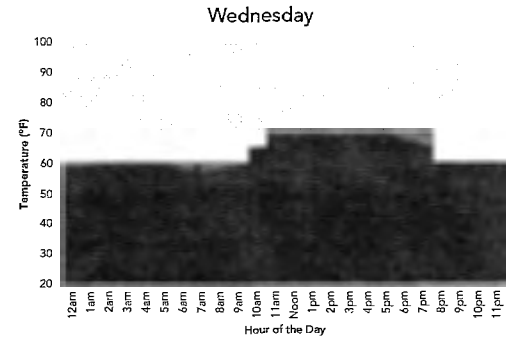
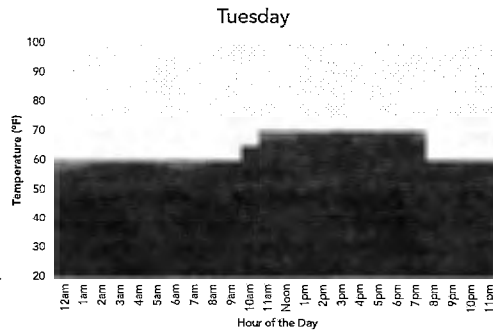
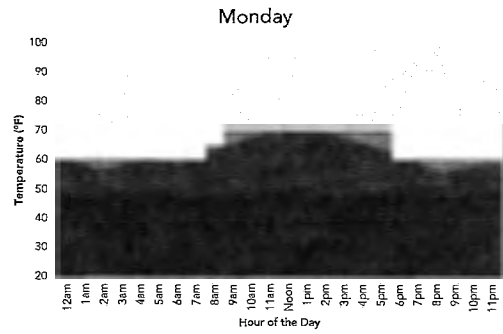


Mission Hills/Hillcrest Branch Library: Energy Performance Analysis

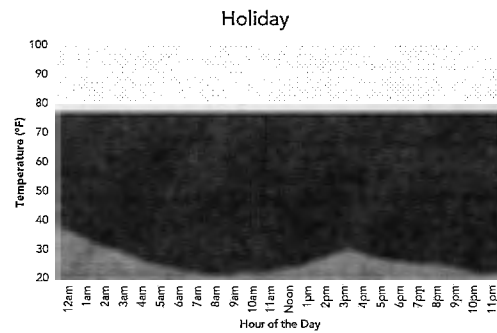
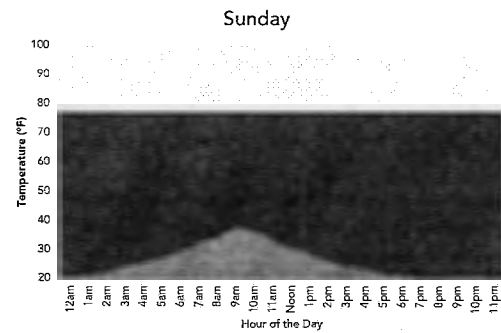
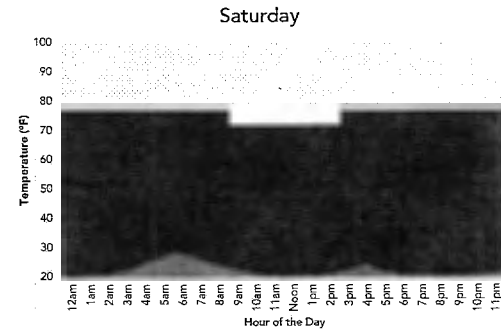
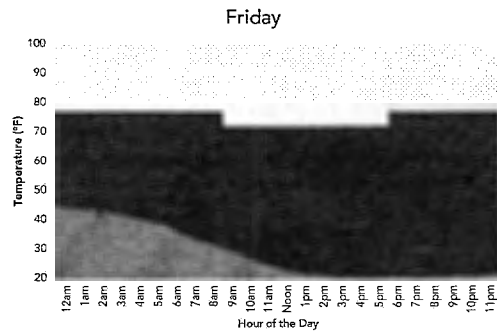
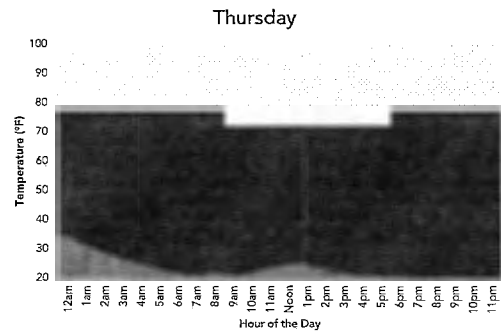
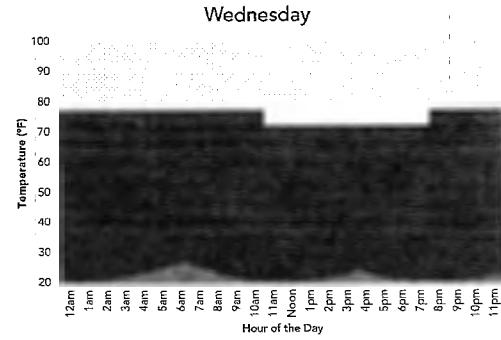
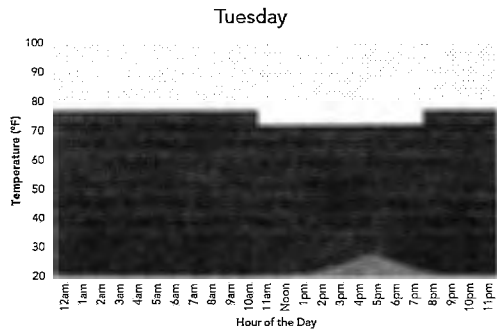
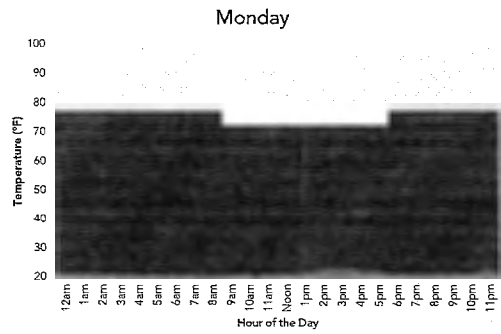
Library - Fans



Library - Heating

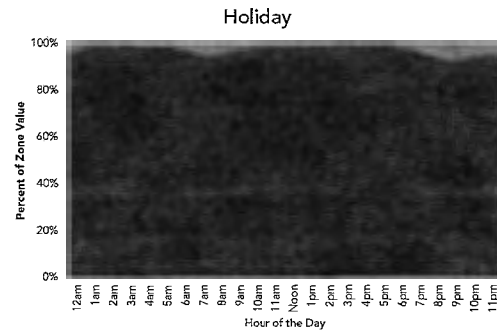
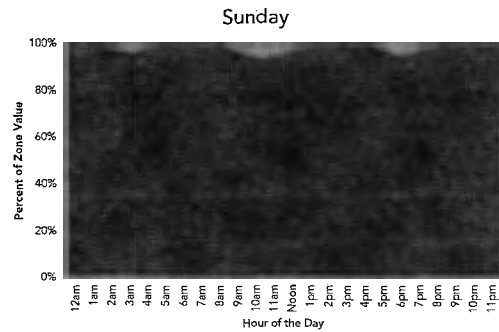
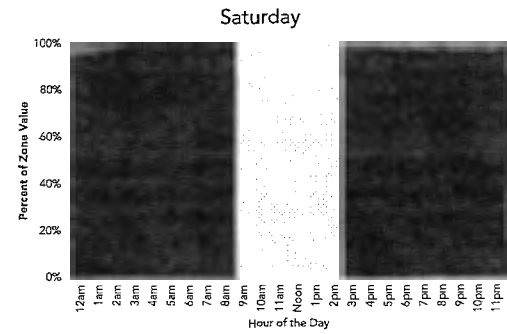
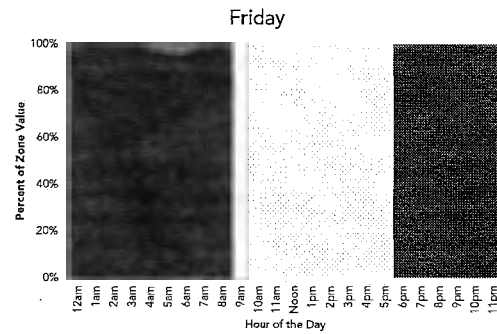
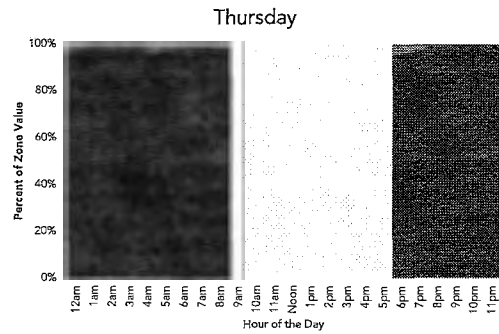
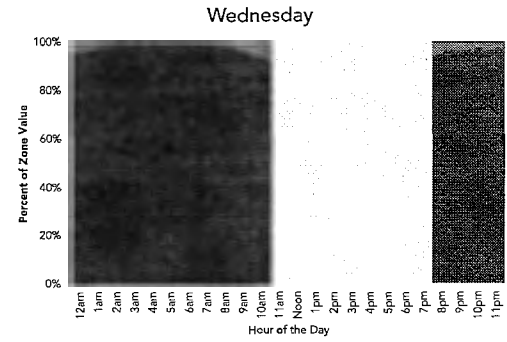
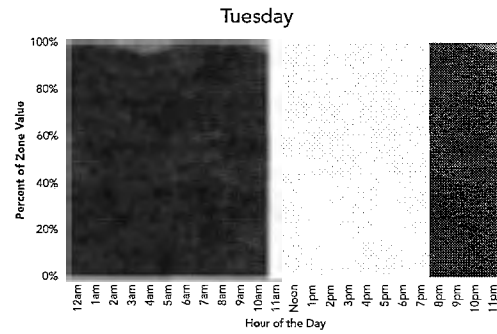
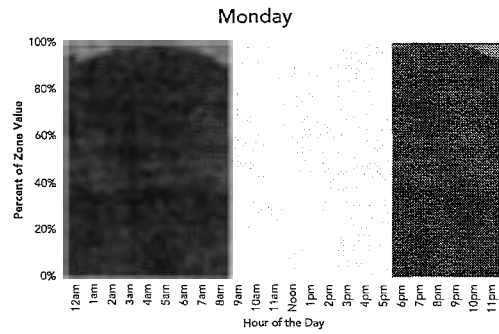


Library - Cooling



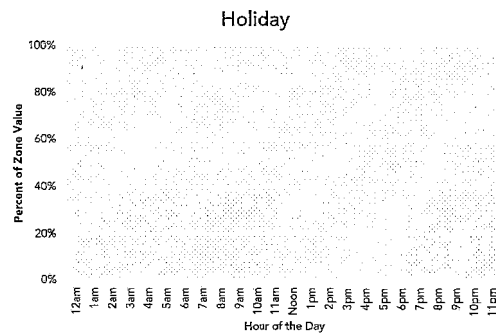
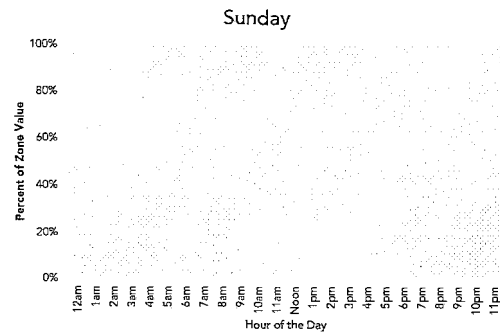
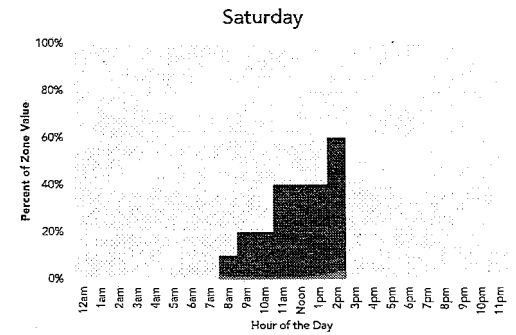
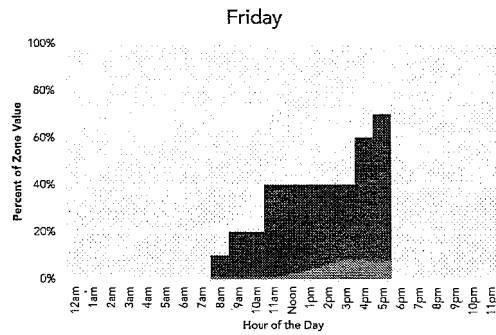
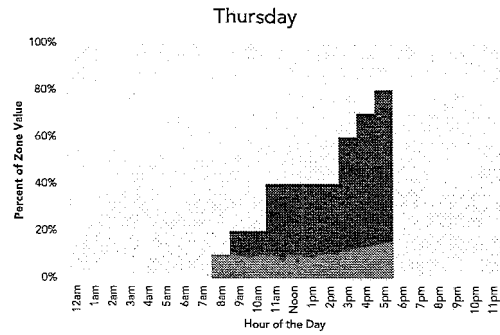
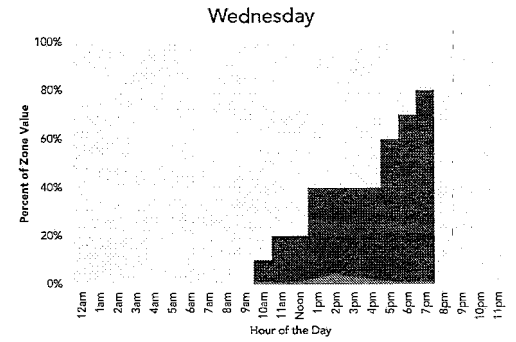
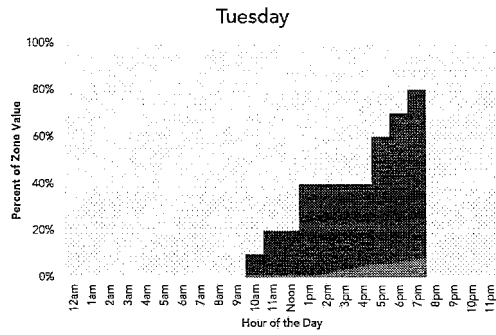
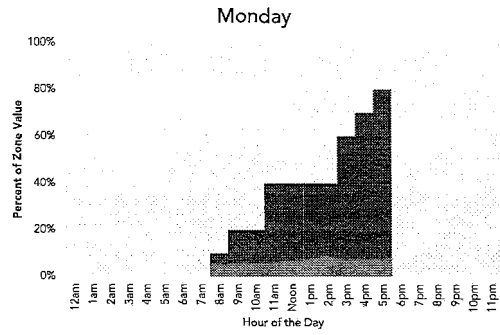
Mission Hills/Hillcrest Branch Library: Energy Performance Analysis

Library - Infiltration



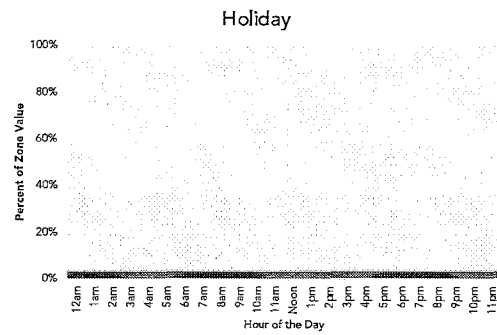
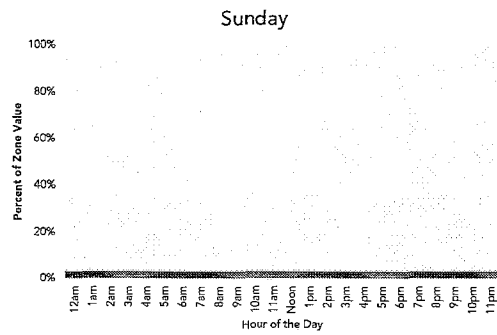
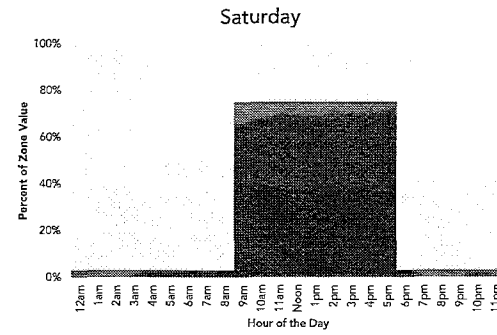
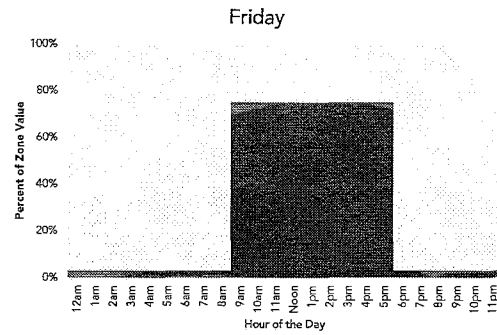
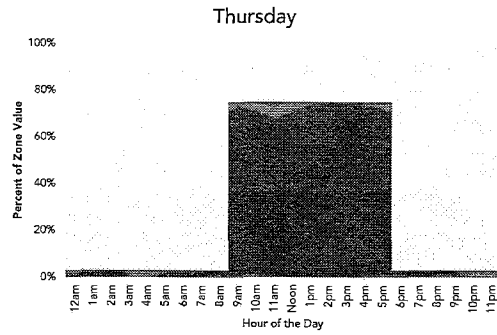
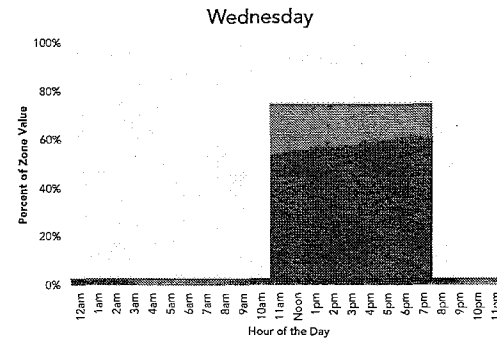
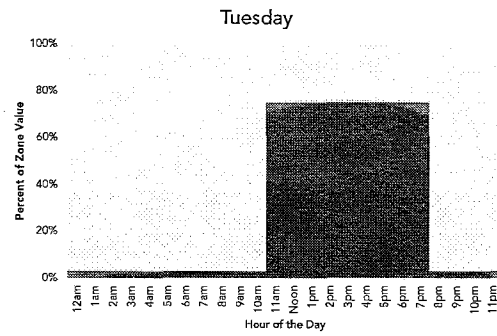
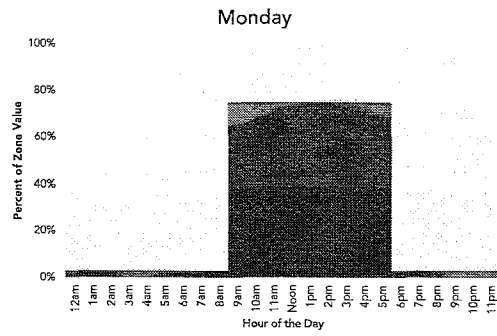
Mission Hills/Hillcrest Branch Library: Energy Performance Analysis

Library - Water Heating

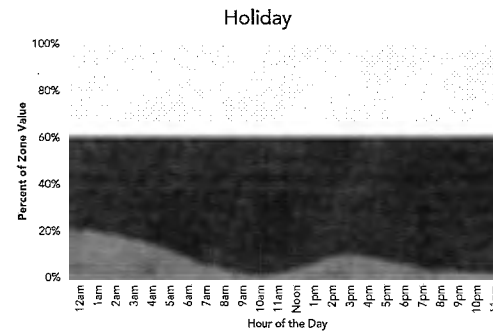
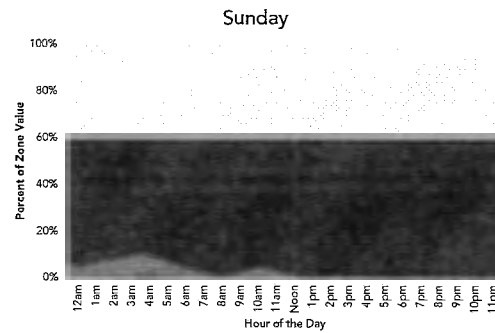
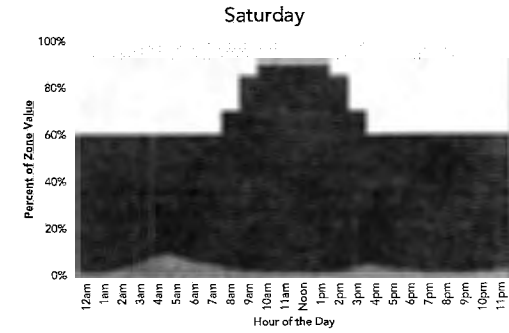
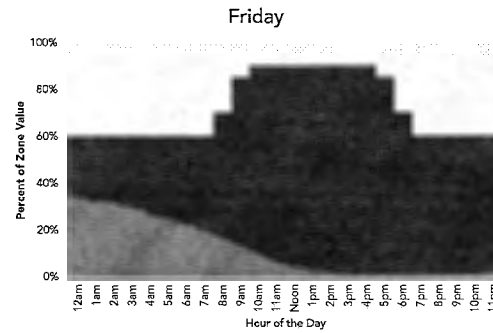
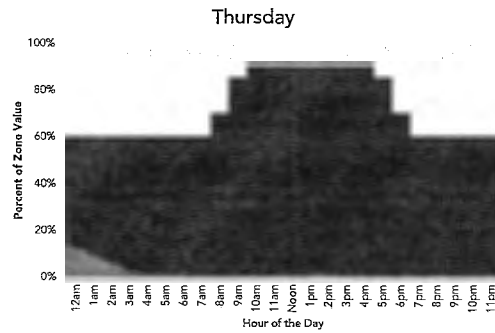
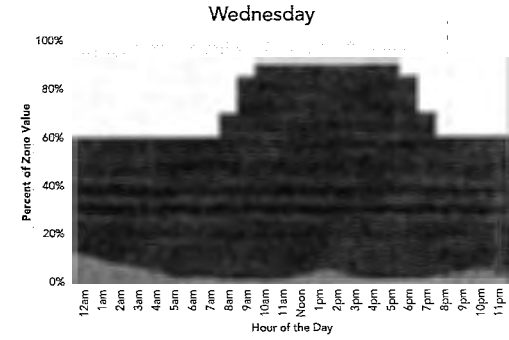
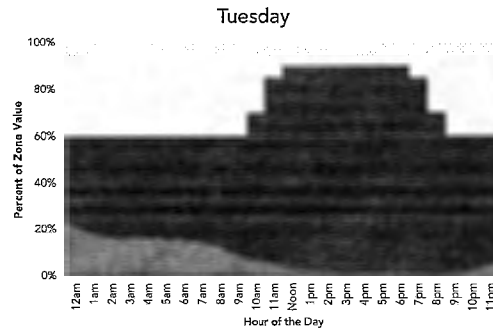
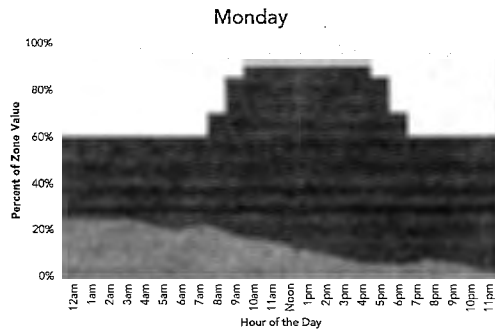


Mission Hills/Hillcrest Branch Library: Energy Performance Analysis

Parking - Lighting

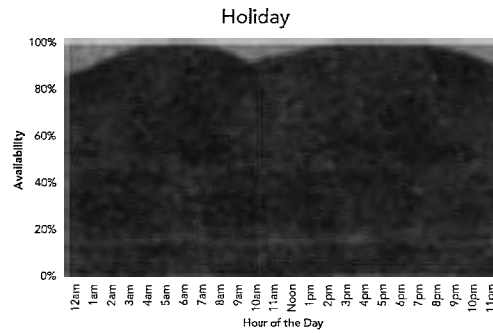
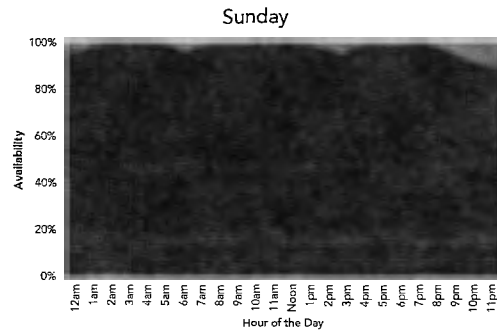
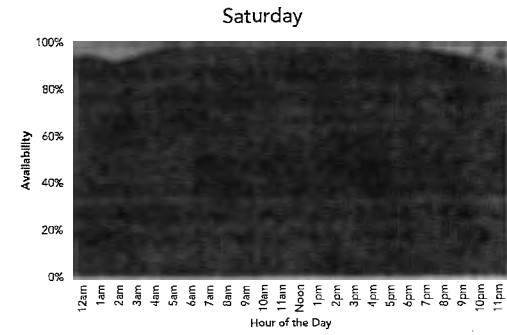
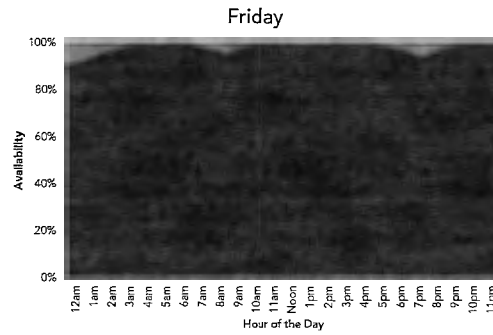
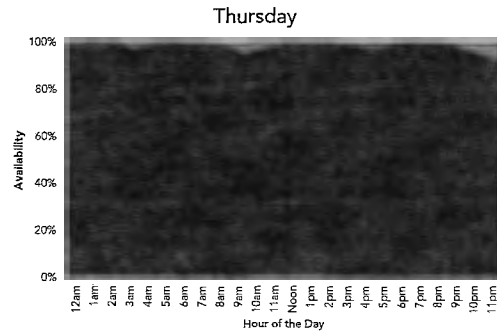
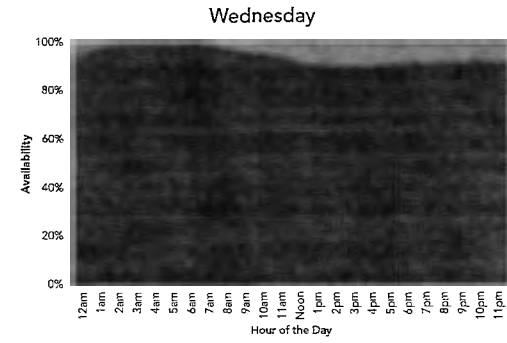
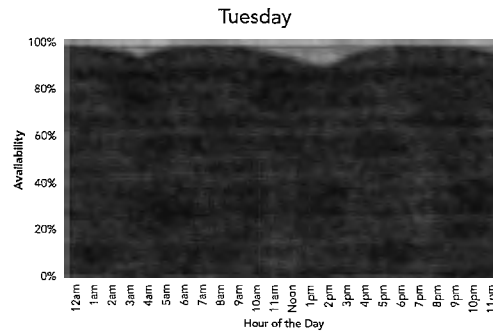
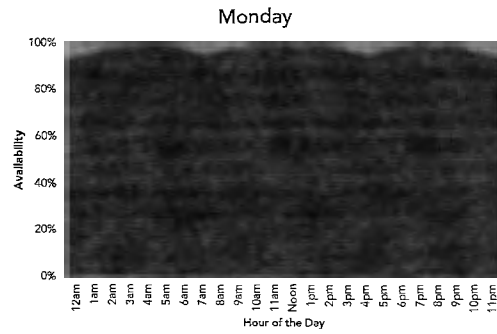


IT Room - Process & Receptacle



Mission Hills/Hillcrest Branch Library: Energy Performance Analysis

IT Room - Fans



APPENDIX N
LEAD ABATEMENT SPECIFICATION



THE CITY OF SAN DIEGO



LEAD ABATEMENT SPECIFICATION

for

**IBEW Building
at
215 W. Washington St.
San Diego, CA 92103**

October 21, 2015

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CDPH IA/PM #20618

Reviewed by:

Michael Anderson
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Asbestos & Lead Management Program
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San Diego, CA 92123
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DIVISION 01 - GENERAL REQUIREMENTS

1.1 SUMMARY SCOPE OF WORK

- 1.1.1 Remove all lead containing ceramic wall tile located within restrooms throughout the facility.

If any materials are to be impacted outside of that listed within the sampling table in Appendix C, contact the Project Monitor as additional sampling may be required.

1.2 CONTRACTOR USE OF THE PREMISES

All site rules and regulations affecting the work should be complied with while engaged in project activities. The existing building should be maintained in a safe condition throughout the lead abatement. The Contractor will be responsible for adhering to all applicable building codes and fire safety requirements.

All public areas will be kept free of accumulated waste, materials, rubbish, and debris.

1.3 PROJECT COORDINATION

It will be the responsibility of the Contractor to coordinate all site activities with the City's Asbestos & Lead Management Program's Project Monitor including any meetings, surveys, special reports, and site usage limitations.

1.4 PROJECT SUBMITTALS

The contractor shall not commence any work until approval has been given from the City. The Contractor shall submit the following at least 30 days prior to commencement of any lead abatement:

1. Method, equipment, and materials for lead related construction activities
2. Site plan indicating areas of work and lead decontamination facilities, if necessary
3. A description of methods to be used to control dispersion of dust to the interior and exterior of the building
4. Methods used to assure the safety of workers and visitors to the site
5. Respiratory protection program
6. Copies of Blood Lead Levels and Zinc Protoporphyrin tests
7. A list of employees who will be performing the work and the supervisor in charge of the project
8. Employee proof of lead training and Certificates of Worker's Acknowledgment not previously submitted*

9. Prior to any abatement activities the contractor must submit a CDPH Form 8551 (Abatement of Lead Hazards Notification) to the Compliance and Enforcement Unit of the CLPPB. The Form 8551 must be posted at the entrances to the property at least 5 days prior and during abatement activities.*
10. Submit Cal/OSHA pre-job notification for lead-related construction work per Title 8 CCR 1532.1 subsection (p), "Lead-Work Pre-Job Notification".
11. Permits, notifications, and licenses needed to perform work (including hazardous waste hauler's registration)
12. The timing and projected completion date of the work.
13. Site specific contingency plan (for emergencies including fire, accident, power failure, or any other event that may require notification, decontamination, or work area isolation procedures)
14. Estimation of the type and amount of waste to be generated
15. Any special reports

* The Contractor will be required to submit training certificates for any "new" employees in the project-specific package.

At the end of a project, the Contractor shall submit the following to the Project Monitor:

1. Personal Air Sample Results
2. Copies of Project Daily Logs
3. Containment Entry/Exit Logs
4. Waste Disposal Documentation
5. Certificate of Visual Inspection

1.5 SCHEDULES AND REPORTS

Prior to each phase of project, the Contractor shall provide the City with a tentative time line which outlines the project schedule. These documents will be reviewed and approved by the City prior to the commencement of work.

1.6 PRODUCT DATA

The Contractor shall submit product information that is to be used during the lead abatement activities prior to commencement of work (i.e., encapsulants). General information required on product data includes manufacturer's standard printed recommendations for application and use, compliance with recognized standards of trade association and testing agencies, and material safety data sheets (MSDSs).

1.7 PROJECT CLOSE-OUT

Upon completion of work and prior to payment, the Project Monitor will proceed with an initial inspection of the lead hazard control area. A Certificate of Visual Inspection (Appendix

B) will be signed by both the Contractor and Project Monitor. The abatement is not complete until the Project Monitor has conducted and passed project-specific clearances.

DIVISION 02 - DEFINITIONS

2.1 DEFINITIONS

- 2.1.1 Abatement: Any set of measures designed to permanently eliminate lead based paint hazards including paint removal, building component removal, or near-permanent enclosure of lead based paint hazards.
- 2.1.2 Accredited or Accreditation: (when referring to a person or laboratory): A person or laboratory having the appropriate accreditation as described in the specific section of this specification.
- 2.1.3 Action Level: An 8-hour time weighted average (TWA) lead airborne concentration of $30 \mu\text{g}/\text{m}^3$.
- 2.1.4 Air Monitoring: The process of measuring the airborne concentrations of a contaminant.
- 2.1.5 Authorized Visitor: The Owner, the Owner's Representative, testing lab personnel, the Architect/Engineer, emergency personnel or a representative of an Federal, State and local regulatory or other agency having authority over the project.
- 2.1.6 Containment: A process for protecting both workers and environment by controlling exposures to lead dust and debris created during abatement.
- 2.1.7 Contaminate: Refers to lead-containing dust/debris.
- 2.1.8 Contractor: Refers to the Lead Hazard Control contractor.
- 2.1.9 Demolition: The wrecking or taking out of any building component, system, finish or assembly of a facility together with any related handling operations.
- 2.1.10 Deteriorated Lead-Based Paint: Any interior or exterior lead based paint that is peeling, chipping, blistering, flaking, worn, chalking, alligating, cracking, or otherwise separating from the substrate, or located on any surface or fixture that is damaged or deteriorated.
- 2.1.11 Encapsulation: Any covering or coating that acts as a barrier between lead based paint and the environment and that relies on adhesion and the integrity of the existing paint bonds between layers and with the substrate for its durability.
- 2.1.12 Enclosure: The use of rigid durable construction materials that are mechanically fastened to the substrate in order to act as a barrier between lead based paint and the living or work space.

- 2.1.13 Exterior Window Sill: The portion of the horizontal window sill that receives the window sash when closed, often located between the storm window and the interior window sash (sometimes called the window well). If there is no storm window, the exterior window sill consists of the portion of horizontal window trim immediately outside the window sash when closed.
- 2.1.14 Friction Surface: Any interior or exterior surface subject to abrasion or friction, such as windows or stair treads.
- 2.1.15 HEPA Filter: A high Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97% of all mono-dispersed particles greater than 0.3 microns in diameter or larger.
- 2.1.16 HEPA Filter Vacuum Collection Equipment (or vacuum cleaner): High efficiency particulate air filtered vacuum collection equipment with a filter system capable of collecting and retaining lead.
- 2.1.17 High Phosphate Detergent: Detergent which contains at least 5% tri sodium phosphate.
- 2.1.18 Impact surface: Any interior or exterior surface subject to damage by repeated impacts, such as surfaces on doors and door jambs.
- 2.1.19 Interim Controls: A set of measures designed to reduce temporarily human exposure or likely exposure to lead based paint hazards, including dust removal, paint stabilization, treatment of friction/abrasion points, and treatment of bare soil.
- 2.1.20 Interior Window Sill: The portion of the horizontal window ledge that protrudes into the interior of the room, adjacent to the window sash when closed; often called the window stool.
- 2.1.21 Lead: Means metallic lead, all inorganic lead compounds, and organic lead soaps.
- 2.1.22 Lead-Based Paint (LBP): For purposes of this project, LBP refers to the materials identified in these specifications as having paint that contains lead.
- 2.1.23 Lead-Related Construction Project Monitor: Means an individual who oversees lead-related construction work to ensure that contract plans and specifications are followed. This person must have received certification as a lead-related construction Project Monitor.
- 2.1.24 Lead-Related Construction Supervisor: Means an individual who is responsible for implementing lead-related construction work and enforcing work practices. This person must have received certification as a lead-related construction Supervisor.

- 2.1.25 Lead-Related Construction Work: Means any construction, alteration, painting, demolition, salvage, renovation, repair, or maintenance of a building, including preparation and cleanup, by disturbing lead-containing material that may result in exposure of individuals to lead.
- 2.1.26 Lead-Related Construction Worker: Means any individual who performs lead-related construction work in a building under the direction of lead-related construction Supervisor, and has received certification as a lead-related construction Worker.
- 2.1.27 Owner: Refers to the City of San Diego
- 2.1.28 Paint film stabilization: The process of using wet scraping, priming, and repainting a deteriorated lead based paint film in a dwelling including clean-up and clearance.
- 2.1.29 Paint removal: A strategy of abatement which entails removing lead based paint from surfaces of components using chemicals, heat guns below 11000F, and certain contained abrasive methods but not open flame burning, open abrasive blasting, sandblasting, water blasting, extensive dry scraping, or methylene chloride removers.
- 2.1.30 Permissible Exposure Limit (PEL): An 8-hour TWA lead airborne concentration of 50 µg/m³.
- 2.1.31 Personal Monitoring: Sampling of contaminant concentrations within the breathing zone of an employee.
- 2.1.32 Project Monitor: City of San Diego Asbestos & Lead Management Program staff or their designated consultant
- 2.1.33 Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.
- 2.1.34 RRP: EPA's Renovation, Repair and Painting certification that requires contractor training and lead-safe work practices when performing renovation type activities in housing built prior to 1978.
- 2.1.35 Replacement: A strategy of abatement which entails the removal of components such as windows, doors, and trim that have lead painted surfaces and installing new components free of lead paint.
- 2.1.36 Respirator: A device designed to protect the wearer from the inhalation of harmful contaminants.
- 2.1.37 Testing Laboratories: A "testing laboratory" is an entity engaged to perform specific inspections or tests, either at the project site or elsewhere, and to report on, and, if required, to interpret results of, those inspections or tests.

- 2.1.38 Time-Weighted Average (TWA): The average concentration of a contaminant in air during a specific time period.
- 2.1.39 Trigger Tasks: Work tasks that require an employer to assume specified employee exposures until the employer has performed an exposure assessment [see T8CCr, 1532.1 (d) (2)].
- 2.1.40 Wet Cleaning: The process of eliminating lead contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with amended water or diluted removal encapsulant and afterwards thoroughly decontaminated or disposed of appropriately
- 2.1.41 Work Area: The area where abatement work operations are performed which is defined and/or isolated to prevent the spread of contamination, and entry by unauthorized personnel.

DIVISION 03 - SITE WORK

3.1 INTRODUCTION

This portion of the specification describes procedures and protocols for lead abatement activities. The protocols/procedures described hereafter are in accordance with federal/state/local requirements. In the absence of these requirements, the procedure/protocols are based on current industry standards.

3.2 BACKGROUND INFORMATION

Sampling has been performed by inspectors from the City's Asbestos and Lead Management Program (ALMP) and has been provided in Appendix C of this specification. Waste characterization sample costs are the responsibility of the contractor.

3.3 GENERAL INFORMATION

3.3.1 Potential Lead Hazard

The disturbance of LBP may cause exposure to workers and building occupants. All workers, supervisory personnel, subcontractors, and consultants who will be at the job site, need to be apprised of the seriousness of the hazard and of proper work practices which must be followed to minimize exposure to lead-containing dust. The procedures and methods described herein must be followed and the Contractor must comply with all applicable federal/state/local requirements.

3.3.2 Stop Work

If the Project Monitor presents a verbal or written stop work order, the Contractor shall immediately and automatically stop all work. Recommencement of the work may not begin until authorized by the Project Monitor.

3.4 PROJECT ADMINISTRATION

3.4.1 CERTIFIED SUPERVISOR

The Contractor needs to provide a full-time lead related construction supervisor who is experienced in administration and supervision of lead hazard control projects including work practices, protective measures for building and personnel, disposal procedures, etc. This supervisor must have completed a “Lead Related Construction Supervision” course and have certification from the California Department of Public Health (CDPH) as a “supervisor.” This person will act as the competent person on the job.

In addition, all employees working on the project must have taken a “Lead Related Construction Worker” course and have obtained certification from State CDPH as a “worker”.

3.4.2 SPECIAL REPORTS

3.4.2.1 Reporting Unusual Events

When an event of unusual and significant nature occurs at the site (e.g., a spill of lead debris, failure of special equipment used to contain lead), the Contractor shall prepare and submit a special report listing the chain of events, persons participating, response by Contractor’s personnel, evaluation of results, and other pertinent information.

3.4.2.2 Reporting Accidents

The Contractor shall prepare and submit reports of significant accidents at the subject site. Pertinent data and actions need to be recorded. In addition, response actions should comply with industry standards. For this purpose, a significant accident is defined to include events where personal injury or property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury or potential environmental contamination.

3.5 COMPLIANCE WITH CODES AND REGULATIONS

Except to the extent that more explicit, or more stringent requirements are written directly into this Lead Hazard Control Contract/Specification, all applicable codes, regulations, and standards have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the contract documents, or as if published copies are bound herewith.

The Contractor will assume full responsibility and liability for the compliance with all applicable federal/state/local regulations pertaining to work practices, protection of workers, and visitors to the site, persons occupying areas adjacent to the site, hauling, and disposal of waste. The Contractor shall hold the City and its representative harmless for the Contractor’s failure to comply with any applicable work, hauling, disposal, safety, health, or other regulation on the part of itself, its employees, or its subcontractors.

State requirements which govern lead hazard control activities or hauling and disposal of

hazardous waste include, but are not limited to, the following:

California Occupational Safety and Health Administration (Cal/OSHA):

- Division of Industrial Safety; Chapter 4
- T8CCR, Section 1532.1, Lead in Construction
- T8CCR, Section 5194, Hazard Communication Standard
- T8CCR, Section 1531, Construction Respiratory Protection Standard
- T8CCR, Section 1514, Construction Personal Protective Equipment
- T8CCR, Section 1509, Construction Injury Illness Prevention Program
- T8CCR, Section 6003-4, Accident Prevention Signs and Tags
- T8CCR, Section 3204, Access to Employee Exposure Medical Records

California Environmental Protection Agency (Cal/EPA):

- T22CCR, Division 4.5, Environmental Health Standards for the Management of Hazardous Waste.

California Department of Public Health (CDPH):

- T17CCR, Division 1, Chapter 8, Accreditation of training providers and interim certification of individuals engaged in lead-related construction work.

Federal requirements which govern lead hazard control activities or hauling and disposal of hazardous waste include, but are not limited to, the following:

Federal Environmental Protection Agency (FED/EPA):

- Hazardous Waste Standards, 40 Code of Federal Regulations (CFR), Part 261
- EPA Renovate, Repair, Painting (RRP) Training

U.S. Department of Transportation (DOT):

- Hazardous Substances, 49CFR, Parts 171 through 180

American National Standards Institute, Inc. (ANSI):

- Z9.2-79 Fundamentals Governing the Design and Operation of Local Exhaust
- Z88.2-80 Practices of Respiratory Protection

Department of Housing and Urban Development (HUD):

- Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing (most current draft or final copy)

In addition, the Contractor must comply with any applicable regulations promulgated as a result of Title X, the Residential Lead Based Paint Hazard Reduction Act and Title IV, Lead

Exposure Reduction Act.

Local requirements which govern lead hazard control activities include, but are not limited to, the following:

Air Pollution Control District (APCD) - San Diego County

- APCD Rules and Regulations, Rule 51 (Public Nuisance), Rule 10-11 (permitting of equipment)

San Diego Municipal Code §54.1001 etc. seq.

- Prevents, identifies and remedies lead hazards within the City of San Diego

3.6 PERMITS AND LICENSES

The Contractor shall submit to the City in the bid submittal any permits or licenses necessary to carry out this work.

3.7 PERMITS

A valid Hazardous Waste Hauler registration is required for transporting any hazardous waste.

3.8 LICENSES

The Contractor must be certified by the California Contractors State License Board. The Contractor, or its subcontractor, shall have current licenses, as required by all applicable state or local jurisdictions for the removal, transportation, disposal, or other regulated activity relative to the work described in this plan.

3.9 HEALTH AND SAFETY

3.9.1 GENERAL WORKER PROTECTION/HEALTHY & SAFETY

This section describes the equipment and procedures required for protecting workers from lead contamination and other workplace hazards.

3.9.1.1 Worker Training

Contractor workers shall be trained in accordance with T8CCR, Section 1532.1 (lead). In addition, workers and supervisors must be lead-trained and have certification for lead-related work from the California Department of Public Health (CDPH).

3.9.1.2 Medical Surveillance

Workers must be provided with initial biological monitoring (blood sampling) if they are occupationally exposed on any day to lead at or above the action level (AL) of 30µg/m³. Employees must be provided with biological monitoring and a medical examination if they are occupationally exposed to lead above the action level for more than 30 days in any consecutive 12 month period. Periodic biological monitoring and medical examinations

must be performed according to the schedule and criteria specified in T8CCR, Section 1532.1(j). In addition, employees performing “trigger” tasks must be included in biological monitoring and/or medical examinations based on their assumed exposure. In the absence of specific airborne exposure data, medical surveillance will need to be provided for all workers.

Blood testing (blood lead and zinc protoporphyrin) shall be performed within 2 weeks prior to the start of the project, at least every month during the first six months of the project and every two months thereafter. An additional blood test shall be performed within 5 days of completion of lead portion of project and/or upon termination of employment.

At a minimum, examinations shall meet all requirements as set forth in T8CCR, Section 1532.1. Furthermore, if an employee’s blood levels are at or above 20µg/dl they will not be allowed to work on the project and shall be medically removed until two consecutive blood lead tests show the employee’s blood lead level under 15µg/dl.

In addition, evaluations of each individual’s ability to work in environments capable of producing heat stress in the worker should be completed. Employees who wear respirators must be medically evaluated.

3.9.1.3 Personal Protective Equipment (PPE)

Workers must be provided and are required to wear the following personal protective equipment at all times when performing lead related construction work.

PPE should include:

- Disposable Clothing (With hood and boot coverings)
- Boots
- Hard Hats
- Eye Protection
- Gloves

3.9.1.4 Additional Protective Equipment

The Contractor is responsible for all other equipment; such as eye wash stations, plastic aprons, etc., as needed.

3.9.1.5 Decontamination Procedures

Decontamination procedures will be determined on a case-by-case basis. At minimum, Contractor shall have hand washing facilities available.

3.9.1.6 Activities within Work Area

Workers may NOT eat, drink, smoke, chew gum or tobacco in the work area. Before eating, chewing, drinking, or smoking, workers will need to follow the decontamination procedures specified, and then dress in street clothes before entering the non-work areas of

the building.

3.9.1.7 Certificate of Worker's Acknowledgment

Each worker is required to complete a certificate stating that he/she has been trained in respiratory protection and lead hazards, and is in a medical surveillance program (see Appendix A).

3.9.1.8 Worker Respiratory Protection

The Contractor must provide for the instruction and training of each worker in the proper use of respiratory protection. The Contractor shall require that each worker wear a properly fitted respirator during activities for which it is reasonable to expect exposures above the PEL and during the performance of trigger tasks until exposure have been measured and found to be less than the PEL. Respiratory protection, appropriate for the task encountered in the work place, or as required for other toxic or oxygen-deficient situations encountered, needs to be utilized. The Contractor is responsible for having a written respiratory protection program, proper selection of respirations, training, and initial and periodic (every six [6] months) fit testing of their employees.

3.9.1.9 Respiratory Protection Standards

Except to the extent that more stringent requirements are written directly into these Lead Related Construction Specifications, the following regulations and standards have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the contract documents, or as if published copies were bound herewith. Where there is a conflict in requirements set forth in these regulations and standards, the Contractor shall meet the more stringent requirement.

Cal/OSHA : T8CCR, Sections 1531, 1532.1 and 5216

ANSI: Practices for Respiratory Protection, ANSI Z88.2-1980

National Institute for Occupational Safety and Health (NIOSH)

3.10 LEAD HAZARD CONTROL ACTIVITIES/PROTOCOLS

General guidelines for performing lead hazard control activities are presented in this section and are based on procedures established by HUD for residential settings. Due to the difference between residential settings and commercial buildings, these procedures will be modified on a case-by-case basis.

3.11 WORKSITE PREPARATION

Building occupants and visitors will not be allowed to enter the specific area where lead hazard control activities are underway. Re-entry is only permitted after the area is deemed to be cleared for re-occupancy by a state certified Lead Project Monitor.

The work area shall be restricted to authorized personnel only. A list of authorized personnel

shall be established prior to the start of work. Entry of unauthorized personnel into the work area shall be reported immediately to the Certified Supervisor, and the Project Monitor.

Warning signs for lead shall be posted as per T8CCR, Section 1532.1(m).

A visitor entry and exit-log, and an employee daily sign-in log will be maintained throughout the lead hazard control activities. The Contractor shall be responsible for the project site security during the operations in order to protect work efforts and equipment.

3.12 TEMPORARY FACILITIES

Temporary facilities for lead hazard control activities may comply with these specifications.

3.12.1 Materials and Equipment

Only material and equipment that are recognized as being suitable for the intended use, by compliance with appropriate standards, may be used.

3.12.2 Water Service

The Contractor will be able to obtain water services from on-site facilities. The City will designate the facilities from which water service may be obtained.

3.12.3 Electrical Services

The Contractor will be able to obtain electrical services from on-site facilities. The City will designate the facilities from which electrical services may be obtained. The contractor shall provide their own electrical hook-ups, i.e. spider boxes, ground fault circuit interrupter (GFCI) etc. and installed by a licensed electrician.

The electrical services need to comply with the applicable NEMA, NECA, and UL standards, and governing regulations for materials and lay-out of temporary electrical services.

3.12.4 Sanitary Facilities

The Contractor will be able to use the sanitary facilities on-site. The City will designate the sanitary facilities that the Contractor may use.

3.12.5 Fire Extinguisher

Applicable recommendations of the National Fire Protection Association (NFPA) Standard 10, "Standard for Portable Fire Extinguishers," must be complied with by the Contractor. Fire extinguishers need to be located where they are most convenient and effective for their intended purpose, but not less than one (1) extinguisher in each work area, the equipment room, outside/work areas, and in the clean room.

3.12.6 First Aid

The Contractor will need to provide first aid supplies which should comply with the governing regulations and recognized recommendations within the construction industry.

3.13 METHODS OF CONTROL

Below are methods for controlling lead based paint that may take place during the Lead Related Construction Activities. Temporary methods are designed to last less than 20 years while permanent methods are designed to last greater than 20 years.

3.13.1 Less than 20 years:

Paint Film Stabilization:

The primary methods are wet scraping or wet sanding. It is preferable to use a HEPA vacuum attachment for scraping and sanding. Dry scraping and sanding are not allowed in specific situations.

Encapsulation:

Use an appropriate primer to ensure adhesion of paint to the substrate prior to demolition.

3.13.2 More than 20 years:

If building components with lead paint are being removed, the following shall be followed:

Building Component Replacement:

The removal of doors, windows, trim, and other building items that contain lead paint. This will involve misting the component with water, scoring the painted seams, removal of any fasteners, prying the building component away from the surface to which it is attached, removal and bending back of all nails, removal of component, and immediate HEPA vacuum any dust chips on the area where the components were located.

3.13.3 Prohibited Practices

Prohibited abatement methods include:

1. Open flame burning or torching, propane fueled heat grids.
2. Machine sanding or grinding without HEPA local vacuum exhaust tool.
3. Uncontained hydro-blasting or pressure washing.
4. Abrasive blasting or sandblasting without HEPA local vacuum exhaust tool.
5. Heat guns operating above 1100⁰F.
6. Methylene chloride paint removal products.
7. Dry Scraping (except for limited surface areas).

3.14 CLEANING

Daily cleaning includes removing large and small debris, HEPA vacuuming horizontal

surfaces, wet mopping, and then HEPA vacuuming horizontal surfaces, and possible exterior cleaning.

Final cleaning must occur no sooner than one (1) hour after lead hazard control activities are finished. All plastic should be misted, cleaned, and folded toward the center to trap any remaining dust. The order of removal should be upper plastic, the first layer of floor plastic, vent and door plastic, the second layer of floor plastic, and finally plastic separating contaminated from non-contaminated areas. Then the entire area should be cleaned using a HEPA vacuum/wet wash/HEPA vacuum cycle. This should be from ceiling to floor. Paint or otherwise seal treated surfaces with the exception of interior floors (floors will be sealed after clearance). The Supervisor should perform an inspection for visible dust and debris.

Additional cleaning cycles may be necessary for porous surfaces, and difficult to clean surfaces (crevices). Failure to meet clearance criteria will require additional cleaning.

3.15 CLEARANCE

Clearance must be performed by a California Department of Public Health Certified Lead Project Monitor. It will not be performed by the Contractor (although the Contractor may and are encouraged to perform their own clearance testing). Clearance testing must occur no sooner than one (1) hour after final cleaning. It consists of two steps; visual examination and possibly environmental sampling (dust and/or soil sampling for exterior work).

1. Visual Examination For Determination of Completed Work:

This is a determination that the work specified in the scope of work has been completed satisfactorily. For surfaces that are to be re-painted, it is important this examination occurs prior to the re-painting (to determine that either all the paint has been removed [abatement] or that the deteriorated paint has been stabilized [interim controls]). Next the surfaces should be examined for settled dust and debris. If dust or debris is visually noted, the Contractor will be asked to re-clean prior to samples being collected.

If no such dust/debris is found, the independent consultant or Project Monitor will complete a Certificate of Visual Inspection (Appendix B) for the area or for multiple areas. The Certified Supervisor will also sign this Certificate. The completed form should be submitted to the City at the end of the project.

2. Environmental Sampling:

The number and location of dust and/or soil samples will be determined on a case-by-case basis. The clearance criterion to be used is shown in the table below:

Surface	Level
Interior Floors	40 µg/ft ²
Interior Window Sills	250 µg/ft ²
Exterior Horizontal Surfaces	40 µg/ft ²
Exterior Soil*	1000 µg/ft ²
Soil in Play Areas*	400 µg/ft ²

* Soil may not be impacted as a part of the proposed work but if contamination occurs than levels shall be used for

clearances. Contractor may take background soil samples to determine the preexisting soil conditions.

Re-cleaning, at the Contractor's expense, will be required for surfaces that do not pass clearance criteria.

The cost for additional tests, which may be required as a result of samples failing to meet the release criteria, shall be paid for the Contractor. This cost shall include all costs associated with sample analysis and collection of additional samples, including Consultant fees.

3.16 DISPOSAL OF LEAD WASTE

3.16.1 WASTE MINIMIZATION

The Contractor is required to make all reasonable efforts to minimize the amount of hazardous waste generated from this project.

3.17 WASTE CHARACTERIZATION

The Contractor shall test any potential hazardous waste generated in accordance with 22 CCR Division 4.5 within ten (10) days and/or prior to the end of the project to determine if it is hazardous waste and requires disposal. All paint chips will be considered hazardous waste and do not require testing. Components with lead paint that has been stabilized shall have a hazardous waste determination made prior to sending to a landfill.

3.18 PRE-TRANSPORTATION REQUIREMENTS

Any packaging used to ship hazardous waste off site such as a container, roll-off bin, tank or other device, must comply with 49 CFR Parts 173, 178, 179 and be labeled and prepared for transportation in accordance with 22 CCR Article 3.

The hazardous waste label must be affixed and filled out when the first amount of hazardous waste is placed in the container. The label must include the initial accumulation date.

All additional pre-transportation labeling, marking or placarding must be conducted prior to transporting off site and in accordance with 22 CCR Chapter 12, Article 3.

All containers and tanks of hazardous waste must be managed in a way which minimizes the threat of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste to the air, soil or surface water which could threaten human health or the environment.

Management techniques include containment areas capable of holding the contents of largest container within the containment area. Properly store and secure waste at all times. Do not leave hazardous waste in uncovered or unlocked trucks or dumpsters.

3.19 TRANSPORTATION AND DISPOSAL

A hazardous waste manifest will be completed in accordance with 22 CCR Chapter 12, Article 2 for each shipment of hazardous waste leaving the work site. All waste shall leave the project site by the end of the project. Only The Project Monitor employees shall sign as the generator

on manifests.

Disposal of the lead related hazardous wastes shall be by incineration unless otherwise specified by the ALMP.

APPENDIX A

CERTIFICATE OF LEAD WORKER'S ACKNOWLEDGMENT

PROJECT NAME: _____ DATE: _____
PROJECT ADDRESS: _____
CONTRACTOR'S NAME: _____

Working with lead can be dangerous. Inhaling and ingesting lead dust can cause an increase in blood lead levels which can lead to adverse health effects such as kidney damage, elevated blood pressure or infertility.

Your employer's contract with the City for the above project requires that: You be supplied with the proper respirator and be trained in its use. You be trained in safe work practices and in the use of the equipment found on the job. You receive a medical examination. These items are to have been done at no cost to you.

RESPIRATORY PROTECTION: You must have been trained in the proper use of respirators, and informed of the type respirator to be used on the above referenced project. You must be given a copy of the written respiratory protection manual issued by your employer. You must be equipped at no cost with the respirator to be used on the above project.

TRAINING COURSE: You should have been trained in the dangers inherent in handling lead and breathing and ingesting lead dust and in proper work procedures and personal and area protective measures. The topics covered in the course must have included the following:

- Possible routes of exposure to lead
- Health hazards associated with lead
- Respiratory protection
- Use of protective equipment
- Work practices including hands on or on-the-job training
- Personal decontamination procedures
- Health and safety considerations

MEDICAL EXAMINATION: You must have had a medical examination within the past 12 months at no cost to you. This examination must have included: health history, physical examination, a blood pressure measurement, pulmonary function test and blood sample and analysis for lead.

By signing this document you are acknowledging only that the City has advised you of your rights to training and protection relative to your employer, the Contractor.

Signature: _____ Social Security No.: _____

Printed Name: _____

Witness (print): _____ Witness Signature: _____

APPENDIX B

CERTIFICATION OF VISUAL INSPECTION

Project # _____ Date: _____ Location: _____

Contractor: _____

The contractor hereby certifies that he/she has visually inspected the Work Area (all surfaces including pipes, counters, ledges, walls, ceiling and floor, behind critical barriers, sheet plastic, etc.) and has found no dust, debris or residue.

by: (Signature): _____ Date: _____

(Print Name): _____

(Company Name): _____

(Print Title): _____

CITY ALMP REPRESENTATIVE

The City ALMP Representative hereby certifies that he has accompanied the contractor on his/her visual inspection and verifies that this inspection has been thorough and to the best of his/her knowledge and belief, the contractor's certification above is a true and honest one.

by: (Signature): _____ Date: _____

(Print Name): _____

WORK AREA

Location: _____

Room: _____

Hazard Reduction Performed:

APPENDIX C

LABORATORY RESULTS

IBEW BUILDING DEMOLITION INSPECTION						
Sample #	Location	Component	Substrate	Color	Result	Content
1	ROOM 1	WALL	DRYWALL	WHITE	Negative	< LOD
2	ROOM 1	WALL	DRYWALL	WHITE	Negative	< LOD
3	ROOM 1	WALL	CONCRETE	WHITE	Negative	< LOD
4	ROOM 1	WALL	CONCRETE	WHITE	Negative	< LOD
5	ROOM 1	WALL	CONCRETE	WHITE	Negative	< LOD
6	ROOM 1	WALL	CONCRETE	WHITE	Negative	< LOD
7	ROOM 1	DOOR	METAL	BROWN	Negative	< LOD
8	ROOM 1	DOOR JAMB	METAL	BROWN	Negative	< LOD
9	ROOM 1	DOOR JAMB	METAL	BROWN	Negative	0.13
10	ROOM 1	DOOR	METAL	BROWN	Negative	0.1
11	ROOM 1	DOOR	WOOD	BROWN	Negative	< LOD
12	ROOM 1	DOOR JAMB	WOOD	BROWN	Negative	< LOD
13	RESTROOM #1	DOOR JAMB	WOOD	BROWN	Negative	< LOD
14	RESTROOM #1	WALL	DRYWALL	BEIGE	Negative	< LOD
15	RESTROOM #1	WALL	DRYWALL	BEIGE	Negative	< LOD
16	RESTROOM #1	WALL	CONCRETE	BEIGE	Negative	< LOD
17	RESTROOM #1	WALL	DRYWALL	BEIGE	Negative	< LOD
18	RESTROOM #1	CEILING	DRYWALL	BEIGE	Negative	< LOD
19	WEST STAIRWELL	CEILING	DRYWALL	WHITE	Negative	< LOD
20	WEST STAIRWELL	DOOR	METAL	BEIGE	Negative	< LOD
21	WEST STAIRWELL	DOOR JAMB	METAL	BEIGE	Negative	< LOD
22	WEST STAIRWELL	COLUMN	METAL	BEIGE	Negative	< LOD
23	WEST STAIRWELL	WALL	CONCRETE	WHITE	Negative	< LOD
24	WEST STAIRWELL	WALL	DRYWALL	BEIGE	Negative	< LOD
25	WEST STAIRWELL	WALL	DRYWALL	BEIGE	Negative	< LOD
26	WEST STAIRWELL	RAILING	METAL	BEIGE	Negative	< LOD
27	ROOM 2	WALL	DRYWALL	WHITE	Negative	< LOD
28	ROOM 2	WALL	DRYWALL	WHITE	Negative	< LOD
29	ROOM 2	WALL	DRYWALL	WHITE	Negative	< LOD
30	ROOM 2	WALL	CONCRETE	WHITE	Negative	< LOD
31	ROOM 2	DOOR	WOOD	BEIGE	Negative	< LOD
32	ROOM 2	DOOR CASING	WOOD	WHITE	Negative	< LOD
33	ROOM 2	DOOR JAMB	WOOD	BROWN	Negative	< LOD
34	ROOM 2	DOOR	WOOD	BROWN	Negative	< LOD
35	ROOM 2	DOOR LINTEL	WOOD	BROWN	Negative	0.13

**IBEW BUILDING
DEMOLITION INSPECTION**

Sample #	Location	Component	Substrate	Color	Result	Content
36	RESTROOM #2	DOOR JAMB	WOOD	BROWN	Negative	0.08
37	RESTROOM #2	DOOR	WOOD	BROWN	Negative	< LOD
38	RESTROOM #2	WALL	DRYWALL	BEIGE	Negative	< LOD
39	RESTROOM #2	WALL	DRYWALL	BEIGE	Negative	< LOD
40	RESTROOM #2	WALL	DRYWALL	BEIGE	Negative	< LOD
41	RESTROOM #2	WALL	DRYWALL	BEIGE	Negative	< LOD
42	RESTROOM #2	CEILING	DRYWALL	BEIGE	Null	< LOD
43	RESTROOM #2	CEILING	DRYWALL	BEIGE	Negative	< LOD
44	RESTROOM #2	PARTITION	METAL	BLUE	Negative	< LOD
45	RESTROOM #3	WALL	DRYWALL	BEIGE	Negative	< LOD
46	RESTROOM #3	WALL	DRYWALL	BEIGE	Negative	< LOD
47	RESTROOM #3	WALL	DRYWALL	BEIGE	Negative	< LOD
48	RESTROOM #3	WALL	DRYWALL	BEIGE	Negative	< LOD
49	RESTROOM #3	PARTITION	METAL	BLUE	Negative	< LOD
50	RESTROOM #3	DOOR	WOOD	BROWN	Negative	0.08
51	RESTROOM #3	DOOR JAMB	WOOD	BROWN	Negative	< LOD
52	RESTROOM #3	DOOR JAMB	WOOD	BROWN	Negative	< LOD
53	RESTROOM #3	DOOR CASING	WOOD	BROWN	Negative	< LOD
54	RESTROOM #3	DOOR	WOOD	BROWN	Negative	0.14
55	RESTROOM #3	TILE WALL	CERAMIC	WHITE	Positive	9.9
56	RESTROOM #3	TILE WALL	CERAMIC	WHITE	Positive	7.6
57	RESTROOM #3	TILE WALL	CERAMIC	WHITE	Positive	8.9
58	RESTROOM #3	CEILING	DRYWALL	BEIGE	Negative	< LOD
59	HALL#1	WALL	DRYWALL	WHITE	Negative	< LOD
60	HALL#1	WALL	DRYWALL	WHITE	Negative	< LOD
61	ROOM #10	WALL	DRYWALL	BEIGE	Negative	< LOD
62	ROOM #10	WALL	DRYWALL	BEIGE	Negative	< LOD
63	ROOM #10	WALL	CONCRETE	BEIGE	Negative	< LOD
64	ROOM #10	DOOR CASING	WOOD	BROWN	Negative	< LOD
65	ROOM #10	DOOR JAMB	WOOD	BROWN	Negative	< LOD
66	ROOM #10	DOOR JAMB	WOOD	BROWN	Negative	< LOD
67	HALL#3	DOOR JAMB	WOOD	WHITE	Negative	< LOD
68	HALL#3	WALL	DRYWALL	ORANGE	Negative	0.08
69	HALL#3	WALL	DRYWALL	ORANGE	Negative	0.07
70	HALL#3	DOOR JAMB	WOOD	BEIGE	Negative	< LOD
71	HALL#3	DOOR JAMB	METAL	BEIGE	Negative	< LOD
72	ROOM #9	SAFE DOOR	METAL	BEIGE	Negative	< LOD
73	ROOM #9	SAFE DOOR JAMB	METAL	BEIGE	Negative	0.17
74	ROOM #9	WALL	CONCRETE	BEIGE	Negative	< LOD
75	ROOM #9	WALL	CONCRETE	BEIGE	Negative	< LOD

**IBEW BUILDING
DEMOLITION INSPECTION**

Sample #	Location	Component	Substrate	Color	Result	Content
76	EAST STAIRWELL	RAILING	METAL	ORANGE	Negative	< LOD
77	EAST STAIRWELL	RAILING	METAL	ORANGE	Negative	0.17

APPENDIX O
ASBESTOS ABATEMENT SPECIFICATION



THE CITY OF SAN DIEGO



ASBESTOS ABATEMENT SPECIFICATION

for

IBEW Building

at

215 W. Washington St.

San Diego, CA 92103

October 21, 2015

Prepared by:

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DIVISION 01 - GENERAL REQUIREMENTS

1.1 DESCRIPTION OF WORK

1.1.1 ABATEMENT CONTRACTOR shall supply all labor, transportation, material, apparatus, and equipment for the removal, and disposal of asbestos-containing materials (ACM) to be impacted as a result of this project, as identified in Appendix C of this section.

1.1.2 ABATEMENT CONTRACTOR shall be responsible for ensuring the building will not be contaminated with asbestos containing material during work and shall be responsible for any clean-up determined necessary by City of San Diego's PROJECT MONITOR.

1.1.3 Before submitting his/her bid, the ABATEMENT CONTRACTOR shall visit the project site and verify the location of the asbestos-containing materials that will be removed under the terms and conditions of the contract and this specification.

1.1.4 Abatement work shall be performed within agreed upon hours submitted prior to project start which will not include designated City holidays.

1.1.5 Before the beginning of the work related to asbestos abatement, ABATEMENT CONTRACTOR shall hold a safety construction meeting with all asbestos related supervisors, workers, and other contractors on-site that provides an overview of the accepted asbestos work plan, decontamination procedures specific to this project (decontamination procedures shall be on paper with copies for all present), and disposal plan for this project. Meeting shall include the PROJECT MONITOR and any other designated City representative. Meeting time shall be provided for the PROJECT MONITOR to introduce them and identify their role in this project.

1.2 CONTRACTOR USE OF THE PREMISES

All site rules and regulations affecting the work should be complied with while engaged in project activities. The existing building should be maintained in a safe condition throughout the asbestos abatement activities. The Contractor will be responsible for adhering to all applicable building codes and fire safety requirements.

All public areas will be kept free of accumulated waste, materials, rubbish, and debris.

1.3 PROJECT COORDINATION

It will be the responsibility of the Contractor to coordinate all site activities with the City's Asbestos & Lead Management Program's (ALMP) PROJECT MONITOR including any meetings, surveys, special reports, and site usage limitations.

1.4 PROJECT SUBMITTALS

The contractor shall not commence any work until approval has been given from the City. The Contractor shall submit the following at least 30 days prior to commencement of any asbestos abatement activities:

1.4.1 Asbestos Abatement Work Plan: In addition to information required in this section, Work Plan shall contain all information required under 8 CCR 1529 Submit a detailed job-specific plan that includes:

- a. The procedures proposed to comply with the requirements of this specification and all applicable regulations.
- b. Detailed drawings that identify the location, size, layout and details of the Work Areas, any equipment, disposal storage, restrooms, and worker decontamination facilities.
- c. The sequencing of abatement work and the interface of trades involved in the performance of work. Provide a time line that details each major phase of work activity and anticipated time it will occur.
- d. The methods to be used to assure the safety occupants and visitors to the site.
- e. Detailed description of the methods to be employed to ensure asbestos is not released above background air levels.
- f. The method of removal to reduce asbestos dust generation in the Work Area,

1.4.2 Work site coordination submittals including:

- a. Contingency and Spill Plan: Prepare a contingency plan for emergencies including fire, accident, power failure, or any other event that may require modification or abridgement of decontamination or Work Area isolation procedures. Include in plan specific procedures for decontamination or Work Area isolation. Plan should be specific for all types of hazardous materials or situations specific to this work site. Note that nothing in this specification should impede safe exiting or providing of adequate medical attention in the event of an emergency.
- b. Telephone numbers and locations of emergency services including but not limited to fire, ambulance, doctor, hospital, police, power company, telephone company.

1.4.3 Notifications:

- a. Notify emergency service agencies including fire, ambulance, police or other agency that may service the abatement work site in case of an emergency. Notification is to include methods of entering Work Area, emergency entry and exit locations, modifications to fire notification or fire-fighting equipment, and other information needed by agencies providing emergency services.
- b. Notifications of Emergency: Any individual at the job site may notify emergency service agencies if necessary without effect on this contract or the Contract Sum.
- c. Provide submittal identifying person responsible for responding to project site emergencies twenty-four hours a day, seven days a week.

1.4.4 ABATEMENT CONTRACTOR qualifications and personnel information submittals that include but are not limited to:

- a. Provide all staff names, certifications, and experience. Identify their duties and responsibilities on this project. ABATEMENT CONTRACTOR shall have the following minimum levels of qualified supervision on the project site:
 - i. General Superintendent: Provide a full-time General Superintendent who is experienced in administration and supervision of asbestos abatement projects including work practices, protective measures for building and personnel, disposal procedures, etc. This person is the ABATEMENT CONTRACTOR's representative responsible for compliance with all applicable federal, state and local regulations and guidelines, particularly those relating to asbestos abatement and hazardous waste. Should, in the opinion of the OWNER, any language barrier exist between the on-site superintendent and the OWNER or PROJECT MONITOR, the ABATEMENT CONTRACTOR shall employ a qualified full-time interpreter or provide a new on-site superintendent at no additional cost to the OWNER. Shall be AHERA certified as asbestos supervisor.
 - ii. Foreman: Provide a full time Foreman to directly supervise and direct no more than 10 abatement workers. Each Foreman will act as the Competent Person as required by 8 CCR 1529 for the workers the foreman is directing. The Foreman has oversight authority over the workers and reports to the General Superintendent. If there are 10 or fewer abatement workers on the project the General Superintendent may fill the Foreman's position. Shall be AHERA certified as asbestos supervisor.
 - iii. Experience and Training: The General Superintendent and foreman shall meet all the requirements as a Competent Person as required by OSHA 8 CCR 1529. They shall have completed training in EPA Asbestos Supervisor Training. They shall have experience with projects of similar types and sizes.

iv. Workers: All asbestos abatement workers shall have current EPA and OSHA asbestos abatement training.

v. Certificate of Worker's Acknowledgment: Submit an original signed copy of the Certificate of Worker's Acknowledgment found in Appendix A of this section, for each worker and supervisor who is to be at the job site or enter the Work Area.

1.4.5 Submit a copy of the ABATEMENT CONTRACTOR's Asbestos DOSH Handling License.

1.4.6 If required by regulations, submit copies of notifications made to regulatory agencies along with a copy of certified mail receipt.

1.4.7 Submit respiratory protection information and air monitoring data as per the following:

- a. Operating Instruction: Submit complete operating and maintenance instructions for all components and systems as a whole. Submittal is to be in bound manual form suitable for field use.
- b. Respiratory Protection Program: Submit ABATEMENT CONTRACTOR's written respiratory protection program manual as required by 8 CCR 1529 and 5144.
- c. Respiratory Protection Schedule: Submit level of respiratory protection intended for each operation required by the project.

1.4.8 Submit doctor's report from medical examination conducted within the last 12 months as part of compliance with OSHA medical surveillance requirements for each worker who is to enter the Work Area. Submit, at a minimum, the following for each worker:

- a. Name and Social Security Number
- b. Physicians Written Opinion from examining physician including at a minimum the following:
 - i. Whether worker has any detected medical conditions that would place the worker at an increased risk of material health impairment from exposure to asbestos. Any recommended limitations on the worker or on the use of personal protective equipment such as respirators.
 - ii. Statement that the worker has been informed by the physician of the results of the medical examination and of any medical conditions that may result from asbestos exposure.

1.4.9 Submit a notarized certification, signed by an officer of the ABATEMENT CONTRACTOR firm that exposure measurements, medical surveillance, and worker training records are being kept in conformance with 8 CCR 1529.

1.4.10 Identify disposal location and provide associated permits for all non-friable asbestos waste.

1.4.11 Identify state licensed transporter, disposal location, and associated permits for all friable asbestos waste.

1.4.12 Identify the laboratory that will be performing the analysis of the personnel samples and provide their accreditation. Also discuss how ABATEMENT CONTRACTOR will be providing the analytical results to the PROJECT MONITOR within 24 hours of sampling completion.

- a. Submit the following during and at the completion of the work
 1. Copies of all Waste Shipment Records
 2. Copies of all air monitoring results within 24 hours

At the end of a project, the Contractor shall submit the following to the Project Monitor:

1. Personal Air Sample Results
2. Copies of Project Daily Logs
3. Containment Entry/Exit Logs
4. Waste Disposal Documentation
5. Certificate of Visual Inspection

1.5 SCHEDULES AND REPORTS

Prior to each phase of project, the Contractor shall provide the City with a tentative time line which outlines the project schedule. These documents will be reviewed and approved by the City prior to the commencement of work.

1.6 PRODUCT DATA

The Contractor shall submit product information that is to be used during the abatement activities prior to commencement of work (i.e., encapsulants). General information required on product data includes manufacturer's standard printed recommendations for application and use, compliance with recognized standards of trade association and testing agencies, and material safety data sheets (MSDSs).

1.6.1 POLYETHYLENE SHEET

- a. A single polyethylene film in the largest sheet size possible to minimize seams, 4.0 or 6.0 mil thick as indicated, and clear, frosted, or black as indicated.
- b. Provide flame resistant polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-resistant Textiles and Films. Provide largest size possible to minimize seams, 4.0 or 6.0 mil thick as indicated, and frosted or black as indicated.
- c. Reinforced Polyethylene Sheet: Where plastic sheet is the only separation between the Work Area and building exterior, provide translucent, nylon reinforced, laminated, flame resistant, polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-resistant Textiles and Films. Provide largest size possible to minimize seams, 4.0 or 6.0 mil thick as indicated, frosted or black as indicated.

1.6.2 TAPE

- a. Provide duct tape in 2" or 3" widths as indicated, with an adhesive which is formulated to stick aggressively to sheet polyethylene.

1.6.3 SPRAY ADHESIVE

- a. Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.

1.7 PROJECT CLOSE-OUT

Upon completion of work and prior to payment, the Project Monitor will proceed with an initial inspection of the abatement work area. A Certificate of Visual Inspection (Appendix B) will be signed by both the Contractor and Project Monitor. The Contractor will not be paid until the area meets the established project-specific clearance criteria and has submitted the required information.

DIVISION 02 - DEFINITIONS

2.1 DEFINITIONS

- A. Accredited or Accreditation (when referring to a person or laboratory): A person or laboratory accredited in accordance with section 206 of Title II of the Toxic Substances Control Act (TSCA).
- B. Air Monitoring: The process of measuring the fiber content of a specific volume of air.

- C. Amended Water: Water to which a surfactant has been added to decrease the surface tension to 35 or less dynes.
- D. Asbestos: The asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite grunerite, anthophyllite, and actinolite tremolite. For purposes of determining respiratory and worker protection both the asbestiform and non asbestiform varieties of the above minerals and any of these materials that have been chemically treated and/or altered shall be considered as asbestos.
- E. Asbestos Containing Material (ACM): Any material containing more than 1% by weight of asbestos of any type or mixture of types.
- F. Asbestos-Containing Building Material (ACBM): Surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a building.
- G. Asbestos Containing Waste Material: Any material which is or is suspected of being or any material contaminated with an asbestos containing material which is to be removed from a work area for disposal.
- H. Asbestos debris: Pieces of ACBM that can be identified by color, texture, or composition, or means dust, if the dust is determined by an accredited inspector to be ACM.
- I. Authorized Visitor: The Owner, the Owner's Representative, testing lab personnel, the Architect/Engineer, emergency personnel or a representative of any federal, state and local regulatory or other agency having authority over the project.
- J. Barrier: Any surface that seals off the work area to inhibit the movement of fibers.
- K. Breathing Zone: A hemisphere forward of the shoulders with a radius of approximately 6 to 9 inches.
- L. Ceiling Concentration: The concentration of an airborne substance that shall not be exceeded.
- M. Curtained Doorway: Device to allow ingress and egress from one room to another while permitting minimal air movement between the rooms.
- N. Demolition: The wrecking or taking out of any building component, system, finish or assembly of a facility together with any related handling operations.
- O. Disposal Bag: A properly labeled 6 mil thick leak tight plastic bags used for transporting asbestos waste from work and to disposal site.
- P. Encapsulant: a penetrating encapsulant specifically designed to minimize fiber release during removal of asbestos containing materials rather than for in situ encapsulation.

- Q. Encapsulation: Treatment of asbestos containing materials, with an encapsulant.
- R. Enclosure: The construction of an air tight, impermeable, permanent barrier around asbestos containing material to control the release of asbestos fibers into the air.
- S. Filter: A media component used in respirators to remove solid or liquid particles from the inspired air.
- T. Friable Asbestos Material: Material that contains more than 1.0% asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry. A material can also be rendered friable via mechanical means.
- U. HEPA Filter: A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 microns in diameter.
- V. HEPA Filter Vacuum Collection Equipment (or vacuum cleaner): High efficiency particulate air filtered vacuum collection equipment with a filter system capable of collecting and retaining asbestos fibers. Filters should be of 99.97% efficiency for retaining fibers of 0.3 microns or larger.
- W. Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere.
- X. Personal Monitoring: Sampling of the asbestos fiber concentrations within the breathing zone of an employee.
- Y. Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.
- Z. Project Monitor: City of San Diego Asbestos & Lead Management Program staff or their designated consultant.
- AA. Visible Emissions: Any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.
- BB. Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with amended water or diluted removal encapsulant and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste.

CC. Work Area: The area where asbestos-related work or removal operations are performed which is defined and/or isolated to prevent the spread of asbestos dust, fibers or debris, and entry by unauthorized personnel. Work area is a Regulated Area as defined by 8 CCR 1529.

DIVISION 03 - SITE WORK

3.1 INTRODUCTION

This portion of the specification describes procedures and protocols for asbestos abatement activities. The protocols/procedures described hereafter are in accordance with federal/state/local requirements. In the absence of these requirements, the procedure/protocols are based on current industry standards.

3.2 BACKGROUND INFORMATION

Sampling has been performed by inspectors from the City's Asbestos and Lead Management Program (ALMP) and has been provided in Appendix C of this specification.

3.3 GENERAL INFORMATION

3.3.1 Potential Asbestos Hazard

The disturbance of asbestos containing materials may cause exposure to workers and building occupants. All workers, supervisory personnel, subcontractors, and consultants who will be at the job site, need to be apprised of the seriousness of the hazard and of proper work practices which must be followed to minimize exposure. The procedures and methods described herein must be followed and the Contractor must comply with all applicable federal/state/local requirements.

3.3.2 Stop Work

If the Project Monitor presents a verbal or written stop work order, the Contractor shall immediately and automatically stop all work. Recommencement of the work may not begin until authorized by the Project Monitor.

3.4 PROJECT ADMINISTRATION

3.4.1 CERTIFIED SUPERVISOR

The Contractor needs to provide a full-time asbestos abatement supervisor who is experienced in administration and supervision of asbestos abatement projects including work practices, protective measures for building and personnel, disposal procedures, etc. This supervisor must have completed an "Asbestos Abatement Supervision" course. This person will act as the competent person on the job.

In addition, all employees working on the project must have taken a "Asbestos Abatement Worker" course.

3.4.2 SPECIAL REPORTS

a. Reporting Unusual Events

When an event of unusual and significant nature occurs at the site (e.g., a spill of asbestos debris, failure of special equipment used to contain asbestos), the Contractor shall prepare and submit a special report listing the chain of events, persons participating, response by Contractor's personnel, evaluation of results, and other pertinent information.

b. Reporting Accidents

The Contractor shall prepare and submit reports of significant accidents at the subject site. Pertinent data and actions need to be recorded. In addition, response actions should comply with industry standards. For this purpose, a significant accident is defined to include events where personal injury or property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury or potential environmental contamination.

3.5 COMPLIANCE WITH CODES AND REGULATIONS

Except to the extent that more explicit, or more stringent requirements are written directly into this Asbestos Abatement Contract/Specification, all applicable codes, regulations, and standards have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the contract documents, or as if published copies are bound herewith.

The Contractor will assume full responsibility and liability for the compliance with all applicable federal/state/local regulations pertaining to work practices, protection of workers, and visitors to the site, persons occupying areas adjacent to the site, hauling, and disposal of waste. The Contractor shall hold the City and its representative harmless for the Contractor's failure to comply with any applicable work, hauling, disposal, safety, health, or other regulation on the part of itself, its employees, or its subcontractors. State requirements which govern asbestos abatement activities or hauling and disposal of hazardous waste include, but are not limited to, the following:

3.5.1 As required, ABATEMENT CONTRACTOR shall notify all Local, State, and Federal agencies regulating standards for the removal of asbestos-containing materials, including but not limited to: Cal-OSHA, San Diego Air Pollution Control District, and U.S. Environmental Protection Agency. ABATEMENT CONTRACTOR shall provide Owner a copy of each notification and a copy of a certified mail receipt proving proper notification to all required agencies.

3.5.2 ABATEMENT CONTRACTOR shall be registered as an asbestos contractor before performing any asbestos related work; a licensee must also be registered with the Department of Industrial Relations, Division of Occupational Safety and Health.

3.5.3 Transportation of hazardous materials shall be in accordance with the State of California Title 22 and the Department of Transportation regulations.

3.5.4 ABATEMENT CONTRACTOR shall comply with all provisions of California Title 8, Section 5208 and Section 1529.

3.5.5 ABATEMENT CONTRACTOR shall be in compliance with all provisions of Title 40 CFR Part 61.

3.5.6 ABATEMENT CONTRACTOR shall assume full responsibility and liability for compliance with all applicable Federal, State, and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to site, and persons occupying areas adjacent to the site.

3.6 PERMITS AND LICENSES

The Contractor shall submit to the City in the bid submittal any permits or licenses necessary to carry out this work.

3.6.1 PERMITS

A valid Hazardous Waste Hauler registration is required for transporting any hazardous waste. Certain types of equipment require APCD permits (e.g., abrasive blasters).

3.6.2 LICENSES

The Contractor must be certified by the California Contractors State License Board. The Contractor, or its subcontractor, shall have current licenses, as required by all applicable state or local jurisdictions for the removal, transportation, disposal, or other regulated activity relative to the work described in this plan.

3.7 HEALTH AND SAFETY

This section describes the equipment and procedures required for protecting workers from asbestos contamination and other workplace hazards.

3.7.1 Provide worker protection as required by the most stringent OSHA and/or EPA standards applicable to the work.

3.7.2 Training

- a. All workers are to be trained, certified and accredited as required by state or local code or regulation.
- b. Train all workers, in accordance with Title 8 CCR section 5208 and section 1529, regarding the dangers inherent in handling asbestos and breathing asbestos dust, proper work procedures, and personal and area protective measures.

3.7.3 Provide medical examinations for all workers who may encounter an airborne fiber level of 0.1 fibers/cc or greater for an 8 hour Time Weighted Average. In the absence of specific airborne fiber data, provide medical examinations for all workers who will enter the Work Area for any reason. Examination shall as a minimum meet OSHA requirements as set forth in 8 CCR 1529. In addition, provide an evaluation of the individual's ability to work in environments capable of producing heat stress in the worker.

3.7.4 Protective clothing

- a. Coveralls: Provide two (2) disposable "full body" coveralls and disposable head covers, and require that they be worn at all times by all workers in the Work Area. Provide a sufficient number for all required changes, for all workers in the Work Area.
- b. Boots: Provide work boots with non skid soles, and where required by OSHA, foot protection for all workers. Provide boots at no cost to workers. Do not allow boots to be removed from the Work Area for any reason, after being contaminated with asbestos-containing material. Thoroughly clean, decontaminate and bag boots before removing them from Work Area at the end of the work.
- c. Hard Hats: Provide head protection (hard hats) as required by OSHA for all workers, and provide 1 spare for use by Owner's Representative, Project Administrator, and Owner. Require hard hats to be worn at all times that work is in progress that may potentially cause head injury. Provide hard hats of the type with plastic strap suspension. Require hats to remain in the Work Area throughout the work. Thoroughly clean, decontaminate and bag hats before removing them from Work Area at the end of the work.
- d. Goggles: Provide eye protection (goggles) as required by OSHA for all workers involved in scraping, spraying, or any other activity which may potentially cause eye injury. Thoroughly clean, decontaminate and bag goggles before removing them from Work Area at the end of the work.
- e. Gloves: Provide work gloves to all workers and require that they be worn at all times in the Work Area. Do not remove gloves from Work Area and dispose of as asbestos-contaminated waste at the end of the work.

3.7.5 Respirators

- a. Air Purifying Respirators
 1. Respirator Bodies: Provide half face or full face type respirators.

2. Filter Cartridges: Provide, at a minimum, HEPA type filters labeled with NIOSH and MSHA Certification for "Radionuclides, Radon Daughters, Dust, Fumes, Mists including Asbestos Containing Dusts and Mists" and color coded in accordance with ANSI Z228.2 (1980). In addition, a chemical cartridge section may be added, if required, for solvents, etc., in use. In this case, provide cartridges that have each section of the combination canister labeled with the appropriate color code and NIOSH/MSHA Certification.
 3. Non permitted respirators: Do not use single use, disposable or quarter face respirators.
- b. Require that respiratory protection be used at all times when there is any possibility of disturbance of asbestos containing materials whether intentional or accidental.
 - c. Require that a respirator be worn by anyone in a Work Area at all times, regardless of activity, during a period that starts with any operation which could cause airborne fibers until the area has been cleared for re occupancy.

3.7.6 Regardless of Airborne Fiber Levels: Require that the minimum level of respiratory protection used be half face air purifying respirators with high efficiency filters.

3.7.7 Fit testing

- a. Initial Fitting: Provide initial fitting of respiratory protection during a respiratory protection course of training. Only allow an individual to use respirators for which training and fit testing has been provided.
- b. Upon Each Wearing: Require that each time an air purifying respirator is put on it be checked for fit with a positive and negative pressure fit test in accordance with the manufacturer's instructions or ANSI Z88.2 (1980).
- c. Respirators, disposable coveralls, head covers, and foot covers shall be provided by the ABATEMENT CONTRACTOR for the City of San Diego's Asbestos and Lead Management Program's PROJECT MONITOR, and other authorized representatives who may inspect the job site. Provide two (2) respirators and six (6) complete coveralls and, where applicable, six (6) respirator filter changes per day.

3.8 TEMPORARY FACILITIES

Temporary facilities for lead hazard control activities may comply with these specifications.

3.8.1 Materials and Equipment

Only material and equipment that are recognized as being suitable for the intended use, by

compliance with appropriate standards, may be used.

3.8.2 Water Service

The Contractor will be able to obtain water services from on-site facilities. The City will designate the facilities from which water service may be obtained.

3.8.3 Electrical Services

The Contractor will be able to obtain electrical services from on-site facilities. The City will designate the facilities from which electrical services may be obtained. The contractor shall provide their own electrical hook-ups, i.e. spider boxes, ground fault circuit interrupter (GFCI) etc. and installed by a licensed electrician.

The electrical services need to comply with the applicable NEMA, NECA, and UL standards, and governing regulations for materials and lay-out of temporary electrical services.

3.8.4 Sanitary Facilities

The Contractor will be able to use the sanitary facilities on-site. The City will designate the sanitary facilities that the Contractor may use.

3.8.5 Fire Extinguisher

Applicable recommendations of the National Fire Protection Association (NFPA) Standard 10, "Standard for Portable Fire Extinguishers," must be complied with by the Contractor. Fire extinguishers need to be located where they are most convenient and effective for their intended purpose, but not less than one (1) extinguisher in each work area, the equipment room, outside/work areas, and in the clean room.

3.8.6 First Aid

The Contractor will need to provide first aid supplies which should comply with the governing regulations and recognized recommendations within the construction industry.

3.9 WORK AREA PROCEDURES

3.9.1 Require that workers **NOT** eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the Work Area.

3.10 WORK AREA PREPARATION

3.10.1 ABATEMENT CONTRACTOR shall secure work area from access by public, staff or users of the area. Accomplish this where possible, by locking doors, gates, or other means of access to the area.

3.10.2 Barricade fencing is required for securing an outside area from unauthorized access. Work area delineation shall occur at no less than twelve feet (12') from the radius of the work and/or building. Yellow caution tape shall not be used.

3.10.3 All windows, vents, mechanical systems, etc., in close proximity to the abatement area shall be sealed with plastic and tape by the ABATEMENT CONTRACTOR prior to the work beginning.

3.10.4 Provide warning signs at entry to work area in accordance with California Title 8, Section 1529 reading as follows:

**DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA**

3.11 REMOVAL OF ASBESTOS-CONTAINING MATERIALS

3.11.1 Asbestos-containing materials shall be adequately wetted with either amended water or a removal encapsulant before and during removal process, to reduce fiber emission.

3.11.2 The ABATEMENT CONTRACTOR should exercise caution in using water, as he will be solely responsible for any water damage to the facility resulting from the work.

3.11.3 ABATEMENT CONTRACTOR is responsible for keeping all asbestos containing debris within the containment area at all times throughout removal. Any interior contamination, if created, is the responsibility of the ABATEMENT CONTRACTOR to clean with no additional cost to this contract.

3.11.4 ABATEMENT CONTRACTOR shall ensure there is no loose debris around the Work Area during the removal and if found, ABATEMENT CONTRACTOR shall clean the area immediately.

3.12 DISPOSAL

3.12.1 Non-friable asbestos materials may be disposed of at Miramar Landfill.

3.12.2 Friable ACM shall be containerized immediately, secured in a locked container, be transported by state licensed hauler with manifest, and disposed of at appropriate landfill location.

3.12.3 The PROJECT MONITOR or designated representative will inspect each load and sign all waste manifests before waste leaves the site.

3.12.4 Copies of Waste Shipment Records for each load of asbestos waste material shall be given to the City.

3.12.5 Cordon off the Work Area, a safe zone around the building, and the dumpster area with barrier fencing. **Yellow caution tape shall not be used.**

3.12.6 Provide warning signs at roof access in accordance with 8 CCR 1529 reading as follows:

**DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA**

3.13 DECONTAMINATION PROCEDURE

3.13.1 Prior to leaving the Work Area, HEPA vacuum outer suit completely and remove, turning it inside out while doing so.

3.13.2 Hygiene facilities such as change rooms and showers are not required to be adjacent to the operations on top of a roof, but these facilities must be provided [California Title 8, Section 1529 (1)(3)]. Proceed to decontamination area where the second suit is to be removed while turning it inside out.

3.13.3 After wiping all areas and respirator, remove respirator and wipe facial area clean.

3.13.4 Place contaminated suits, towels, and respirator cartridges in a properly labeled disposal bag.

3.13.5 At the completion of the project, boots, hard hats, and goggles should be decontaminated and bagged prior to removal from the Work Area.

3.13.6 Equipment leaving the Work Area should be HEPA vacuumed and wet wiped.

3.14 AIR MONITORING/WORK AREA CLEARANCE

3.14.1 The City's PROJECT MONITOR will provide ambient area air monitoring during all phases of the removal of asbestos-containing roofing materials, including but not limited to interior of facility, dumpster area and downwind samples.

3.14.2 During the project, personnel air monitoring will be conducted by ABATEMENT CONTRACTOR to determine fiber levels. If fiber levels exceed 0.1 fibers/cc then work shall cease and not begin again until after PROJECT MONITOR approves the ABATEMENT CONTRACTOR's revised methodology which will lower fiber levels. Procedures shall be submitted in writing to the City prior to implementing these procedures. This includes Short Term Exposure Limit (STEL) air monitoring. The ABATEMENT CONTRACTOR shall install a personal pump on one of the employees working at the point where the asbestos-containing roofing materials are being cut. This air sample shall run for 30 minutes. At a minimum, ABATEMENT CONTRACTOR shall provide air monitoring for every four workers. Testing of air samples will be by Phase Contrast Microscopy following NIOSH 7400 rules.

3.14.3 If any of the ambient area samples taken by the PROJECT MONITOR either inside or outside exceed .01 fibers/cc then ABATEMENT CONTRACTOR is required to pay for the additional testing on those samples collected using transmission electron microscopy (TEM).

3.14.4 Release of the ABATEMENT CONTRACTOR from the asbestos-containing material removal phase of the contract will be accomplished by a visual inspection by the PROJECT MONITOR. Visual Clearance, performed by the PROJECT MONITOR, shall include all exterior and interior areas of the facility.

3.15 PRE-TRANSPORTATION REQUIREMENTS

Any packaging used to ship hazardous waste off site such as a container, roll-off bin, tank or other device, must comply with 49 CFR Parts 173, 178, 179 and be labeled and prepared for transportation in accordance with 22 CCR Article 3. The hazardous waste label must be affixed and filled out when the first amount of hazardous waste is placed in the container. The label must include the initial accumulation date.

All additional pre-transportation labeling, marking or placarding must be conducted prior to transporting off site and in accordance with 22 CCR Chapter 12, Article 3.

All containers and tanks of hazardous waste must be managed in a way which minimizes the threat of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste to the air, soil or surface water which could threaten human health or the environment. Management techniques include containment areas capable of holding the contents of largest container within the containment area. Properly store and secure waste at all times. Do not leave hazardous waste in uncovered or unlocked trucks or dumpsters.

3.16 TRANSPORTATION AND DISPOSAL

A hazardous waste manifest will be completed in accordance with 22 CCR Chapter 12, Article 2 for each shipment of hazardous waste leaving the work site. All waste shall leave the project site by the end of the project. Only The Project Monitor employees shall sign as the generator on manifests.

APPENDIX A

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

PROJECT NAME: _____ DATE: _____
PROJECT ADDRESS: _____
CONTRACTOR'S NAME: _____

Working with asbestos can be dangerous. Inhaling asbestos fibers has been linked with various types of cancer. If you smoke and inhale asbestos fibers the chance that you will develop lung cancer is greater than that of the non-smoking public.

Your employer's contract with the City for the above project requires that: You be supplied with the proper respirator and be trained in its use. You be trained in safe work practices and in the use of the equipment found on the job. You receive a medical examination. These things are to have been done at no cost to you.

RESPIRATORY PROTECTION: You must have been trained in the proper use of respirators, and informed of the type respirator to be used on the above referenced project. You must be given a copy of the written respiratory protection manual issued by your employer. You must be equipped at no cost with the respirator to be used on the above project.

TRAINING COURSE: You must have been trained in the dangers inherent in handling asbestos and breathing asbestos dust and in proper work procedures and personal and area protective measures. The topics covered in the course must have included the following:

- Physical characteristics of asbestos
- Health hazards associated with asbestos
- Respiratory protection
- Use of protective equipment
- Pressure Differential Systems
- Work practices including hands on or on-job training
- Personal decontamination procedures
- Air monitoring, personal and area

MEDICAL EXAMINATION: You must have had a medical examination within the past 12 months at no cost to you. This examination must have included: health history, pulmonary function tests and may have included an evaluation of a chest x-ray.

By signing this document you are acknowledging only that the City has advised you of your rights to training and protection relative to your employer, the ABATEMENT CONTRACTOR.

Signature: _____ Social Security No.: _____

Printed Name: _____

Witness (print): _____ Witness Signature: _____

APPENDIX B

CERTIFICATION OF VISUAL INSPECTION

Project # _____ Date: _____ Location: _____

Contractor: _____

The contractor hereby certifies that he/she has visually inspected the Work Area (all surfaces including pipes, counters, ledges, walls, ceiling and floor, behind critical barriers, sheet plastic, etc.) and has found no dust, debris or residue.

by: (Signature): _____ Date: _____

(Print Name): _____

(Company Name): _____

(Print Title): _____

CITY ALMP REPRESENTATIVE

The City ALMP Representative hereby certifies that he has accompanied the contractor on his/her visual inspection and verifies that this inspection has been thorough and to the best of his/her knowledge and belief, the contractor's certification above is a true and honest one.

by: (Signature): _____ Date: _____

(Print Name): _____

WORK AREA

Location: _____

Room: _____

Hazard Reduction Performed:

APPENDIX C

SUMMARY OF ASBESTOS RESULTS

IBEW ASBESTOS SAMPLING					
SAMPLE #	LOCATION	MATERIAL	ASBESTOS %	QUANTITY	HOMOGENEOUS LOCATION
B-001	Level 1 – Room 2 - Wall	Drywall Composite	ND	N/A	Throughout All Levels
B-002	Level 1 – Room 1 - Wall	Drywall Composite	ND	N/A	Throughout All Levels
B-003	Level 1 – Room 4 - Wall	Drywall Composite	ND	N/A	Throughout All Levels
B-004	Level 1 – Room 1 - Ceiling	2’x4’ Ceiling Tile	ND	N/A	Throughout All Levels
B-005	Level 1 – Room 2 - Ceiling	2’x4’ Ceiling Tile	ND	N/A	Throughout All Levels
B-006	Level 1 – Room 11 - Ceiling	2’x4’ Ceiling Tile	ND	N/A	Throughout All Levels
B-007	Level 1 – Room 4 - Ceiling	2’x2’ Ceiling Tile	ND	N/A	Throughout All Levels
B-008	Level 1 – Room 7 - Ceiling	2’x2’ Ceiling Tile	ND	N/A	Throughout All Levels

IBEW ASBESTOS SAMPLING

SAMPLE #	LOCATION	MATERIAL	ASBESTOS %	QUANTITY	HOMOGENEOUS LOCATION
B-009	Level 1 – Room 10 - Ceiling	2’x2’ Ceiling Tile	ND	N/A	Throughout All Levels
B-010	Level 1 – Room 11 - Ceiling	1’x1’ Ceiling Tile with Mastic	ND	N/A	Throughout All Levels
B-011	Level 1 – Room 12 - Ceiling	1’x1’ Ceiling Tile with Mastic	ND	N/A	Throughout All Levels
B-012	Level 1 – Room 11 - Ceiling	1’x1’ Ceiling Tile with Mastic	ND	N/A	Throughout All Levels
B-013	Level 1 – Restroom 4 - Floor	Vinyl Sheet Flooring (multi-layered)	15% Chrysotile	300SF	Level 1 Restrooms
B-014	Level 1 – Room 10 - Floor	9”x9” Vinyl Containing Tile	2-3% Chrysotile	3,000SF	Level 1: Hallways, Janitors Closet, Main Entry, Restrooms, Offices. Level 2: Kitchen, Landing, MPR, Closets
B-015	Level 1 – Room 11 - Floor	9”x9” Vinyl Containing Tile	2-3% Chrysotile	3,000SF	Same As B-015
B-016	Level 1 – Hall 3 - Floor	9”x9” Vinyl Containing Tile	10% Chrysotile	1,000SF	Level 1: Hallways, Janitors Closet, Main Entry, Restrooms,
B-017	Level 1 – Room 14 - Floor	9”x9” Vinyl Containing Tile	10% Chrysotile	1,000SF	Same As B-016

IBEW ASBESTOS SAMPLING

SAMPLE #	LOCATION	MATERIAL	ASBESTOS %	QUANTITY	HOMOGENEOUS LOCATION
B-018	Level 1 – Restroom 4 - Wall	Plaster Wall	ND	N/A	
B-019	Level 1 – Room 11 - Wall	Plaster Wall	ND	N/A	Throughout Building
B-020	Level 1 –Janitors Closet - Wall	Plaster Wall	ND	N/A	Throughout Building
B-021	Level 1 – Room 11 - Wall	Basecove with Mastic	ND	N/A	Throughout Building
B-022	Level 1 – Hall 2 - Wall	Basecove with Mastic	ND	N/A	Throughout Building
B-023	Basement – Ceiling	Acoustic Ceiling Spray	3% Chrysotile	1,500SF	Throughout Basement Ceiling
B-024	Basement – Ceiling	Acoustic Ceiling Spray	3% Chrysotile	1,500SF	Throughout Basement Ceiling
B-025	Basement – Ceiling	Acoustic Ceiling Spray	3% Chrysotile	1,500SF	Throughout Basement Ceiling
B-026	Level 2 – MPR - Floor	Wood Floor Paper Backing	ND	N/A	Level 2 Multipurpose Room
B-027	Level 2 – MPR - Wall	1’x1’ Wall Tile with Mastic	ND	N/A	Level 2 Multipurpose Room

IBEW ASBESTOS SAMPLING

SAMPLE #	LOCATION	MATERIAL	ASBESTOS %	QUANTITY	HOMOGENEOUS LOCATION
B-028	Level 2 – MPR - Ceiling	Plaster Ceiling	ND	N/A	Throughout Level 2
B-029	Level 2 – MPR - Ceiling	Plaster Ceiling	ND	N/A	Throughout Level 2
B-030	Level 2 – Closet - Ceiling	Plaster Ceiling	ND	N/A	Throughout Level 2
B-031	Level 2 – Offices - Ceiling	2’x4’ Ceiling Tile	ND	N/A	Throughout Level 2
B-032	Level 2 – Offices - Ceiling	2’x4’ Ceiling Tile	ND	N/A	Throughout Level 2
B-033	Level 2 – Offices - Ceiling	2’x4’ Ceiling Tile	ND	N/A	Throughout Level 2
B-034	Roof	Built Up Roofing Material	ND	N/A	West Portion of Roof
B-035	Roof	Built Up Roofing Material	ND	N/A	West Portion of Roof
B-036	Roof	Rolled On Roofing Material	ND	N/A	East Portion of Roof
B-037	Roof	Rolled On Roofing Material	ND	N/A	East Portion of Roof

IBEW ASBESTOS SAMPLING					
SAMPLE #	LOCATION	MATERIAL	ASBESTOS %	QUANTITY	HOMOGENEOUS LOCATION
B-038	Roof	HVAC Seam Tape with Mastic	ND	500LF	Throughout Roofing on Ducts
B-039	Roof	Roof Penetration/Patch Mastic	5% Chrysotile	120SF	Throughout Roofing on Penetrations, Seams, and Patches
B-040	Roof	Roof Penetration/Patch Mastic	ND	120SF	Throughout Roofing on Penetrations, Seams, and Patches
B-041	Roof	Roof Pitch Pocket Mastic	ND	100SF	Throughout Roofing

*ND = No Asbestos Detected

APPENDIX P

BRIDGING DOCUMENT (30% PLANS)



MISSION HILLS - HILLCREST LIBRARY

SAN DIEGO PUBLIC LIBRARY

BRIDGING DOCUMENTS

(30%)

COUNTY PLAN	PROJECT OWNER AND BRIDGING DOCUMENTS TEAM				SHEET INDEX		30% BRIDGING DOCUMENTS JANUARY 8, 2016
	OWNER CITY OF SAN DIEGO PUBLIC BUILDING AND PARKS DIVISION 1016 Second Avenue, Suite 1400, MS814 San Diego, California 92101 CONTACT: Sepe Amrtacci PH: (619) 533-4821 samrta@sanidiego.gov	ELECTRICAL ENGINEER MICHAEL WALL ENGINEERING 4115 Sorrento Valley Boulevard San Diego, California 92121 CONTACT: Guy Carpio PH: (619) 538-0910 FAX: (619) 538-0940 gcarpio@mwalleng.com	ENERGY BRUMMITT ENERGY ASSOCIATES 2771 India Street, Suite 2 San Diego, California 92101 CONTACT: Beth Brummitt PH: (619) 531-1125 FAX: (619) 531-1101 bbrummitt@brummitt.com	LEED DREW GEORGE AND PARTNERS, INC. 7472 La Jolla Boulevard La Jolla, California 92037 CONTACT: Drew George PH: (858) 272-2123 FAX: (858) 408-1844 drew@dgpa.com	T.01 TITLE SHEET T.02 BUILDING CODE SUMMARY T.03 BUILDING PROGRAM/FURNITURE SUMMARY T.04 FURNITURE SCHEDULE GRADING 1.0 GRADING TITLE SHEET 3.0 EXISTING CONDITIONS/PARTIAL DEMOLITION PLAN 3.0 PRELIMINARY GRADING PLAN 4.0 EROSION AND SEDIMENT CONTROL 5.0 DETAILS LANDSCAPE L.01 PRELIMINARY LANDSCAPE PLAN ARCHITECTURAL A.01 DEMOLITION SITE PLAN A.01 SITE PLAN A.02 GROUND FLOOR PLAN A.03 PARKING BASEMENT 1 PLAN LEVEL 1 A.04 PARKING BASEMENT 1 PLAN LEVEL 2 A.05 REFLECTED POOLING PLAN A.06 ROOF PLAN A.07 EXTERIOR ELEVATIONS A.08 EXTERIOR ELEVATIONS A.09 EXTERIOR ELEVATIONS A.10 BUILDING SECTIONS A.11 BUILDING SECTIONS A.12 ENLARGED TOILET PLANS A.13 FINISH SCHEDULE A.14 DOOR SCHEDULE A.15 WINDOW TYPES STRUCTURAL S1.0 STRUCTURAL NOTES S2.0 PARKING LEVEL 2 & BASEMENT S2.1 PARKING LEVEL 1 S2.2 SECOND LEVEL FRAMING PLAN S2.3 MAIN ROOF FRAMING PLAN S2.4 HIGH ROOF FRAMING PLAN S3.0 CONCRETE WALL ELEVATIONS S3.1 CONCRETE WALL ELEVATIONS S3.2 FRAME ELEVATIONS	MECHANICAL M0.1 MECHANICAL LEGEND, GENERAL NOTES & ABBREVIATIONS M0.2 MECHANICAL SCHEDULES M1.0 MECHANICAL ZONING BASEMENT LEVEL 2 FLOOR PLAN M1.1 MECHANICAL ZONING BASEMENT LEVEL 1 FLOOR PLAN M1.2 MECHANICAL ZONING FLOOR PLAN M2.0 MECHANICAL ZONING BASEMENT LEVEL 2 FLOOR PLAN M2.1 MECHANICAL ZONING BASEMENT LEVEL 1 FLOOR PLAN M2.2 MECHANICAL LEVEL FLOOR PLAN M2.3 MECHANICAL ROOF PLAN M3.0 MECHANICAL CONTROLS PLUMBING P.01 PLUMBING LEGEND, GENERAL NOTES & ABBREVIATION P.02 PLUMBING SCHEDULES P1.0 PLUMBING SITE PLAN P1.1 PLUMBING BASEMENT LEVEL 2 P1.2 PLUMBING BASEMENT LEVEL 1 P1.3 PLUMBING WASTE & VENT FLOOR PLAN P1.4 PLUMBING GAS & DOMESTIC WATER FLOOR PLAN ELECTRICAL E0.1 NOTE SHEET E0.2 LUMINAIRE SCHEDULE E0.0 SITE PLAN - UTILITIES E0.1 SITE PLAN - LIGHTING E2.0 LEVEL 1 - LIGHTING PLAN E2.1 BASEMENT 1 - LIGHTING PLAN E2.2 BASEMENT 2 - LIGHTING PLAN E3.0 LEVEL 1 - POWER PLAN E3.1 BASEMENT 1 - POWER PLAN E3.2 BASEMENT 2 - POWER PLAN E3.3 ROOF PLAN E4.0 SINGLE LINE DIAGRAM E5.0 PANEL SCHEDULE E6.0 DETAIL SHEET E6.1 DETAIL SHEET	

Date: 5/19/2015

Mission Hills / Hillcrest Library
215 W. Washington Street
San Diego, California 92103

PRELIMINARY CODE REVIEW

BUILDING CODE COMPLIANCE:

ALL WORK SHALL COMPLY WITH THE LATEST EDITIONS OF THE FOLLOWING CODES AND STANDARDS AS ADOPTED BY THE GOVERNING AUTHORITY:

PARTIAL LIST OF APPLICABLE CODES:

- 2013 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (CABC) PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (C.C.R.)
- 2013 CALIFORNIA BUILDING CODE (CBC) PART 2, TITLE 24 C.C.R. BASED ON THE 2010 INTERNATIONAL BUILDING CODE (IBC) VOLUMES 1
- 2013 CALIFORNIA ELECTRIC CODE (CEC) PART 5, TITLE 24 C.C.R. BASED ON THE 2011 NATIONAL ELECTRIC CODE
- 2013 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R. BASED ON THE 2012 UNIFORM MECHANICAL CODE
- 2013 CALIFORNIA PLUMBING CODE (CPC) PART 5, TITLE 24 C.C.R. BASED ON THE 2012 UNIFORM PLUMBING CODE
- 2013 CALIFORNIA ENERGY CODE PART 6, TITLE 24 C.C.R. REPLICATION OF THE 2012 CALIFORNIA ENERGY EFFICIENCY STANDARDS
- 2013 CALIFORNIA FIRE CODE (CFC) PART 9, TITLE 24 C.C.R. BASED ON THE 2010 INTERNATIONAL FIRE CODE AND THE 2012 CALIFORNIA AMENDMENTS.
- 2013 CALIFORNIA REFERENCE STANDARDS CODE (CRSC) PART 12, TITLE 24 C.C.R., TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS, 2013 CALIFORNIA GREEN BUILDING STANDARDS CODE

PARTIAL LIST OF APPLICABLE STANDARDS:

- NFPA 10 PORTABLE FIRE EXTINGUISHERS 2013 EDITION
- NFPA 13 INSTALLATION OF SPRINKLER SYSTEMS 2013 EDITION
- NFPA 72 NATIONAL FIRE ALARM CODE 2013 EDITION (NOTE: SEE UL STANDARD 1971 FOR VISUAL DEVICES)

405 W. Palm Lane Blvd., Suite 300 San Diego, CA 92110 T: 619.223.2400 F: 619.223.2017 moshercrew.com



PROJECT NUMBER: 04012.02
 PROJECT NAME: MISSION HILLS / HILLCREST LIBRARY
 SITE ADDRESS: 215 W. WASHINGTON STREET SAN DIEGO, CA 92103
 LEGAL DESCRIPTION: LOT 24 TR4U 26 ALZEC ST WD / LOT 27 IN BLK 6 TR 872
 ASSESSOR'S PARCEL NUMBER: 444-050-36
 EXISTING ZONE: CH2A, residential equivalent zone MR-1000 Mid-City Communities Planned District, The Grand Area Overlay Zone, The Residential Tandem Parking Overlay Zone, and the Uptown Community Planned Area.
 HAZARD SEVERITY ZONE: N/A
 OCCUPANCY CLASSIFICATION: A-3 LIBRARY (Occ. Load > 50) SEC. 503.4 SEC. 1028 5-2 UNDERGROUND PARKING SEC. 511.3 0 STAFF WORK ROOM SEC. 304.1
 OCCUPANCY SEPARATION: NONE (A-3 & 0) SEC. 508.3.1, 503.2.1.3
 SEPARATE BUILDINGS: 3 HR. HORIZONTAL FIRE WALL 510.2 TABLE 703.4
 SPRINKLER SYSTEM: FULLY SPRINKLERED (A-3 & 5-2) SEC. 403.3, 504.2
 CONSTRUCTION TYPE: V-A (A-3) TABLE 503 (SPRINKLERED IN LIEU OF 1-HR. CONTRIBUTION)
 ALLOWABLE HEIGHT (STORIES): 1 STORY (A-3) TABLE 503 11 STORY (5-2)
 ALLOWABLE BUILDING HEIGHT (FEET): 40'-0" (A-3) 165'-0" (5-2) TABLE 503
 GROSS FLOOR AREAS: LIBRARY 13,580 SQ.FT. COMMUNITY ROOM 724 SQ.FT. TOTAL 14,304 SQ.FT.

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UNDERGROUND PARKING
 BASEMENT 1 18,854 SQ.FT.
 BASEMENT 2 19,140 SQ.FT.
 TOTAL 38,042 SQ.FT.

BUILDING AREA MODIFICATION
 $A_{adj} = A(1 + \frac{h}{h_0} + \frac{P}{W} + \frac{L}{W})$ (EQUATION 5-1)
 $A_{adj} = 11,000 \text{ SQ.FT.} + (11,000 \text{ SQ.FT.} \times 25\%) + (A \times \frac{L}{W})$
 $A_{adj} = 11,000 \text{ SQ.FT.} + (11,000 \text{ SQ.FT.} \times 0.25) + (P \times \frac{L}{W})$

WHERE:
 A_{adj} = ALLOWABLE AREA PER STORY (SQ.FT.)
 A = TABULAR AREA PER STORY IN ACCORDANCE WITH TABLE 503 (SQ.FT.)
 h = AREA INCREASE FACTOR DUE TO FRONTAGE IN ACCORDANCE WITH SECTION 506.2
 h_0 = AREA INCREASE FACTOR DUE TO SPRINKLER PROTECTION IN ACCORDANCE WITH SECTION 503.3
 P = $(P/P - 0.25) \times W/20$ (EQUATION 5-2)

WHERE:
 h = AREA INCREASE FACTOR DUE TO FRONTAGE
 P = BUILDING PERIMETER (SHAFT FRONT) ON A PUBLIC WAY OR OPEN SPACE HAVING 20 FEET OPEN MINIMUM WIDTH (IN FEET)
 P_0 = PERIMETER OF ENTIRE BUILDING (IN FEET)
 W = WIDTH OF PUBLIC WAY OR OPEN SPACE (IN FEET) IN ACCORDANCE WITH SEC. 506.2.1 ($W/30$ MAXIMUM VALUE = 1)
 L = $(275 - 47/1051 - 25) \times 30/20 = 0.26$

ALLOWABLE AREA PER STORY (Per CALCULATIONS PER EQUATION 5-1) SEC. 506.1

OCCUPANCY A-3
 ALLOWABLE: $A_{adj} = 11,000 \text{ SQ.FT.}$ TABLE 503
 FRONTAGE INCREASE: $L = 2,675 \text{ SQ.FT.}$ SEC. 506.2
 SPRINKLER INCREASE: $L = \text{NOT USED}$ SEC. 506.3
 TOTAL ALLOWABLE AREA: A-3 14,375 SQ.FT.

OCCUPANCY 5-2
 ALLOWABLE: $A_{adj} = 79,000 \text{ SQ.FT.}$ TABLE 503
 FRONTAGE INCREASE: $L = \text{NOT NEEDED}$ SEC. 506.2
 SPRINKLER INCREASE: $L = \text{NOT NEEDED}$ SEC. 506.3
 TOTAL ALLOWABLE AREA: 5-2 UNLIMITED

EXTERIOR WALL OPENINGS TABLE 703A.3.2

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FIRE-RESISTIVE RATING REQUIREMENTS FOR BUILDING ELEMENTS: TABLE 601

BUILDING ELEMENT	FIRE-RATING REQ.	Type IA	Type VA
PRIMARY STRUCTURAL FRAME		3	1
BEARING WALLS:		3	1
EXTERIOR		3	1
INTERIOR		3	1
NON-BEARING WALLS AND PARTITIONS:	SEE TABLE 602		
EXTERIOR		0	0
NON-BEARING WALLS AND PARTITIONS:		2	1
INTERIOR		0	0
FLOOR CONSTRUCTION		2	1
ROOF CONSTRUCTION		11/2	1
SHAFT ENCLOSURES:	SEC. 510.2		
STAIRS	2		
ELEVATOR	2		
STAIRPIPE SYSTEM	Not Required (SEC. 905.2.1)		
MINIMUM FLOOR AREA ALLOWABLE PER OCCUPANT:	TABLE 100A.1.2		
OCCUPANCY	SQ.FT. PER OCCUPANT		
STORAGE	300		
ASSEMBLY CONCENTRATED	7		
ASSEMBLY UNCONCENTRATED	15		
OFFICE	100		
PARKING GARAGE	200		
LIBRARY READING ROOMS	50 FEET		
LIBRARY STACK AREA	100 GRCS		
MINIMUM REQUIRED WIDTH OF EXITS (INCHES):	SEC. 1005.3.16.2		
STAIR (200 OCCUPANTS X 0.2)	50 INCHES		
PROVIDED	36 INCHES (MIN. 80% CAPACITY)		
EXITS (200 OCCUPANTS X 0.2)	40 INCHES		
PROVIDED	108 INCHES		
COMMON PATH OF EGRESS TRAVEL	75'-0" (A-3) TABLE 1014.3 100'-0" (B & D)		
SPACES WITH ONE EXIT	49' MAX. OCC. TABLE 1015.1		
MAXIMUM EXIT TRAVEL DISTANCE:	250' (A-3) TABLE 1016.2 300' (B) 400' (5-2)		
CORRIDOR FIRE RESISTIVE RATING (HR.):	0 TABLE 1018.1		
MAXIMUM LENGTH OF DEAD-END CORRIDORS:	20'-0' SEC. 1018.4		
MINIMUM NUMBER OF EXITS (PER STORY):	2 (1-500 OCC.) TABLE 1021.1		

405 W. Palm Lane Blvd., Suite 300 San Diego, CA 92110 T: 619.223.2400 F: 619.223.2017 moshercrew.com

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ARCHITECTS MOSHER DREW
 405 WEST POINT LOMA BOULEVARD
 SUITE 300
 SAN DIEGO, CALIFORNIA 92110
 TELEPHONE (619) 223-2400
 FAX (619) 223-2017

CITY CONTRACT SPECIAL SPECIFICATIONS NO. _____ Project Number 04012.02
 CDP 101

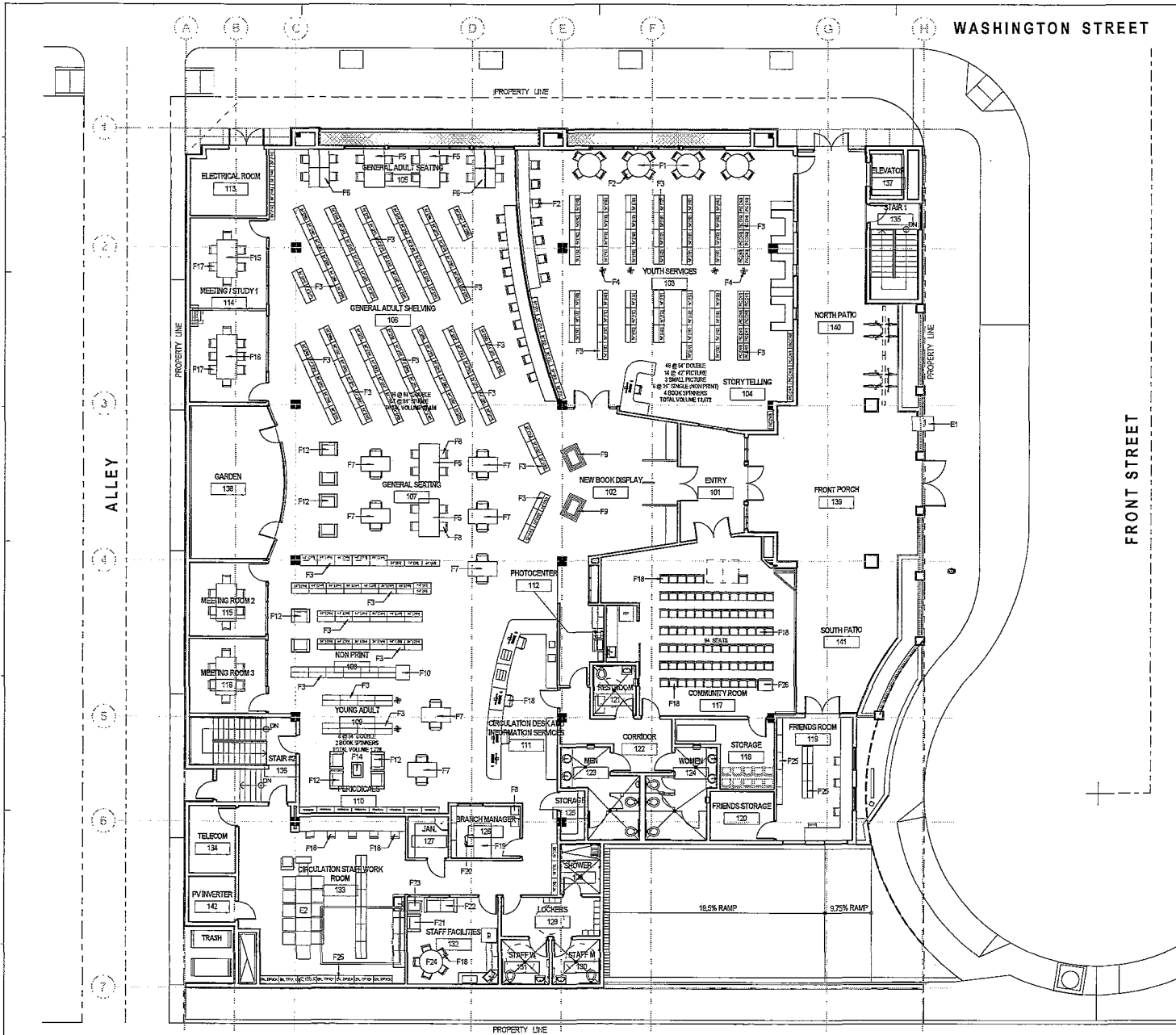
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SHEET TITLE SHEET NO:
 BUILDING CODE SUMMARY T.02

CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS
 DEPARTMENT SHEET 02 SHEET _____

FOR CITY ENGINEER DATE _____ (INCLUDE IN PAD)
 DISCUSSION BY APPROVED DATE FILED _____
 PROJECT MANAGER _____
 CONTROL CHECKPOINTS _____

CONTRACTOR DATE STARTED _____ 39037-D
 SPECTOR DATE COMPLETED _____



LEVEL 1 FLOOR PLAN
1/8" = 1'-0"

Approved for Proposal (Rev. July 2015)
Appendix 7 - Bridging Documents (30% Plans) - Mission Hills / Hillcrest Library Design - SoM Contract

PROGRAM SUMMARY

PROGRAM AREAS	PROGRAM NET AREA	PROPOSED PROGRAM NET AREA	PROGRAMMED VOLUME COLLECTION	PROPOSED VOLUME COLLECTION
PUBLIC AREAS				
A. ENTRANCE VESTIBULE AND LOBBY	Non Assigned	Non Assigned		
B. OOCOR WALL	Non Assigned	Non Assigned		
C. CIRCULATION AREA				
CIRCULATION DESK	472	472		
CIRCULATION & STAFF WORK ROOM	852	852		
D. PHOTOCOPIER CENTER	34	22		
E. BROWSE AREA	30	627		
F. INFORMATION SERVICES	505	135		
G. PERIODICALS AREA	120	150		
PERIODICAL BACK ISSUES			350	350
CURRENT PERIODICAL TITLES			50	50
H. GENERAL ADULT BOOK SHELVING	2,782	2,553	26,500	8,655
NON-PRINT ITEMS			6,500	6,480
I. GENERAL ADULT SEATING	1,669	2,025		
J. YOUNG ADULT AREA	420	375	1,500	1,728
NON-PRINT ITEMS			45	45
K. YOUTH SERVICES	2,590	2,156	11,715	13,572
NON-PRINT ITEMS			665	665
L. FRIENDS ROOM & STORAGE	240	375		
M. MEETING ROOM & STORAGE	835	888		
N. PUBLIC RESTROOMS	556	573		
TOTAL PUBLIC AREAS	11,160	11,059	49,365	51,686
NON-PUBLIC SERVICE AREAS				
A. STAFF FACILITIES	500	475		
B. TELECOMMUNICATIONS ROOM	150	114		
C. BUILDING STAFF SPACE	442	152		
D. SHIPPING & RECEIVING	200	153		
E. TRASH (Not Assigned)				
TOTAL NON-PUBLIC SERVICE AREAS 312	1,292	944		
GRAND TOTAL	12,452	12,042		

FURNITURE LEGEND

- NOTE:
SEE SHEET T.04 FOR DETAILED FURNITURE SCHEDULE. THE BASIS OF DESIGN MANUFACTURER IS AGATIL, LLC.
- F1 MYLES ROUND STUDY TABLE
 - F2 "WHITE" YOUTH SLAT BACK SIDE CHAIR PRIMARY SHELVING
 - F3 PRIMARY 2 SEAT BENCH
 - F4 PAPERBACK DISPLAY SHELVING ROTATING UNIT
 - F5 MYLES 4 PERSON RECTANGULAR STUDY TABLE
 - F6 MYLES 4 PERSON DOUBLE FACED TABLE CARRIAGE
 - F7 MYLES 2 PERSON RECTANGULAR TABLE
 - F8 TALBOT SLAT BACK SIDE CHAIR
 - F9 TIERED DISPLAY SHELVING
 - F10 MYLES ATLAS STAND
 - F11 MYLES CUSTOM CD BIN
 - F12 "TUMED" LOUNGE CHAIR
 - F13 MYLES LOUNGE CHAIR WITH VERTICAL SLAT
 - F14 MYLES RECTANGULAR OCCASIONAL TABLE
 - F15 MYLES 6 PERSON RECTANGULAR STUDY TABLE
 - F16 MYLES 6 PERSON RECTANGULAR STUDY TABLE
 - F17 TALBOT SLAT BACK SIDE CHAIR
 - F18 BERTS BERTWOOD AND PLASTIC LAMINATE SIDE CHAIR
 - F19 ELEGANT'S DESK
 - F20 DORI TASK CHAIR
 - F21 RIO LOUNGE CHAIR
 - F22 RIO TWO SEAT SEATSE
 - F23 SQUARE OCCASIONAL TABLE
 - F24 METAL BASE TABLE, ROUND
 - F25 PRIMARY BOOK TROTTER WITH 2 SHELVES
 - F26 MYLES MOBILE PODIUM

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JANUARY 8, 2016

EQUIPMENT LEGEND

- E1 BOOK DROP
"JM MODEL 2820/2922 PLUS"
OR EQUAL
- E2 BOOK SORTER
"JM MODEL 5810/510"
OR EQUAL

ARCHITECTS: MOSHER DREW
4200 WEST POINT LOMA BOULEVARD
SUITE 200
SAN DIEGO, CALIFORNIA 92118
TELEPHONE: (619) 223-2400
FAX NO: (619) 223-0317

CITY CONTRACT SPECIAL SPECIFICATION(S) NO. _____ Project Number: **04012.02**
C.I.P. NO. _____

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SHEET TITLE
BUILDING PROGRAM/FURNITURE SUMMARY

SHEET NO.:
T.03

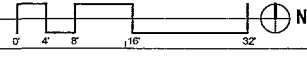
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS
DEPARTMENT SHEET _____ OF _____ SHEET

W.D. NO. _____
1/07

DATE STARTED _____ DATE COMPLETED _____
BY _____ APPROVED _____
DESCRIPTION _____

PROJECT MANAGER: _____
PROJECT CERTIFICATION: _____

39037-D



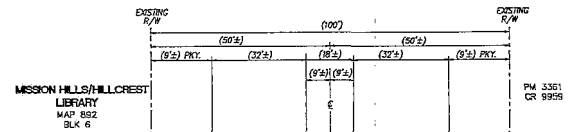
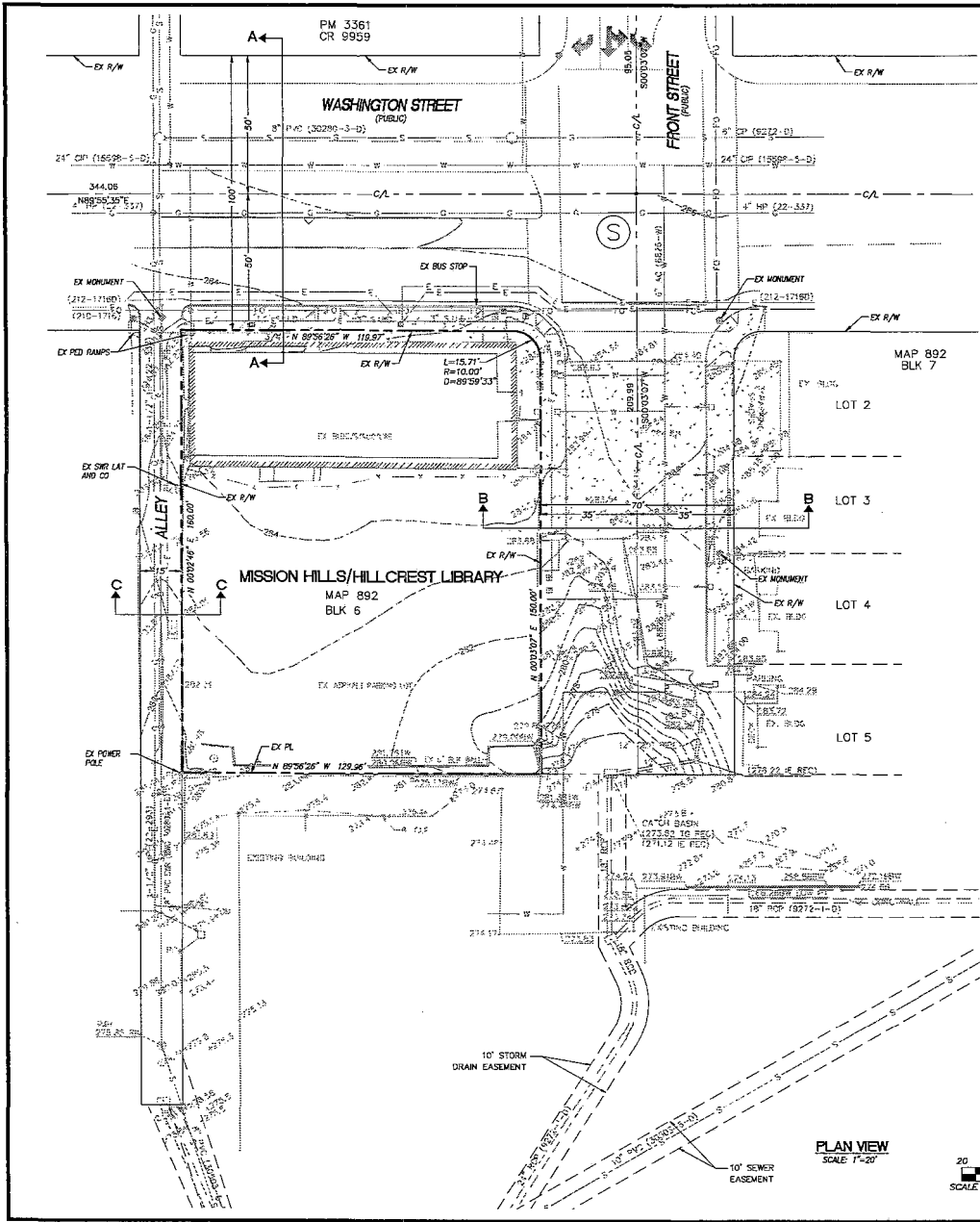
FURNITURE

LOCATION	QTY	BOD PRODUCT #	DESCRIPTION	SIZE
FURNITURE BASIS OF DESIGN PROVIDE THE FOLLOWING SYSTEM OR EQUIV.				
MANUFACTURER: AGATI, INC. COLLECTION: MYLES, TALBOT SEATING, WOOD SHELVING, SENSI MATERIAL: CHERRY WOOD FINISH: MANUFACTURER'S STANDARD INSET TOPS: MARMOLEUM				
YOUTH SERVICES				
	4	MYL-TBL-48-2427-C	MYLES ROUND STUDY TABLE WITH EDGE BAND, 4 WOOD LEGS, CHERRY	48 DIA. 2427H
	4	ELEC-NODE-2P-SP	BYRNE ELECTRICAL NODE WITH 2 POWER OUTLETS	
	4	ELEC-UL101-4-8C	COMPACT PLUG-IN OUTLET POWER STRIP, 4 OUTLETS, 6' CORD.	
	4	ELEC-VVWC-C	CHERRY VENEER WRAPPED WIRE CHANNEL	
	23	WHI-STG-1200-C	WHITE YOUTH SLAT BACK SIDE CHAIR WITH WOOD SEAT, CHERRY	16W 17D 30H 16SH
	14	PRM-BKC-DF-STR-3584-22-C	PRIMARY SHELVING, CHERRY WOOD, DOUBLE FACED STARTER UNIT.	35W 22D 54H
	38	PRM-BKC-DF-ADR-3584-22-C	PRIMARY SHELVING, CHERRY WOOD, DOUBLE FACED ADDER UNIT.	35W 22D 54H
	11	MYL-TC-DF-24144-C	DOUBLE FACED WIDTH TOP CAP, CHERRY EDGE, MARMOLEUM INSET TOP	24W 14L 1.25TH
	1	MYL-TC-DF-24144-C	DOUBLE FACED WIDTH TOP CAP, CHERRY EDGE, WOOD VENEER TOP	24W 14L 1.25TH
	3	MYL-TC-DF-24108-C	DOUBLE FACED WIDTH TOP CAP, CHERRY EDGE, MARMOLEUM INSET TOP	24W 10L 1.25TH
	1	MYL-TC-DF-24108-C	DOUBLE FACED WIDTH TOP CAP, CHERRY EDGE, WOOD VENEER TOP	24W 10L 1.25TH
	28	MYL-EP-DF-248-C	MYLES DOUBLE FACED END PANEL, CHERRY	24W 5H 1.25TH
	1	PRM-BKC-SF-STR-3536-12-C	PRIMARY SHELVING, CHERRY WOOD, SINGLE FACED STARTER UNIT.	35W 12D 36H
	5	PRM-BKC-SF-ADR-3536-12-C	PRIMARY SHELVING, CHERRY WOOD, SINGLE FACED ADDER UNIT.	35W 12D 36H
	1	MYL-TC-SF-12216-C	SINGLE FACED WIDTH TOP CAP, CHERRY EDGE, MARMOLEUM INSET TOP	12W 21L 1.25TH
	1	MYL-TC-SF-12216-C	SINGLE FACED WIDTH TOP CAP, CHERRY EDGE, WOOD VENEER TOP	12W 21L 1.25TH
	2	PRM-BKC-SF-STR-3584-12-C	PRIMARY SHELVING, CHERRY WOOD, SINGLE FACED STARTER UNIT.	35W 12D 36H
	3	PRM-BKC-SF-ADR-3584-12-C	PRIMARY SHELVING, CHERRY WOOD, SINGLE FACED ADDER UNIT.	35W 12D 36H
	1	MYL-TC-SF-12216-C	SINGLE FACED WIDTH TOP CAP, CHERRY EDGE, MARMOLEUM INSET TOP	12W 14L 1.25TH
	1	MYL-TC-SF-12216-C	SINGLE FACED WIDTH TOP CAP, CHERRY EDGE, WOOD VENEER TOP	12W 38L 1.25TH
	4	PRD3222	PAPERBACK DISPLAY SHELVING ROTATING DISPLAY UNIT	22W 22D 72H
GENERAL ADULT SHELVING/SEATING				
	4	MYL-TBL-7892-30-C	MYLES RECTANGULAR STUDY TABLE FOR 4 PEOPLE WITH EDGE BAND, STRETCHER BASE WITH 3 SLAT DETAIL, WOOD LEGS, CHERRY	78W 42D 30H
	4	ELEC-NODE-2P-SP	BYRNE ELECTRICAL NODE WITH 2 POWER OUTLETS	
	4	ELEC-UL101-4-8C	COMPACT PLUG-IN OUTLET POWER STRIP, 4 OUTLETS, 6' CORD.	
	4	ELEC-VVWC-C	CHERRY VENEER WRAPPED WIRE CHANNEL	
	2	MYL-TBL-CRL-7850-42-C	MYLES 4 PERSON, DOUBLE FACED TABLE CHAIR, MARMOLEUM OR PLASTIC LAMINATE TOP, WOOD EDGE, SURROUND, CHERRY	78W 60D 42H
	8	ELEC-GL-EN-CONT-PMNIS	GLENBEIGH CONTEMPORARY SURFACE MOUNT WITH 1 POWER AND 1 USB PORT.	
	2	ELEC-UL101-4-8C	COMPACT PLUG-IN OUTLET POWER STRIP, 4 OUTLETS, 6' CORD.	
	2	ELEC-VVWC-C	CHERRY VENEER WRAPPED WIRE CHANNEL	
	7	MYL-TBL-6048-30-C	MYLES RECTANGULAR STUDY TABLE FOR 2 PEOPLE WITH EDGE BAND, STRETCHER BASE WITH 3 SLAT DETAIL, WOOD LEGS, CHERRY	60W 48D 30H
	7	ELEC-NODE-2P-SP	BYRNE ELECTRICAL NODE WITH 2 POWER OUTLETS	
	7	ELEC-UL101-4-8C	COMPACT PLUG-IN OUTLET POWER STRIP, 4 OUTLETS, 6' CORD.	
	7	ELEC-VVWC-C	CHERRY VENEER WRAPPED WIRE CHANNEL	
	48	TAL-STG-1000-C	TALBOT SLAT BACK SIDE CHAIR WITH SLAT BACK, WOOD SEAT, CHERRY	20W 22D 31.5H 17.5SH
	21	PRM-BKC-DF-STR-3584-22-C	PRIMARY SHELVING, CHERRY WOOD, DOUBLE FACED STARTER UNIT.	35W 22D 54H
	89	PRM-BKC-DF-ADR-3584-22-C	PRIMARY SHELVING, CHERRY WOOD, DOUBLE FACED ADDER UNIT.	35W 22D 54H
	38	MYL-EP-DF-248-C	MYLES DOUBLE FACED END PANEL, CHERRY	24W 5H 1.25TH
	1	PRM-BKC-SF-STR-3584-12-C	PRIMARY SHELVING, CHERRY WOOD, SINGLE FACED STARTER UNIT.	35W 12D 36H
	3	PRM-BKC-SF-ADR-3584-12-C	PRIMARY SHELVING, CHERRY WOOD, SINGLE FACED ADDER UNIT.	35W 12D 36H
	1	MYL-EP-SF-290-C	MYLES SINGLE FACED END PANEL, CHERRY	12W 8H 1.25TH
	1	PRM-BKC-SF-STR-3584-22-C	PRIMARY SHELVING, CHERRY WOOD, DOUBLE FACED STARTER UNIT.	35W 22D 54H
	5	PRM-BKC-DF-ADR-3584-22-C	PRIMARY SHELVING, CHERRY WOOD, DOUBLE FACED ADDER UNIT.	35W 22D 54H
	2	MYL-TC-DF-24108-C	DOUBLE FACED WIDTH TOP CAP, CHERRY EDGE, MARMOLEUM INSET TOP	24W 10L 1.25TH
	1	MYL-TC-DF-24108-C	DOUBLE FACED WIDTH TOP CAP, CHERRY EDGE, WOOD VENEER TOP	24W 10L 1.25TH
	1	MYL-TC-DF-2436-C	DOUBLE FACED WIDTH TOP CAP, CHERRY EDGE, MARMOLEUM INSET TOP	24W 38L 1.25TH
	1	MYL-TC-DF-2436-C	DOUBLE FACED WIDTH TOP CAP, CHERRY EDGE, WOOD VENEER TOP	24W 38L 1.25TH
	3	MYL-EP-SF-248-C	MYLES DOUBLE FACED END PANEL, CHERRY	24W 5H 1.25TH
	2	PRM-BKC-SF-ADR-3584-12-C	PRIMARY SHELVING, CHERRY WOOD, SINGLE FACED ADDER UNIT.	35W 12D 36H
	1	MYL-TC-SF-12108-C	SINGLE FACED WIDTH TOP CAP, CHERRY EDGE, MARMOLEUM INSET TOP	12W 10L 1.25TH
	1	MYL-TC-SF-12108-C	SINGLE FACED WIDTH TOP CAP, CHERRY EDGE, WOOD VENEER TOP	12W 10L 1.25TH
	1	MYL-EP-SF-1224-C	MYLES SINGLE FACED END PANEL, CHERRY	12W 5D 1.25TH
	8	PRM-BKC-SF-POCL-3572-13-C	PRIMARY SHELVING, SINGLE FACED PERIODICAL UNIT, CHERRY	35W 13D 72H
	2	PRD3222	PAPERBACK DISPLAY SHELVING ROTATING DISPLAY UNIT	22W 22D 72H
	2	TRD3250	TIERED DISPLAY SHELVING	35W 60D 42H
	1	MYL-ATL-3099-45-C	MYLES ATLAS STAND, CHERRY	30W 26D 45H
	1	MYL-CUBEN	MYLES CUBEN 23 BEN	21W 42D 30H
	10	TUN-STG-2001OPT-ARM-CAPOPT-TAB-01	TUXEDO LOUNGE CHAIR WITH UPHOLSTERED ARMS, SOLID WOOD FEET, WOOD ARM CAP OPTION, TABLE ARM RECTANGLE \$559YARD FABRIC ALLOWANCE INCLUDED, 64" WIDE PLAIN FABRIC.	30W 32D 31H 17.5SH 25AH
	1	MYL-STG-2201-C	MYLES LOUNGE CHAIR WITH VERTICAL SPLAT, CHERRY \$55YARD FABRIC ALLOWANCE INCLUDED, 64" WIDE PLAIN FABRIC.	27.5W 30D 31H 17SH 26AH
	1	MYL-TBL-OCCL-3624-16-C	MYLES RECTANGULAR OCCASIONAL TABLE, CHERRY	36W 24D 16H
MEETING/STUDY ROOMS				
	3	MYL-TBL-7842-30-C	MYLES 8 PERSON RECTANGULAR STUDY TABLE WITH EDGE BAND, STRETCHER BASE WITH 3 SLAT DETAIL, WOOD LEGS, CHERRY	78W 42D 30H
	3	ELEC-NODE-2P-SP	BYRNE ELECTRICAL NODE WITH 2 POWER OUTLETS	
	3	ELEC-UL101-4-8C	COMPACT PLUG-IN OUTLET POWER STRIP, 4 OUTLETS, 6' CORD.	
	3	ELEC-VVWC-C	CHERRY VENEER WRAPPED WIRE CHANNEL	
	1	MYL-TBL-8043-30-C	MYLES 8 PERSON RECTANGULAR STUDY TABLE WITH EDGE BAND, STRETCHER BASE WITH 3 SLAT DETAIL, WOOD LEGS, CHERRY	80W 42D 30H
	1	ELEC-NODE-2P-SP	BYRNE ELECTRICAL NODE WITH 2 POWER OUTLETS	
	1	ELEC-UL101-4-8C	COMPACT PLUG-IN OUTLET POWER STRIP, 4 OUTLETS, 6' CORD.	
	1	ELEC-VVWC-C	CHERRY VENEER WRAPPED WIRE CHANNEL	
	26	TAL-STG-1000-C	TALBOT SLAT BACK SIDE CHAIR WITH SLAT BACK, WOOD SEAT, CHERRY	20W 22D 31.5H 17.5SH
CIRCULATION STAFF WORK ROOM				
	6	SEN-STG-1000-PL-SC	SENSI SIDE CHAIR PLASTIC LAMINATE SEAT AND BACK, BENT PLYWOOD, GANGING MECHANISM, STACKS 5 HIGH, SATIN CHROME BASE, COLOR TBD	18.5W 21.75D 34.25H 18SH
BRANCH MANAGER				
	8	PRM-BKT-OPS-3014-37-C	PRIMARY BOOKTRUCK WITH 2 SHELVES, CHERRY	30W 14.5D 37H
	1	EMT-DSK-7228-25-WFS	ELEMENTS DESK WITH WOOD VENEER MODESTY PANELS ON THREE SIDES, ROUND LEGS, PLASTIC LAMINATE TOP WITH PVC EDGE.	72W 22D 28H
	1	DDR-STG-3000-POLY	DOOR FABR. CHAIR WITH ARMS, POLISHED ALUMINUM BASE, SEVEN POINTS OF ADJUSTMENT, POLYURETHANE FABRIC, WHITE STITCHING, SINGLE AND DUAL COLORED UPHOLSTERY OPTIONS AVAILABLE.	27W 27D 36-43H

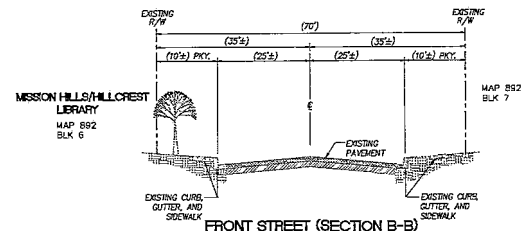
LOCATION	QTY	BOD PRODUCT #	DESCRIPTION	SIZE
	2	TAL-STG-1000-C	TALBOT SLAT BACK SIDE CHAIR WITH SLAT BACK, WOOD SEAT, CHERRY,	20W 22D 31.5H 17.5SH
STAFF FACILITIES				
	1	RIO-STG-2001	RIO LOUNGE CHAIR WITH UPHOLSTERED ARMS AND SOLID MAPLE FEET \$55YARD FABRIC ALLOWANCE INCLUDED, 64" WIDE PLAIN FABRIC.	31W 33D 35H 17SH 25AH
	1	RIO-STG-2002	RIO TWO SEAT SETTEE WITH UPHOLSTERED ARMS AND SOLID MAPLE FEET \$55YARD FABRIC ALLOWANCE INCLUDED, 64" WIDE PLAIN FABRIC.	36W 33D 35H 17SH 25AH
	1	DRU-TBL-36-24-C	SQUARE OCCASIONAL TABLE, EASED CORNERS, CHERRY	36W 36D 24H
	1	TBL-DSSE-60-29	METAL BASE TABLE ROUND TABLE WITH DISC BASE, MARMOLEUM OR PLASTIC LAMINATE TOP, PVC EDGE BAND, METAL POWDERCOAT BASE.	60DIA 29H
	6	SEN-STG-1000-PL-SC	SENSI SIDE CHAIR PLASTIC LAMINATE SEAT AND BACK, BENT PLYWOOD, GANGING MECHANISM, STACKS 5 HIGH, SATIN CHROME BASE, COLOR TBD	18.5W 21.75D 34.25H 18SH
COMMUNITY ROOM				
	84	SEN-STG-1000-PL-SC	SENSI SIDE CHAIR PLASTIC LAMINATE SEAT AND BACK, BENT PLYWOOD, GANGING MECHANISM, STACKS 5 HIGH, SATIN CHROME BASE, COLOR TBD	18.5W 21.75D 34.25H 18SH
FRIENDS ROOM				
	4	SEN-STG-1000-PL-SC	SENSI SIDE CHAIR PLASTIC LAMINATE SEAT AND BACK, BENT PLYWOOD, GANGING MECHANISM, STACKS 5 HIGH, SATIN CHROME BASE, COLOR TBD	18.5W 21.75D 34.25H 18SH
	2	PRM-BKT-OPS-3014-37-C	PRIMARY BOOKTRUCK WITH 2 SHELVES, CHERRY	30W 14.5D 37H
LIGHTING				
	1	LOT	WIDE STACK LIGHTING FOR SHELVING 72" AND ABOVE, 330" DOUBLE STACK, 1/2 SINGLE.	

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JANUARY 8, 2016

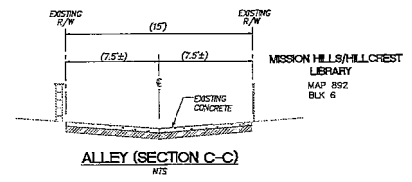
	ARCHITECTS: MOSHER DREW 400 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92118 TELEPHONE: (619) 223-3017 FAX NO.: (619) 223-3017	Project Number: 04012.02 Client: City of San Diego
	CITY CONTRACT SPECIAL SPECIFICATION 5.10	
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SHEET TITLE: FURNITURE SCHEDULE		SHEET NO.: T.04
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET: _____		
FOR CITY ENGINEER: _____ DATE: _____ SECTION HEAD: _____ BY: _____ APPROVED: _____ DATE: _____ PROJECT MANAGER: _____ CITY HONOR CERTIFICATION: _____		
CONTRACTOR: _____ DATE STARTED: _____ SPECTOR: _____ DATE COMPLETED: _____		39037-D



WASHINGTON STREET (SECTION A-A)
NTS



FRONT STREET (SECTION B-B)
NTS

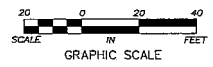


ALLEY (SECTION C-C)
NTS

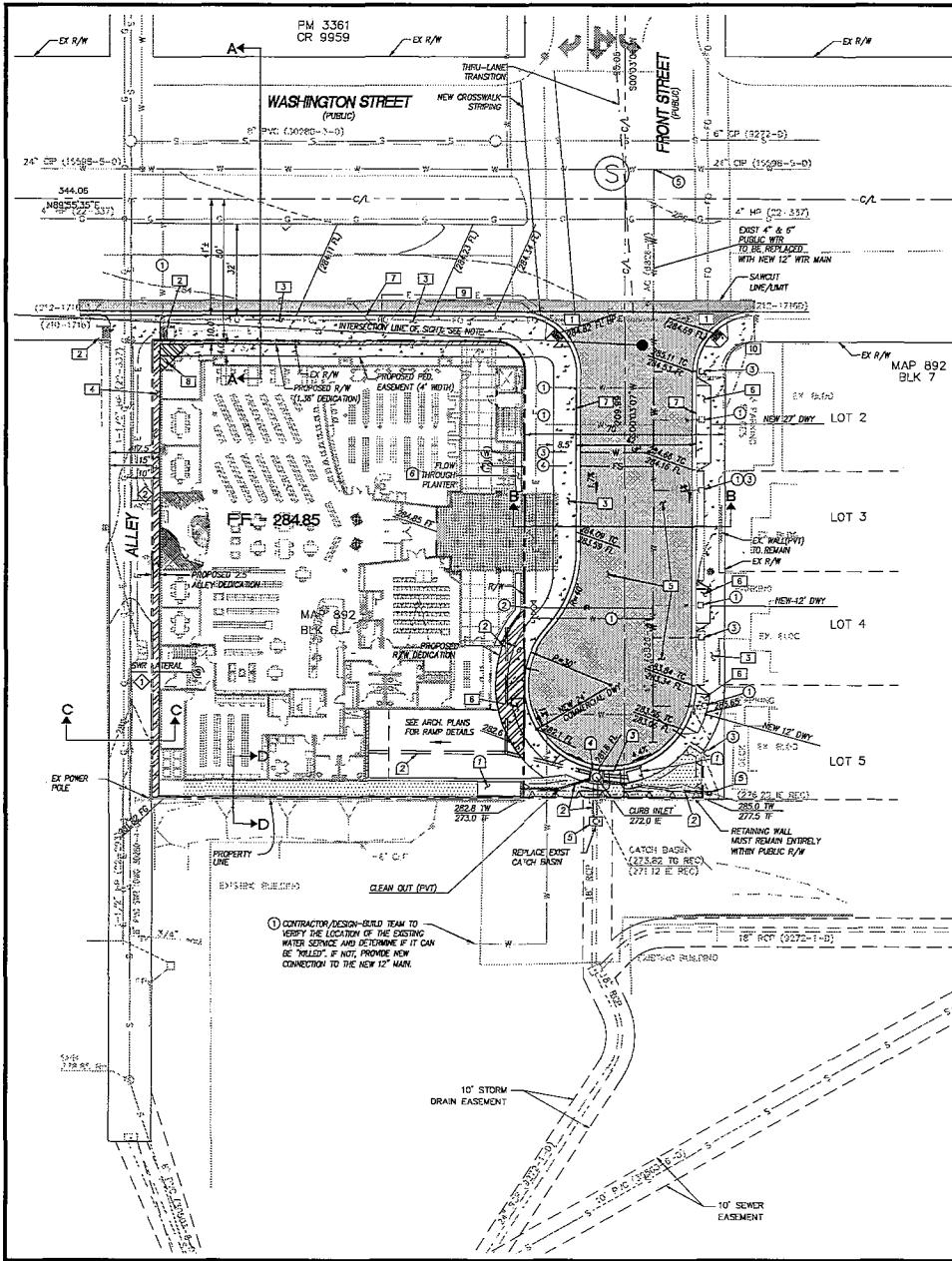
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JANUARY 8, 2016

PRIVATE CONTRACT			
EXISTING CONDITIONS PLAN:			
MISSION HILLS/HILLCREST LIBRARY			
CITY OF SAN DIEGO, CALIFORNIA DEVELOPMENT SERVICES DEPARTMENT SHEET 2 OF 5 SHEETS			
FOR CITY EMPLOYEES		DATE	TAX NO.
DESIGNED BY	APPROVED	DATE	FILED
GRADUATE	REG.		
AS-BUILTS			LIBRARY COORDINATES
CONTRACTOR	DATE STARTED	39037-2 -D	
INSPECTOR	DATE COMPLETED		

KETTLER LEWECK
ENGINEERING
353 A STREET, SUITE 202
SAN DIEGO, CA 92101
TEL: 619 298-2444 | F: 619 298-3459
www.ketlelleweck.com



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MISCELLANEOUS NOTES

1. A REMEDIATION STUDY AND WATER QUALITY TECHNICAL REPORT WILL BE REQUIRED AS PART OF THE MINISTERIAL PERMIT.
2. IF THE PROJECT EXCAVATION IS DEEPER THAN 10' AND THE REMOVAL OF 1,000 CY OF SOIL, A PRELIMINARY MONITOR WILL BE REQUIRED TO OBSERVE THE EXCAVATION.
3. THE PROPOSED CUL-DE-SAC INCLUDES A CURB RADIUS OF 30'. THE MINISTERIAL PERMIT DOCUMENTS MAY REQUIRE THE CITY'S DEVIATION FROM STANDARDS FROM SIGNED BY A CALIFORNIA REGISTERED CIVIL ENGINEER.
4. AN ALLEY DESIGNATION (WITHIN 2'-6" R/W) DESIGNATION TO SUPPORT THE FRONT STREET CUL-DE-SAC (NORTH VARIES), A 1.35' R/W ALONG WASHINGTON ST. AND A 4' PEDESTRIAN EASEMENT ALONG WASHINGTON ST. ARE REQUIRED BY THE CITY OF SAN DIEGO. A STREET DESIGNATION APPLICATION, ALONG WITH THE REQUIRED SUPPORTING DOCUMENTS, HAVE BEEN INITIATED. THE DESIGN-BUILD TEAM WILL ASSIST WITH FINALIZING THIS APPLICATION.
5. REFER TO THE ARCHITECTURAL PLANS FOR THE LOCATION OF THE PROPOSED BUMP RACKS.
6. THE NEW CONSTRUCTION AND DESIGN OF THE NEW SIDEWALK SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE HISTORICAL DESIGN OF SIDEWALKS ON ADJACENT PROPERTIES. CONTRACTOR DATE STAMPS ARE ALSO CONSIDERED HISTORICAL WARNINGS TO BE PRESERVED IN PLACE OR RELOCATED AND SET NEARBY.
7. A STORM WATER REQUIREMENTS APPLICABILITY CHECKLIST WILL BE REQUIRED AS PART OF THE MINISTERIAL PERMIT PROCESS.
8. THE PROJECT IS ANTICIPATED TO COMPLY WITH THE NEW STORM WATER REGULATIONS SCHEDULED TO BECOME EFFECTIVE 12/23/15. SEE SHEET 5 FOR ADDITIONAL INFORMATION.
9. ALLOWED BUILDING ENCROACHMENTS, IF ANY, WILL REQUIRE AN ENCROACHMENT MAINTENANCE AGREEMENT.

SEWER NOTES

1. THE MINISTERIAL PERMIT PLANS SHALL IDENTIFY THE DEPTH OF THE EXISTING SEWER MAIN IN RELATIONSHIP TO THE STRUCTURE'S PROPOSED WALL.
2. THE DESIGN AND CONSTRUCTION OF ANY PROPOSED PUBLIC SEWER FACILITY SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE CITY OF SAN DIEGO SEWER DESIGN MANUAL.
3. PROPOSED PRIVATE UNDERGROUND SEWER FACILITIES LOCATED WITHIN A SINGLE LOT SHALL BE DESIGNED TO MEET THE REQUIREMENTS OF THE CALIFORNIA UNIFORM PLUMBING CODE AND SHALL BE REVIEWED AS PART OF THE BUILDING PERMIT PLAN.

WATER NOTES

1. NO WATER SERVICES SHALL BE TAKEN FROM THE EXISTING 24" WATER MAIN IN WASHINGTON STREET.
2. ALL PUBLIC WATER FACILITIES, INCLUDING SERVICES AND METERS, MUST BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ESTABLISHED CRITERIA IN THE MOST CURRENT EDITION OF THE CITY OF SAN DIEGO WATER FACILITY DESIGN GUIDELINES AND CITY REGULATIONS, STANDARDS, AND PRACTICES RELATED.

FIRE NOTES

1. PROVIDE BUILDING ADDRESS NUMBERS, VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY FOR FIRE POLICY P-09-4 (LIFE 301.4-4).
2. POST INDICATOR VALVES, FIRE DEPARTMENT CONNECTIONS, AND ALARM BELLS ARE TO BE LOCATED ON THE ADDRESS/ACCESS SIDE OF THE STRUCTURE.
3. PROVIDE FIRE ACCESS ROADWAY SIGN ON RED CURB IN ACCORDANCE WITH FIRE POLICY A-00-1.
4. PER SDGID, IT WAS DETERMINED THAT A TURN-AROUND FOR FIRE TRUCKS WILL NOT BE REQUIRED (I.E. THE TRUCKS WILL BACK OUT).

INTERSECTION NOTES

1. THE SOUTHBOUND TURN LANE IN FRONT STREET SHIFTS 4' ACROSS THE WASHINGTON STREET INTERSECTION.
2. LANE SHIFT CALCULATION:
CURB-CURB DISTANCE = 100'
TRANSITION DISTANCE = 100'
REQUIRED DISTANCE = $L = W \cdot V / 80$
 $L = 400 / 80 = 4.67$
3. THE LINE OF SIGHT FROM N/2 FRONT ST TO E/B WASHINGTON STREET WAS DETERMINED USING THE FOLLOWING:
WASHINGTON STREET DESIGN SPEED = 40 MPH
FRONT STREET POSITIONING = 10' OFF WASHINGTON STREET EDGE OF PAVEMENT, 2' FRONT OF PROPOSED FRONT ST CENTERLINE.
WASHINGTON ST POSITIONING = 8' FROM EDGE OF PAVEMENT, 400' FROM FRONT ST POSITIONING.

CONSTRUCTION NOTES

- SUBGRADE IMPROVEMENTS (PUBLIC)**
1. NEW PEDESTRIAN CURB RAMP PER DMC NO. SDG-132, TYPE A
 2. NEW PEDESTRIAN CURB RAMP PER DMC NO. SDG-136, TYPE D
 3. NEW SIDEWALK PER DMC NO. SDG-155
 4. NEW ALLEY CONCRETE
 5. NEW AC PAVEMENT
 6. NEW CONCRETE DRIVEWAY PER DMC NO. SDG-159 (SIZE PER PLAN VIEW)
 7. NEW CURB AND GUTTER PER DMC NO. SDG-151
 8. VISIBILITY TRIANGLE PER D.C. SECTION 113.0273
 9. EXISTING GRASS STOP TO REMAIN, COORDINATE WITH NTS FOR REQUIREMENTS.
 10. PVT. IMPROVEMENTS IN THIS AREA TO BE CONFIRMED & COORDINATED WITH NEW PVT RAMP.

SEWER IMPROVEMENTS

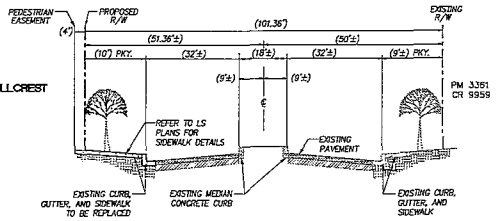
1. NEW SEWER LATERAL (SIZE AND LOCATION TO BE DETERMINED BY D-B CONTRACTOR)
2. EXISTING SEWER LATERAL

WATER IMPROVEMENTS (PUBLIC)

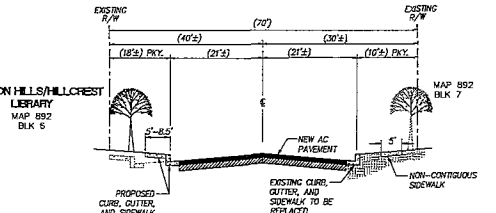
1. KILL EXISTING WATER SERVICE
2. NEW FIRE HYDRANT
3. NEW WATER SERVICE WITH METER (SIZE AND LOCATION TO BE DETERMINED BY D-B CONTRACTOR). PVT IMPROVEMENTS DOWNSTREAM OF METER WILL BE REQUIRED TO CONNECT NEW SERVICE TO EXIST. PVT. SERVICE WILL BE REQUIRED.
4. NEW FIRE SERVICE (SIZE AND LOCATION TO BE DETERMINED BY D-B CONTRACTOR)
5. CONNECT NEW 12" MAIN TO EXIST. 24" WTR

STORM DRAIN IMPROVEMENTS

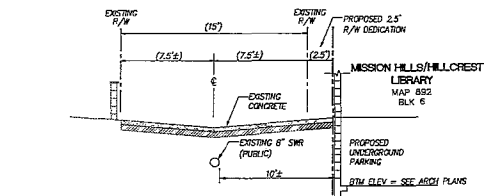
1. STORM WATER VAULT (SIZE AND LOCATION TO BE DETERMINED)
2. STORM DRAIN PIPE (SIZE TO BE DETERMINED)
3. REVERSE FLOW CURB OUTLET (SIZE AND LOCATION TO BE DETERMINED)
4. STORM DRAIN INLET (SIZE AND LOCATION TO BE DETERMINED)
5. STORM DRAIN CATCH BASIN
6. FLOW THROUGH PLANTERS, COORDINATE WITH LANDSCAPE ARCH. (SIZE AND LOCATION TO BE DETERMINED)



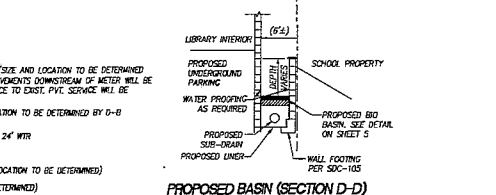
PROPOSED WASHINGTON STREET (SECTION A-A)
NTS



PROPOSED FRONT STREET (SECTION B-B)
NTS



PROPOSED ALLEY (SECTION C-C)
NTS



PROPOSED BASIN (SECTION D-D)
NTS

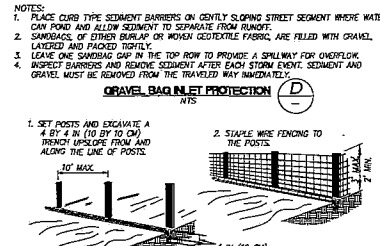
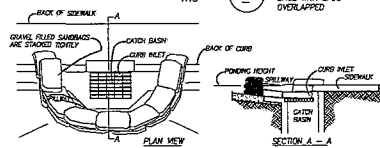
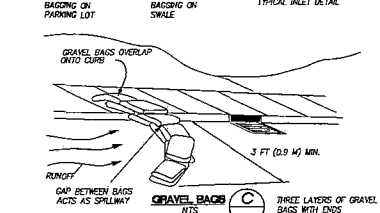
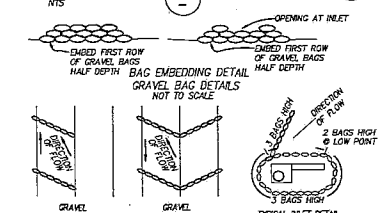
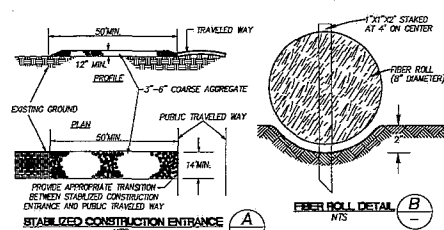
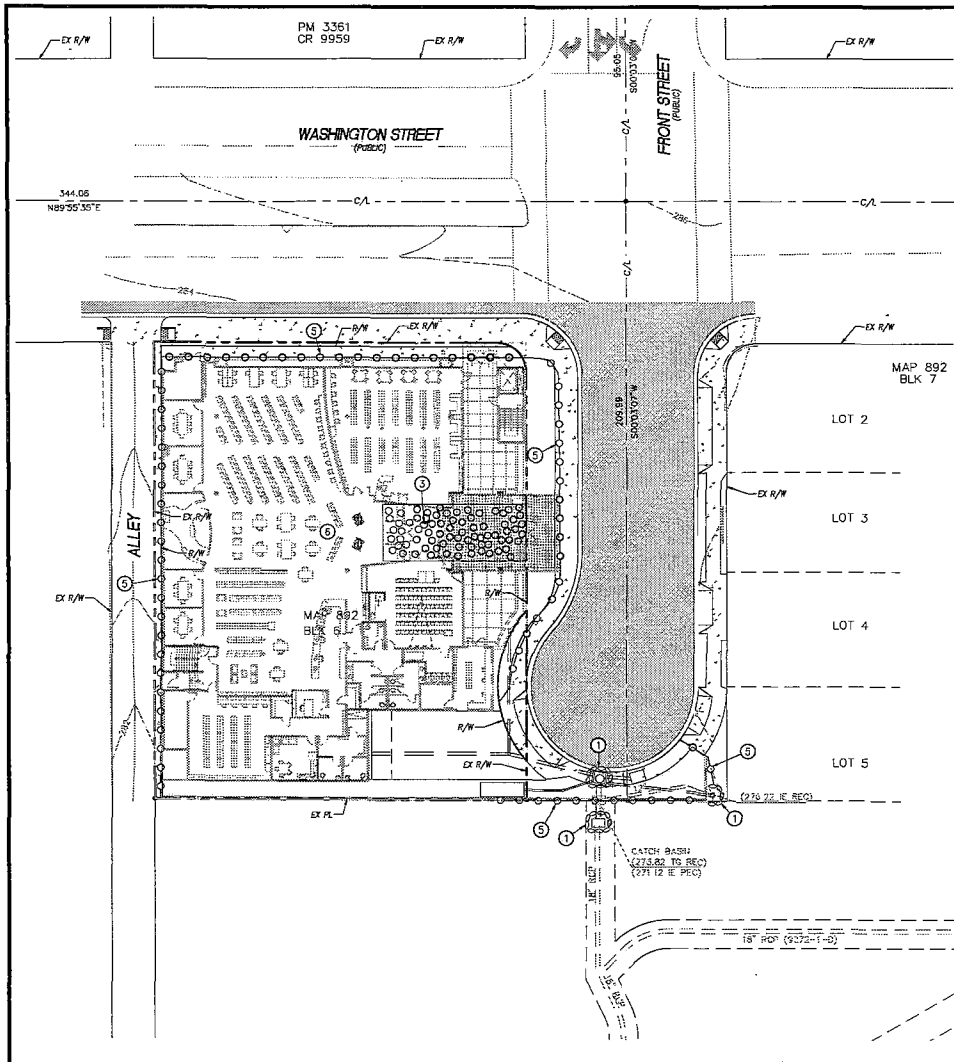
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JANUARY 8, 2016

<p>MISSION HILLS/HILLCREST LIBRARY</p> <p>CITY OF SAN DIEGO, CALIFORNIA DEVELOPMENT SERVICES DEPARTMENT SHEET 3 OF 3 SHEETS</p>				<p>I.D. NO. 180 PROJECT NO. 98895</p>
<p>FOR CITY ENGINEER</p> <p>DESCRIPTION BY APPROVED DATE</p> <p>ORIGINAL FILE</p>	<p>TAX NO. 180</p> <p>HARST COORDINATES</p> <p>180</p> <p>LANBERT COORDINATES</p>	<p>CONTRACTOR DATE STARTED INSPECTOR DATE COMPLETED</p>		<p>39037-3 -D</p>

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SAN DIEGO, CA 92101
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www.kettlerleweck.com



STEVEN C. KETTLER R.C.E. NO. 48858 EXP. 6-30-2016 DATE



- LEGEND (DURING CONSTRUCTION)**
- | DESCRIPTION | SYMBOL |
|--|----------|
| STABILIZED CONSTRUCTION ENTRANCE | [Symbol] |
| SILT FENCE | [Symbol] |
| FIBER ROLL | [Symbol] |
| GRAVEL BAGS | [Symbol] |
| BONDED FIBER MATRIX (SEE MIX THIS SHEET) | [Symbol] |
| CATCH BASIN WITH STORAGE OF SOLID WASTE STORAGE (SW) WASTE STORAGE (SSW) | [Symbol] |
- CONSTRUCTION NOTES**
- INSTALL INLET PROTECTION (SEE DETAIL "D" THIS SHEET)
 - INSTALL VELOCITY CHECK DAM (SEE DETAIL "C" THIS SHEET)
 - INSTALL CONSTRUCTION STABILIZATION ENTRANCE (SEE DETAIL "A" THIS SHEET)
 - INSTALL FIBER ROLL (SEE DETAIL "B" THIS SHEET)
 - INSTALL SILT FENCE (SEE DETAIL "E" THIS SHEET)
 - INSTALL BONDED FIBER MATRIX.

- EROSION AND SEDIMENT CONTROL NOTES**
- TEMPORARY EROSION/SEDIMENT CONTROL PRIOR TO COMPLETION OF FINAL IMPROVEMENTS SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:
- ALL REQUIREMENTS OF THE CITY OF SAN DIEGO "LAND DEVELOPMENT MANUAL STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/APPROXIMATIONS CONSISTENT WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND/OR WATER POLLUTION CONTROL PLAN (WPP) FOR CONSTRUCTION LEVEL BMP'S AND FOR PERMANENT POST CONSTRUCTION TREATMENT CONTROL. PERMANENT BMP'S, THE WATER QUALITY TECHNICAL REPORT (WQTR) IF APPLICABLE.
 - FOR STORM DRAIN NEETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF THE INLET AS INDICATED ON THIS SHEET.
 - FOR RILES LOCATED AT SLOPES ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THEM IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1'00' FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DUES.
 - THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREETS(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
 - THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
 - THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
 - THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
 - THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC DEBRIS AND AREAS WHERE UNPROTECTED WATERS CREATE A HAZARDOUS CONDITION.
 - ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED FOR THE APPROVED GRADING PLAN SHALL BE PROMPTLY REINSTALLED. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
 - GRAZED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY FROM ALL REMOVED PROTECTIVE COVERINGS. PROTECTIVE COVERINGS AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
 - THE CONTRACTOR SHALL ONLY GRAZE, INCLUDING CLEANING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
 - THE CONTRACTOR SHALL ABSENCE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, CITY ENGINEER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.
 - FOR MORE INFORMATION ON BOTH TEMPORARY CONSTRUCTION AND PERMANENT POST CONSTRUCTION STORM WATER QUALITY BMP'S, PLEASE REFER TO KETTLER AND LEWICK ENGINEERING'S FINAL WATER POLLUTION CONTROL PLAN (WPP) AND FINAL WATER QUALITY TECHNICAL REPORT (WQTR).

- ADDITIONAL NOTES**
- SIDEWALK AND STREET IMMEDIATELY ADJACENT TO CONSTRUCTION DRIVEWAY TO BE KEPT CLEAN OF SEDIMENT AND DEBRIS DAILY OR AS NECESSARY TO MINIMIZE SEDIMENT ENTERING PUBLIC STORM DRAIN SYSTEM.
 - CONTRACTOR TO REFER TO THE WPP AND WATER QUALITY TECHNICAL REPORT FOR STATE/CITY BMP'S.
 - ALL GRAZED, DISTURBED OR ERODED AREAS THAT WILL NOT BE PERMANENTLY PAVED OR COVERED BY STRUCTURES SHALL BE PERMANENTLY REVEGETATED AND PROTECTED AS SHOWN IN TABLE 142-04F AND IN ACCORDANCE WITH THE STANDARDS IN THE SAN DIEGO MUNICIPAL CODE SECTION 142.011. ALL REQUIRED REVEGETATION AND EROSION CONTROL SHALL BE COMPLETED WITHIN 90 CALENDAR DAYS OF THE COMPLETION OF GRADING OR DISTURBANCE. INTERNAL EROSION NOTE: GRAZED, DISTURBED OR ERODED AREAS TO BE TREATED WITH A NON-IRRADIATED HYDROSEED MIX SHALL RECEIVE AN INTERIM EROSION/SEDIMENT CONTROL AS NEEDED BETWEEN APRIL 2 AND AUGUST 31 FOR DUST-EROSION CONTROL. WITH SUBSEQUENT APPLICATION OF HYDROSEED MIX DURING THE RAINY SEASON BETWEEN OCTOBER 1 AND APRIL 1.

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JANUARY 8, 2016

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FOR CITY ENGINEER	DATE	TOWN NO.	REV.	
DESCRIPTION	BY	APPROVED	DATE	FILED
ORIGINAL	KEL			
AS SHOWN				
CONTRACTOR		DATE STARTED		
INSPECTOR		DATE COMPLETED		

NO. _____ 39037-4 - D

KETTLER LEWICK ENGINEERING

303 A STREET SUITE 302
SAN DIEGO, CA 92101
PHONE NO. (619) 269-3444
FAX NO. (619) 269-3459
EMAIL: info@kellere.com

PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
No. 048336
Exp. 6-30-2016
CIVIL

STEVEN K. KETTLER R.C.E. NO. 048336 EXP. 6-30-2016 DATE

BONDED FIBER MATRIX

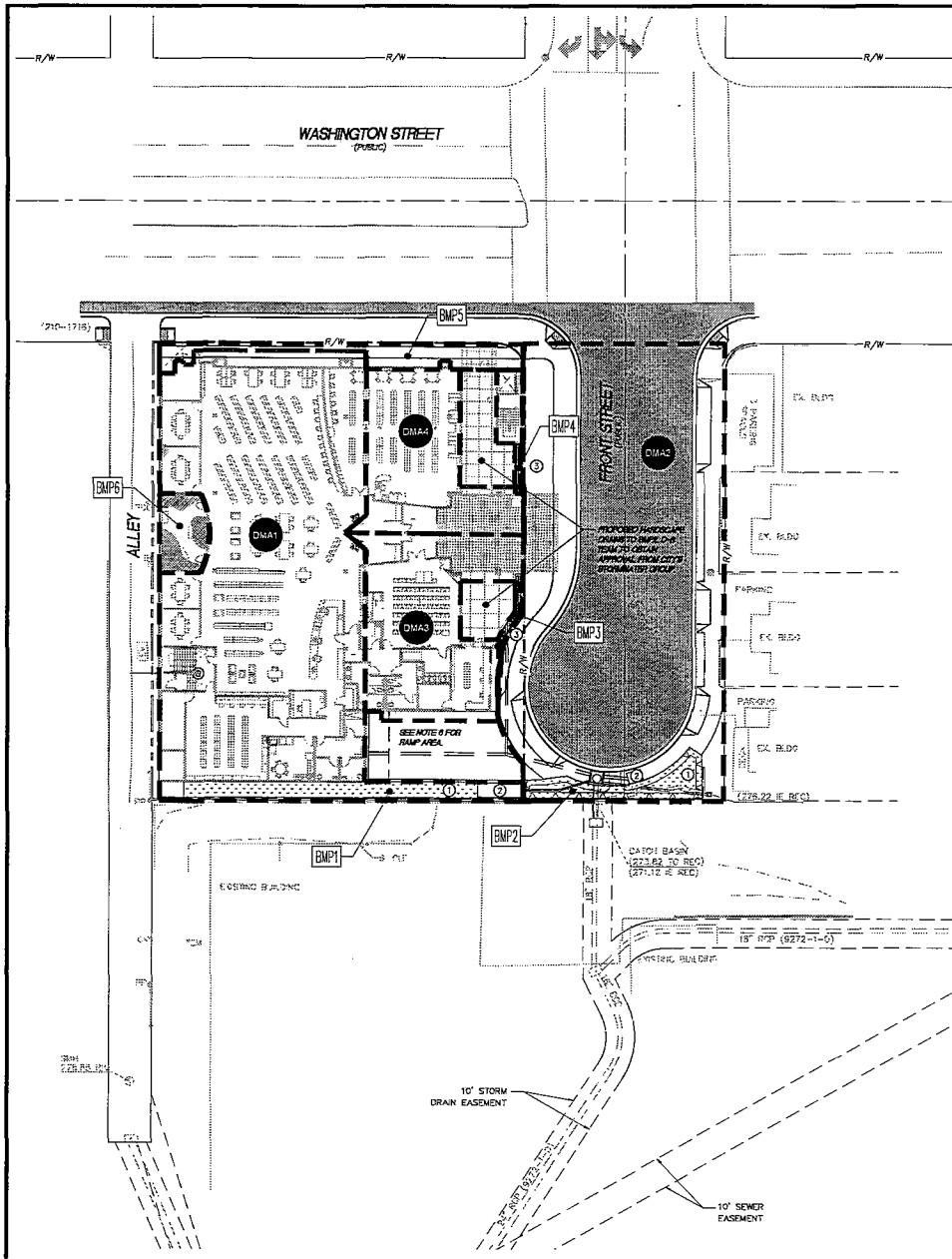
SEEDS SHALL BE APPLIED IN A SLURRY CONSISTING OF:

ROTTATIONAL NAME	RATE
ESCHSCHOLZIA CALIFORNICA	2 LBS/AC
GALLARDA ARISTATA	2 LBS/AC
PHACELIA CAMPANULATA	2 LBS/AC
PLANTAGO INSULARIS	20 LBS/AC
TRIFOLIUM HYDRUM SYMON'	10 LBS/AC
VALPAM MICROSTACHYS	8 LBS/AC

WOOD CELLULOSE FIBER 2000 LBS/AC
ALL-PURPOSE FERTILIZER 300 LBS/AC (10/10/10)
QUAR QUM SOIL BINDER 100 LBS/AC
NON-IRRADIATED HYDROSEED MIXTURE AVAILABLE FROM HYDRO-PLANT (760) 744-7350

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Report (As Proposed) (Rev. July 2013)
Appendix 7 - Bridging Document (CPLS 15001 - Mission Hills / Hillcrest Library design - Build Contract)



PRELIMINARY DMA CALCULATIONS

THE CALCULATIONS SHOWN ASSUME A "HIGH" DOWNSTREAM SUSCEPTIBILITY TO EROSION. THE D-8 TEAM SHALL CONSIDER FURNISHING AN EVALUATION OF THE DOWNSTREAM CONDITION TO POSSIBLY DEMONSTRATE A "LOW" OR "MEDIUM" DESIGNATION.

DMA1											
Area	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)
...

DMA2											
Area	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)
...

DMA3											
Area	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)
...

DMA4											
Area	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)	Area (sq ft)
...

STORM WATER NOTES (CONST. BMP'S)

1. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT, THE APPLICANT SHALL:
 1. INCORPORATE AND CONSTRUCTION BEST PRACTICES NECESSARY TO COMPLY WITH CHAPTER 14, ARTICLE 2, DIVISION 1 (CONCRETE REGULATIONS) OF THE SAN DIEGO MUNICIPAL CODE, INTO THE CONSTRUCTION PLANS OR SPECIFICATIONS.
 2. SUBMIT A WATER POLLUTION CONTROL PLAN (WPOC), THE WPOC SHALL BE PREPARED IN ACCORDANCE WITH THE GUIDELINES IN APPENDIX E OF THE CITY'S STORM WATER STANDARDS.
 3. REFER TO SHEET 04.0 FOR LOCATION OF CONSTRUCTION BMP'S.

STORM WATER NOTES (POST CONST. BMP'S)

1. THE PROJECT IS ANTICIPATED TO BE A PRIORITY DEVELOPMENT PROJECT FOR THE CITY'S STORM WATER REQUIREMENTS APPLICABILITY CHECKLIST (05-560).
2. THE ADDITIONAL PUBLIC R/W'S AND THE PARKING STRUCTURE RAMP ARE PROPOSED TO NOT BE TREATED. RUNOFF FROM THE PARKING RAMP WILL BE DIRECTED TO A TRENCH DRAIN. THE DESIGN-BUILD TEAM IS TO ASSESS WHETHER OR NOT TREATMENT IS FEASIBLE AND OBTAIN AGENCY APPROVAL IF REQUIRED BY THE CITY. THE RAMP WILL BE TREATED BY A MECHANICAL DEVICE OR COVERED WITH THE RUNOFF FROM STRUCTURE DIRECTED TO BMP.
3. IT IS ANTICIPATED THAT THE PROJECT WILL BE REQUIRED TO COMPLY WITH THE NEW STORM WATER REGULATIONS THAT ARE SCHEDULED TO BECOME EFFECTIVE 12/23/15.
4. ALTHOUGH THE DESIGN-BUILD TEAM WILL BE REQUIRED TO DEVELOP A COMPREHENSIVE STORM WATER APPROACH, THE PRELIMINARY GRADING PLAN INCLUDES A CONCEPTUAL APPROACH. THE CONCEPTUAL APPROACH ASSUMES:
 - HARVEST AND REUSE IS NOT FEASIBLE
 - INFILTRATION IS NOT FEASIBLE
 - BIO-FILTRATION WITH VAULT WAS SELECTED AS PART OF THE TREATMENT APPROACH
 - FLOW-THROUGH PLANTERS FOR A PORTION OF THE TREATMENT APPROACH WITH AGENCY/CITY OF SAN DIEGO APPROVAL.
5. ALTHOUGH A CONCEPTUAL DESIGN IS PROVIDED, THE DESIGN-BUILD TEAM IS RESPONSIBLE TO DEVELOP AN APPROACH THAT IS COMPLIANT WITH THE STORM WATER REGULATIONS IN PLACE AT THE TIME OF THE MINISTERIAL PERMIT.
6. THE PROJECT WILL BE REQUIRED TO ENTER INTO A STORM WATER MAINTENANCE AGREEMENT.

KEYED NOTES

1. BIORETENTION BASIN - SEE DETAIL THIS SHEET
2. STORM RUNOFF DETENTION VAULT
3. FLOW-THROUGH PLANTER - SEE LANDSCAPE PLANS

BMP SUMMARY

- BMP1 BIORETENTION AREA
- BMP2 BIORETENTION AREA
- BMP3 FLOW-THROUGH PLANTER
- BMP4 FLOW-THROUGH PLANTER
- BMP5 SELF-TREATING AREA
- BMP6 SELF-TREATING AREA

LEGEND

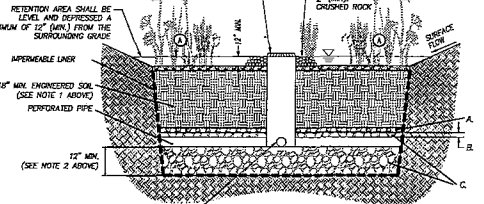
- DMA BOUNDARY
- BIO BASIN
- FLOW-THROUGH PLANTER
- DETENTION VAULT

BIORETENTION NOTES

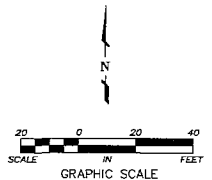
1. BIORETENTION "ENGINEERED SOIL" LAYER SHALL BE MINIMUM 12" DEEP "SANDY LOAM" SOIL MIX WITH NO MORE THAN 5% CLAY CONTENT. THE MIX SHALL CONTAIN 50-50% SAND, 20-30% COMPOST OR HARDWOOD MULCH, AND 20-30% TOPSOIL.
2. 3/4" CRUSHED ROCK LAYER SHALL BE A MINIMUM OF 12" BUT MAY BE DEEPER TO INCREASE THE INFILTRATION AND STORAGE ABILITY OF THE BASIN.
3. THE EFFECTIVE AREA OF THE BASIN SHALL BE LEVEL AND SHALL BE 5000' BASED ON CITY STORMWATER MANUAL CALCULATIONS. SEE PLAN FOR BOTTOM AREA AND ELEVATION.

4. DEEP ROOTED, DENSE, DROUGHT TOLERANT PLANTING SUITABLE FOR WELL DRAINER SOIL. PLANTING SCHEDULE AS FOLLOWS (PER LANDSCAPE PLANS):

SCIENTIFIC NAME	COMMON NAME
QUERUS ILEX	SMALL LEAF OAK
JUNCAUS PARVIFLORA	CALIFORNIA GRASS WOOD
LEUCOSPORUS	CANYON PRINCE



BIORETENTION BASIN DETAIL
NOT TO SCALE



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PRIVATE CONTRACT
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CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 5 OF 5 SHEETS

LO. NO. 880
PROJECT NO. 8882

T.A.M. NO. 880

TOP CITY ENGINEER	DATE	DATE FILLED
DESCRIPTION	APPROVED	DATE FILLED
ORIGINAL	KLE	
AS-BUILTS		

CONTRACTOR: DATE STARTED: DATE COMPLETED: **39037-5-D**

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APPROVED 4'x6' CITY OF SAN DIEGO TREE GRATE SUBMIT MODEL # AND MANUFACTURER FOR APPROVAL

WASHINGTON STREET

DESIGN STATEMENT / OBJECTIVES

1. PLANTINGS WILL BE DESIGNED TO OBTAIN UNDESIRABLE VIEWS (AUTOMOBILE STORAGE, UTILITY AREAS, ETC.) AND ADD CHARACTER AND INTEREST TO THE SITE.
2. ARCHITECTURAL ELEMENTS OF THE SITE WILL BE RELATED AND ENHANCED WITH PLANTINGS OF SIMILAR DESIGN CHARACTER.
3. ALL PLANT MATERIAL SELECTED FOR USE WILL BE OF A TYPE KNOWN TO BE SUCCESSFUL IN THE AREA OR IN SIMILAR CLIMATIC AND SOIL CONDITIONS.
4. COLOR FROM PLANT FOLIAGE, BARK OR FLOWERS WILL BE UTILIZED TO CREATE A FRIENDLY, WARM AND VISUALLY EXCITING LANDSCAPE ENVIRONMENT. THEMATIC COLOR SCHEMES WILL BE UTILIZED IN DEVELOPING PROJECT IDENTITY.
5. VERTICAL ENTRANCES WILL BE IDENTIFIED AND ACCENTED WITH SPECIAL GROUPINGS OF TREES, SHRUBS AND/OR GROUND COVERS. HOWEVER, THESE AREAS SHALL NOT DETRACT FROM THE BUILDING AS THE FOCUS OF THE SITE.
6. LANDSCAPE FINISH GRADING OBJECTIVES WILL INCLUDE POSITIVE SURFACE DRAINAGE OF PLANTED AREAS THROUGHOUT THE SITE - A MINIMUM OF TWO PERCENT (2%) AWAY FROM BUILDING IN PLANTING AREAS. SEE CIVIL ENGINEERING PLANS FOR FINAL GRADINGS.
7. IRRIGATION SYSTEMS WILL BE PERMANENT BELOW GROUND AUTOMATED SYSTEMS APPROPRIATE FOR THE ESTABLISHMENT AND MAINTENANCE OF ALL PLANT MATERIAL. THESE SYSTEMS WILL BE INSTALLED AS SOON AS PRACTICAL AFTER GRADING AND PRIOR TO PLANT MATERIAL INSTALLATION. AREAS ADJACENT TO STRUCTURES, SIGNWAYS, ENTRANCES AND ACTIVITY AREAS WILL BE IRRIGATED WITH PERMANENT BELOW GRADE AUTOMATED SYSTEMS.
8. IRRIGATION SYSTEMS SHALL UTILIZE LOW PRECIPITATION PIPED AND POP-UP STREAM ROTORS, SERIES GREAT, BUBBLE HEADS AND DRIP FOR ALL LANDSCAPE AREAS. POP-UP SPRAY HEADS SHALL BE USED ADJACENT TO WALKS, DRIVES AND ACTIVITY AREAS.
9. ALL SOILS WILL BE FERTILIZED, AMENDED AND TILLED TO CONFORM TO RECOMMENDATIONS MADE BY A SOIL TESTING LABORATORY AND/OR LANDSCAPE ARCHITECT IN ORDER TO PROMOTE HEALTHY AND VIGOROUS PLANT GROWTH.
10. ALL PLANTING AREAS WILL BE MAINTAINED IN A NEED AND DESIRE FREE CONDITION.
11. ALL LANDSCAPE AREAS THAT ARE LESS THAN 2:1 SLOPE WILL RECEIVE 1% OF COMPOSED BANKS PER HILL OR 2% OF RECOMPOSED GRANITE SUBMIT SAMPLE TO OWNER FOR APPROVAL PRIOR TO BULK DELIVERY TO JOB SITE.
12. PROVIDE DRIP IRRIGATION FOR ALL POTTED PLANTS.

30% BRIDGING DOCUMENTS
MAY 9, 2016



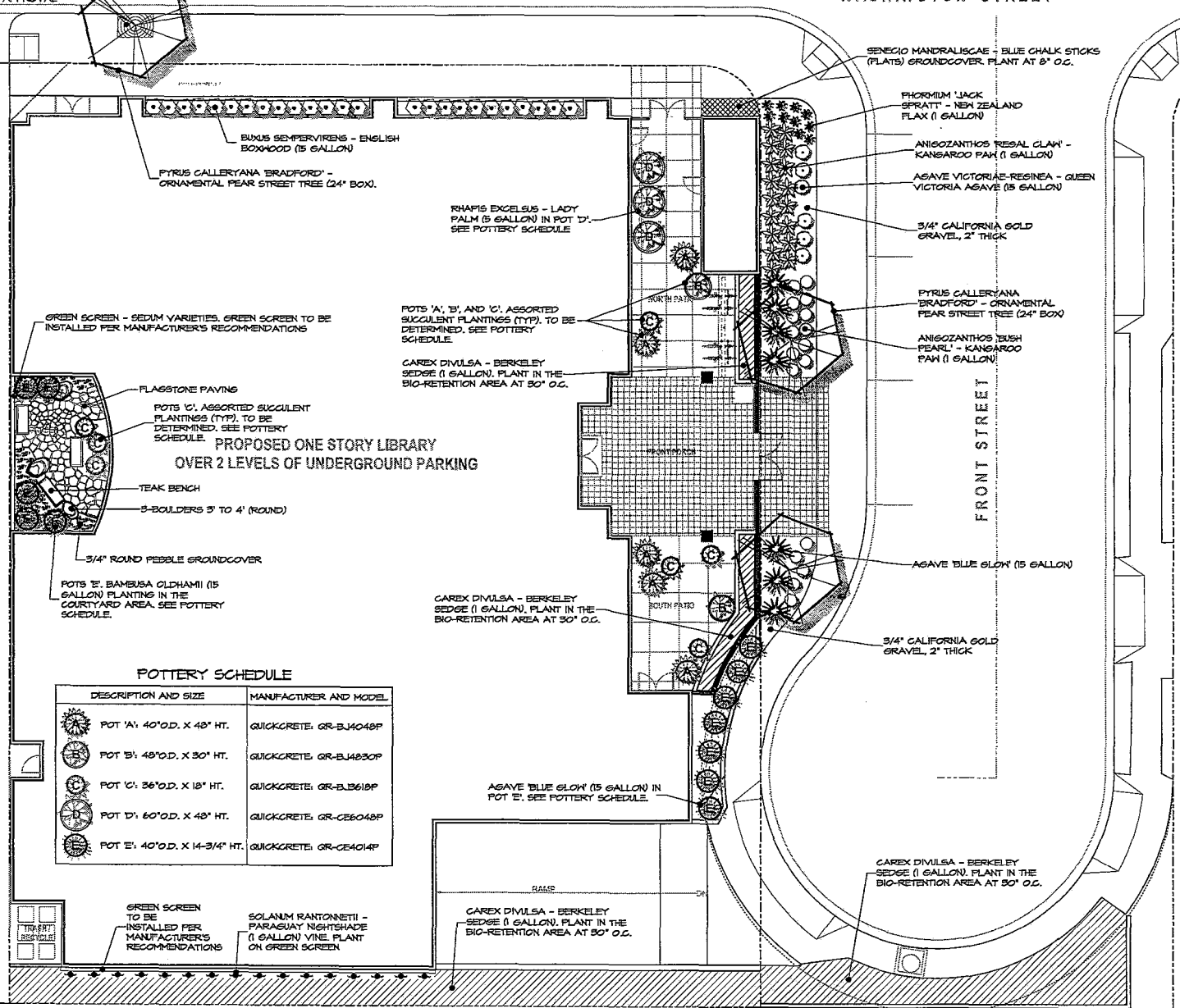
TESHIMA DESIGN GROUP
LANDSCAPE ARCHITECTS - LAND PLANNING
990 BLUNDSVILLE AVE, SUITE 100 - SAN DIEGO, CA 92122
TEL 619 451-8888 FAX 619 225-2817
TDG JOB NO. 14-08 DATE 2-1-16

ARCHITECT'S MASTER DRAW
4218 WEST POINT LOMA BOULEVARD
SUITE 200
SAN DIEGO, CALIFORNIA 92119
TELEPHONE (619) 223-0400
FAXING (619) 225-2817

CITY CONTRACT Project Number 04012.00
SPECIAL SPECIFICATIONS NO. CLIP NO.

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LIBRARY
SAN DIEGO PUBLIC LIBRARY

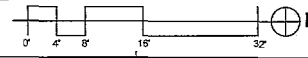
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CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET OF		NO. NO.	
FOR CITY ENGINEER	DATE	SECTION HEAD	
DESCRIPTION	BY	APPROVED DATE	FILED
		PROJECT MANAGER	
		CONTROL/COORDINATION	
CONTRACTOR	DATE STARTED	39037-D	
INSPECTOR	DATE COMPLETED		



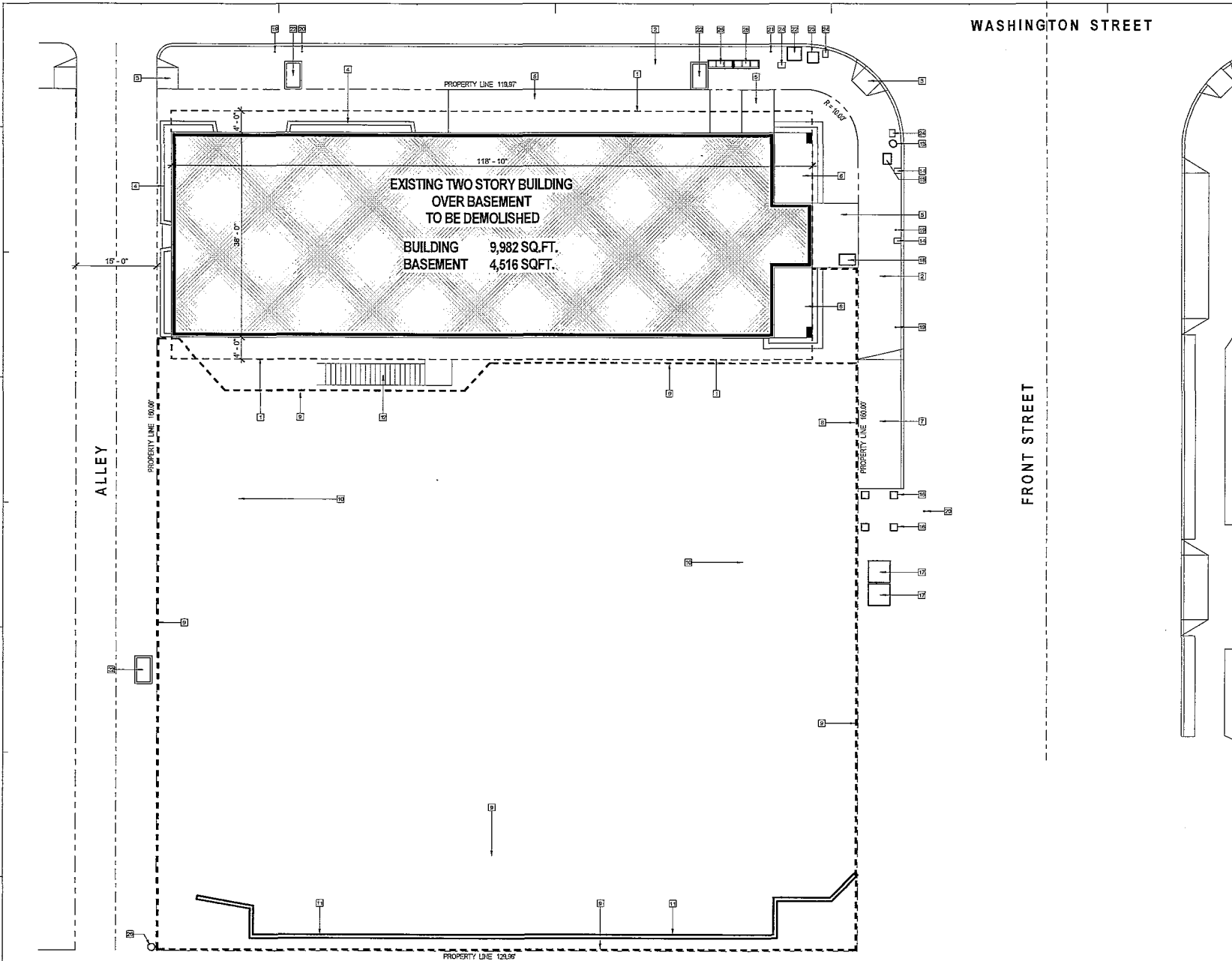
POTTERY SCHEDULE

DESCRIPTION AND SIZE	MANUFACTURER AND MODEL
POT 'A': 40"O.D. X 48" HT.	QUICKCRETE, GR-BJ4048P
POT 'B': 48"O.D. X 50" HT.	QUICKCRETE, GR-BJ4820P
POT 'C': 36"O.D. X 18" HT.	QUICKCRETE, GR-BJ3618P
POT 'D': 60"O.D. X 48" HT.	QUICKCRETE, GR-CE6048P
POT 'E': 40"O.D. X 14-3/4" HT.	QUICKCRETE, GR-CE4014P

PRELIMINARY LANDSCAPE PLAN
1/8" = 1'-0"



Request for Proposal (RFP, July 2015)
Appendix F - Bridging Documents (30% Plans) - Mission Hills / Hillcrest Library Design - Build Contract



WASHINGTON STREET

FRONT STREET

ALLEY

EXISTING TWO STORY BUILDING
OVER BASEMENT
TO BE DEMOLISHED

BUILDING 9,982 SQ.FT.
BASEMENT 4,516 SQ.FT.

PROPERTY LINE 119.97'

118'-10"

138'-0"

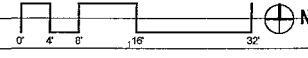
PROPERTY LINE 180.00'

PROPERTY LINE 180.00'

PROPERTY LINE 129.86'

DEMOLITION SITE PLAN

1/8" = 1'-0"



KEYNOTES

- 1 LINE OF EXISTING SECOND FLOOR ABOVE
- 2 DEMOLISH EXISTING CONCRETE SIDEWALK AND CURB. SEE CIVIL
- 3 DEMOLISH EXISTING CONCRETE SIDEWALK RAMP
- 4 DEMOLISH EXISTING LOW MASONRY PLANTER WALL
- 5 DEMOLISH EXISTING PLANTING AREAS
- 6 DEMOLISH EXISTING CONCRETE WALKWAY AND STEPS
- 7 DEMOLISH EXISTING CONCRETE DRIVEWAY
- 8 DEMOLISH EXISTING SLIDING CHAIN LINK GATE
- 9 DEMOLISH EXISTING PERIMETER 6' HIGH CHAIN LINK FENCE
- 10 DEMOLISH EXISTING ASPHALT PARKING LOT PAVING
- 11 DEMOLISH EXISTING LOW SITE MASONRY WALL
- 12 DEMOLISH EXISTING EXTERIOR METAL STAIRS
- 13 EXISTING TRAFFIC LIGHT TO BE RELOCATED
- 14 EXISTING WATER METER TO BE RELOCATED
- 15 EXISTING STREET TRAFFIC SIGNAL CONTROL
- 16 PEDESTAL TO REMAIN
- 17 EXISTING CMU PLASTERS TO BE REMOVED
- 18 EXISTING SDG&E ELECTRICAL TRANSFORMER TO BE RAISED TO MEET PROPOSED FINISH GRADE. COORDINATE WITH SDG&E
- 19 EXISTING BACKFLOW PREVENTER WITH PROTECTIVE METAL BOX TO BE RELOCATED
- 20 EXISTING STREET PARKING METER TO BE RELOCATED
- 21 EXISTING STREET PARKING SIGNAGE TO BE RELOCATED
- 22 EXISTING BUS STOP STREET SIGNAGE TO BE RELOCATED
- 23 EXISTING UNDERGROUND SDG&E VAULT TO REMAIN
- 24 EXISTING STREET TRASH CONTAINER TO BE SALVAGED TO THE CITY OF SAN DIEGO
- 25 EXISTING TRAFFIC SIGNAL ELECTRICAL BOX TO BE RELOCATED
- 26 EXISTING CONCRETE BUS STOP BENCH TO BE RELOCATED
- 27 EXISTING POWER POLE TO REMAIN

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

ARCHITECTS MOSEER DREW
4200 WEST POINT LOMA BOULEVARD
SUITE 200
SAN DIEGO, CALIFORNIA 92110
TELEPHONE (619) 223-2400
FACSIMILE (619) 223-3017

CITY CONTRACT SPECIAL SPECIFICATIONS NO. PROJECT NUMBER 04012.02
C.I.P. 130

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SHEET TITLE SHEET NO.
DEMOLITION SITE PLAN AD.1

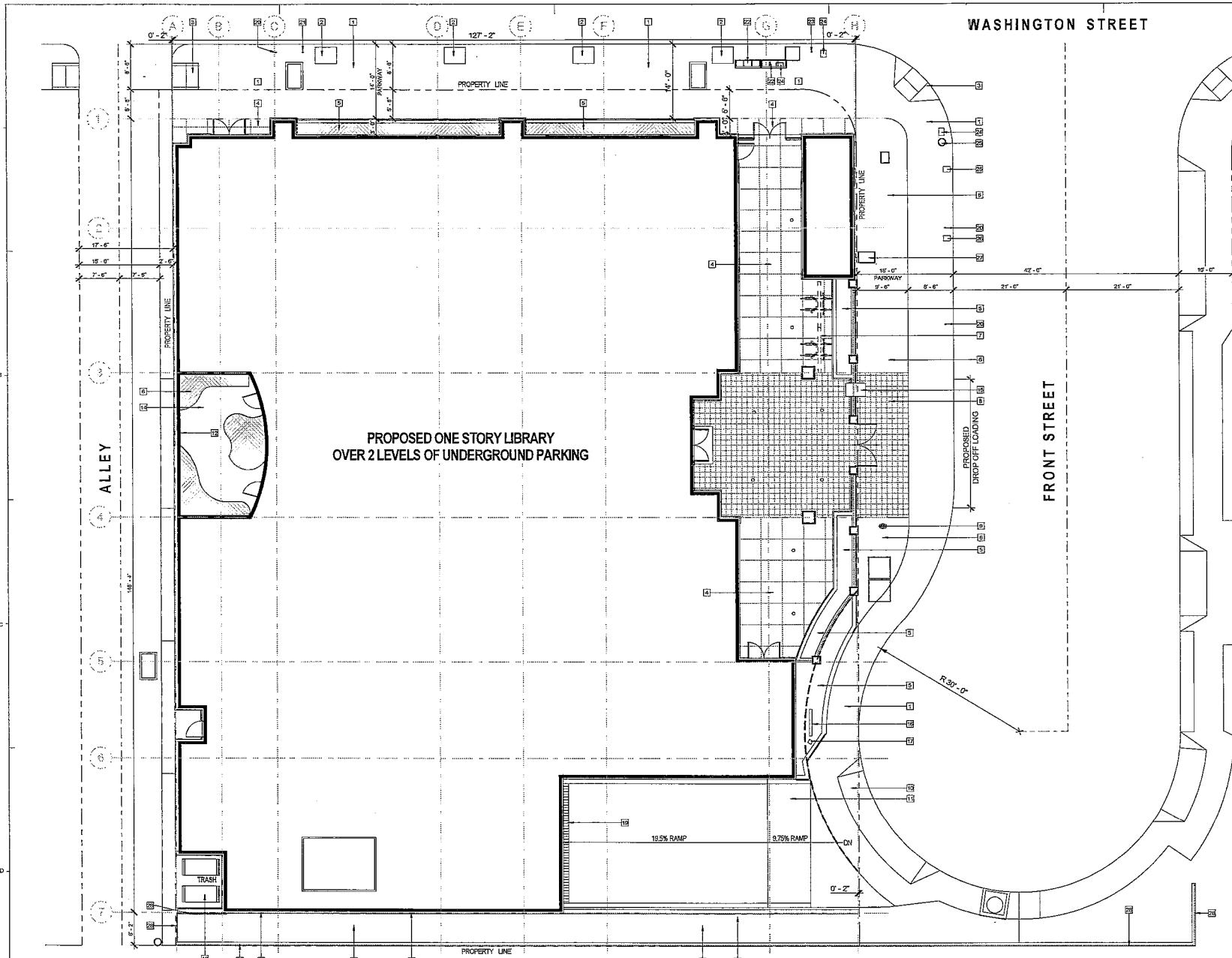
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS
DEPARTMENT SHEET OF SHEET

YOUR CITY ENGINEER DATE APPROVED DATE FILMED SHEETS HEAD

DESCRIPTION BY PROJECT MANAGER

CERTIFICAT CERTIFICATION

CONTRACTOR DATE STARTED 39037-D
INSPECTOR DATE COMPLETED



SITE PLAN
1/8" = 1'-0"

- KEYNOTES**
- 1 NEW CONCRETE SIDEWALK & CURB
 - 2 TREE GRATE FLUSH WITH ADJACENT SIDEWALK SURFACE, TYP.
 - 3 NEW ACCESSIBLE SIDEWALK RAMP WITH TRUNCATED DOMES/WARNING STRIP
 - 4 INTEGRAL COLORED CONCRETE WITH SCORED/SEAM PATTERN OVER WATERPROOFING & DRAINAGE SYSTEM
 - 5 RAISED PLANTER/BIORETENTION BASIN. SEE CIVIL
 - 6 GRADE LEVEL PLANTING AREA. CONNECT TO NEW LANDSCAPE DRAINAGE SYSTEM. REFER TO LANDSCAPE PLANS, TYP.
 - 7 BIKE RACK(S), AFFIXED TO GRADE
 - 8 QUARRY TILE PAVERS OVER WATERPROOFING & DRAINAGE SYSTEM
 - 9 NEW FIRE HYDRANT
 - 10 NEW CONCRETE SIDEWALK VEHICLE CURB CUT/RAMP.
 - 11 VEHICLE RAMP TO BELOW GRADE PARKING
 - 12 GREEN SCREEN STRUCTURE
 - 13 TRASH & RECYCLE ENCLOSURE
 - 14 FLAGSTONE PAVING, SMOOTH AND LEVEL
 - 15 AFTER-HOURS BOOKDROP BOX
 - 16 ELECTRONIC "OPEN/CLOSED" SIGN, MOUNTED POLE SET IN PLANTER
 - 17 OFF-HOURS STAFF ACCESS KEY CARD READER FOR PARKING COILING DOOR, MOUNTING POLE SET IN PLANTER
 - 18 BIORETENTION BASIN. SEE CIVIL
 - 19 TRENCH DRAIN
 - 20 RELOCATED STREET PARKING METER
 - 21 RELOCATED STREET PARKING SIGNAGE
 - 22 RELOCATED CONCRETE BUS STOP BENCH
 - 23 RELOCATED BUS STOP STREET SIGNAGE
 - 24 RELOCATED TRAFFIC SIGNALING ELECTRICAL BOX
 - 25 RELOCATED TRAFFIC LIGHT
 - 26 RELOCATED WATER METER
 - 27 RELOCATED BACKFLOW PREVENTER WITH PROTECTIVE METAL BOX
 - 28 7 FEET HIGH ORNAMENTAL IRON FENCE AT TOP OF RETAINING WALL

30% BRIDGING DOCUMENTS
MAY 9 2016

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CITY CONTRACT SPECIAL SPECIFICATIONS NO. Project Number: 04012.02
C.I.P. NO.

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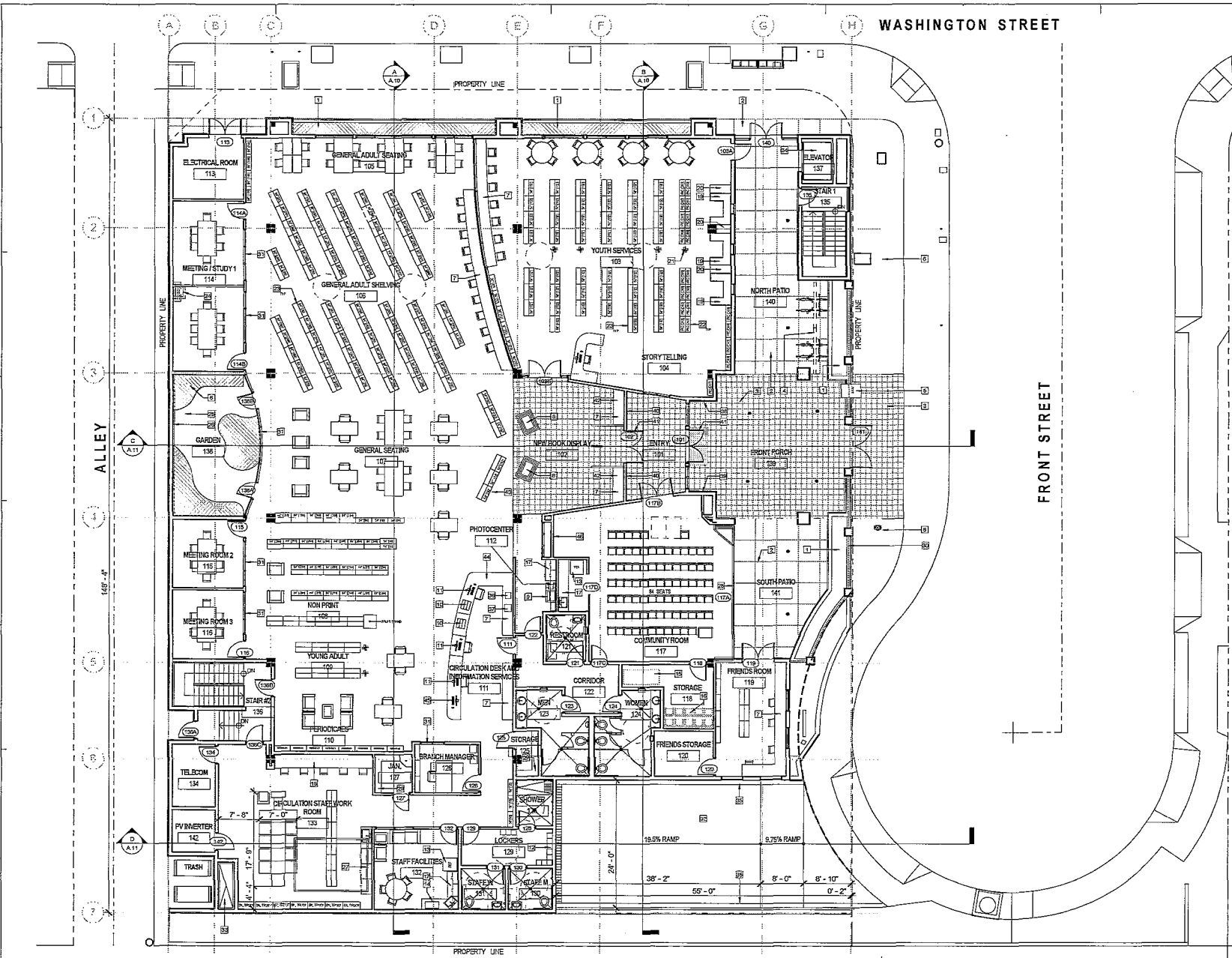
SHEET TITLE SHEET NO:
SITE PLAN **A.01**

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET NO. _____

TOR CITY ENGINEER DATE SECTION HEAD
DESCRIPTION BY APPROVED DATE FILMED PROJECT MANAGER

CONTROL CERTIFICATION

CONTRACTOR DATE STARTED 39037-D
INSPECTOR DATE COMPLETED



- KEYNOTES
- 1 RAISED PLANTER/BIORETENTION BASIN. SEE CIVIL
 - 2 INTEGRAL COLORED CONCRETE WITH SCORED/REAM PATTERN OVER WATERPROOFING & DRAINAGE SYSTEM
 - 3 QUARRY TILE PAVERS OVER WATERPROOFING & DRAINAGE SYSTEM
 - 4 BIKE RACK(S), AFFRIDE TO GRADE
 - 5 AFTER-HOURS BOOKDROP BOX
 - 6 GRADE LEVEL PLANTING AREA. CONNECT TO NEW LANDSCAPE DRAINAGE SYSTEM. REFER TO LANDSCAPE PLAN(S), TYP.
 - 7 24" CANTILEVERED COUNTERTOP
 - 8 TIERED SHELVING UNIT
 - 9 COPIER/MULTIFUNCTION UNIT, OFCI
 - 10 SELF-CHECKOUT SYSTEM
 - 11 CHECKOUT SYSTEM
 - 12 EMPLOYEE LOCKERS
 - 13 REFRIGERATOR PER INTERIOR DESIGN DRAWINGS
 - 14 MICROWAVE PER INTERIOR DESIGN DRAWINGS
 - 15 SEMINAR TABLE CART (20 TABLE CAPACITY)
 - 16 STACKING AREA (100 CHAIR CAPACITY)
 - 17 24" BASE CABINET & COUNTERTOP WITH MATCHING UPPER CABINETS
 - 18 30" CANTILEVERED COUNTERTOP
 - 19 FLOOR-MOUNTED BENCH
 - 20 PICTURE BOOKSHELF
 - 21 BOOK CAROUSEL
 - 22 BOOK STACK(S) - PICTURE BOOK SHELVING
 - 23 BOOK STACK(S) - DOUBLE FACE SHELVING
 - 24 OPERABLE PARTITION WALL SYSTEM
 - 25 FLAGSTONE PAVING, SMOOTH AND LEVEL
 - 26 WALL MOUNTED GREENS. REFER TO LANDSCAPE PLANS
 - 27 FULL HEIGHT (34" X 87") CASEWORK
 - 28 FULL HEIGHT DEMOUNTABLE WALL AND DOOR SYSTEM. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION
 - 29 STORAGE SHELVING
 - 30 METAL FENCE
 - 31 INTERIOR STOREFRONT SYSTEM/ WINDOW WALL
 - 32 VEHICLE RAMP TO BELOW GRADE PARKING
 - 33 GARAGE EXHAUST DUCTS PER MECHANICAL
 - 34 ACCESSIBLE ELEVATOR
 - 35 CONCRETE CURB
 - 36 PARKING VALIDATION MACHINE
 - 37 CASH REGISTER
 - 38 LIBRARY FLOOR PLAN SIGN
 - 39 HOURS OF OPERATION SIGN
 - 40 DONOR WALL
 - 41 SENSOR AUTOMATIC DOORS
 - 42 FREE MATERIALS COUNTER
 - 43 RESERVE PICK UP
 - 44 SELF RETURN UNDER COUNTER
 - 45 PUBLIC ACCESS WORK STATION
 - 46 EXHIBIT DISPLAY

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

ARCHITECT'S MOSHER DREW
4206 WEST POINT LOMA BOULEVARD
SUITE 200
SAN DIEGO, CALIFORNIA 92110
TELEPHONE: (619) 225-2600
FAX NO: (619) 225-3017

CITY CONTRACT Project Number 04012.02
SPECIAL SPECIFICATIONS 6 (S.S.) CLIP 1A0

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SHEET TITLE SHEET NO:
GROUND FLOOR PLAN A.02

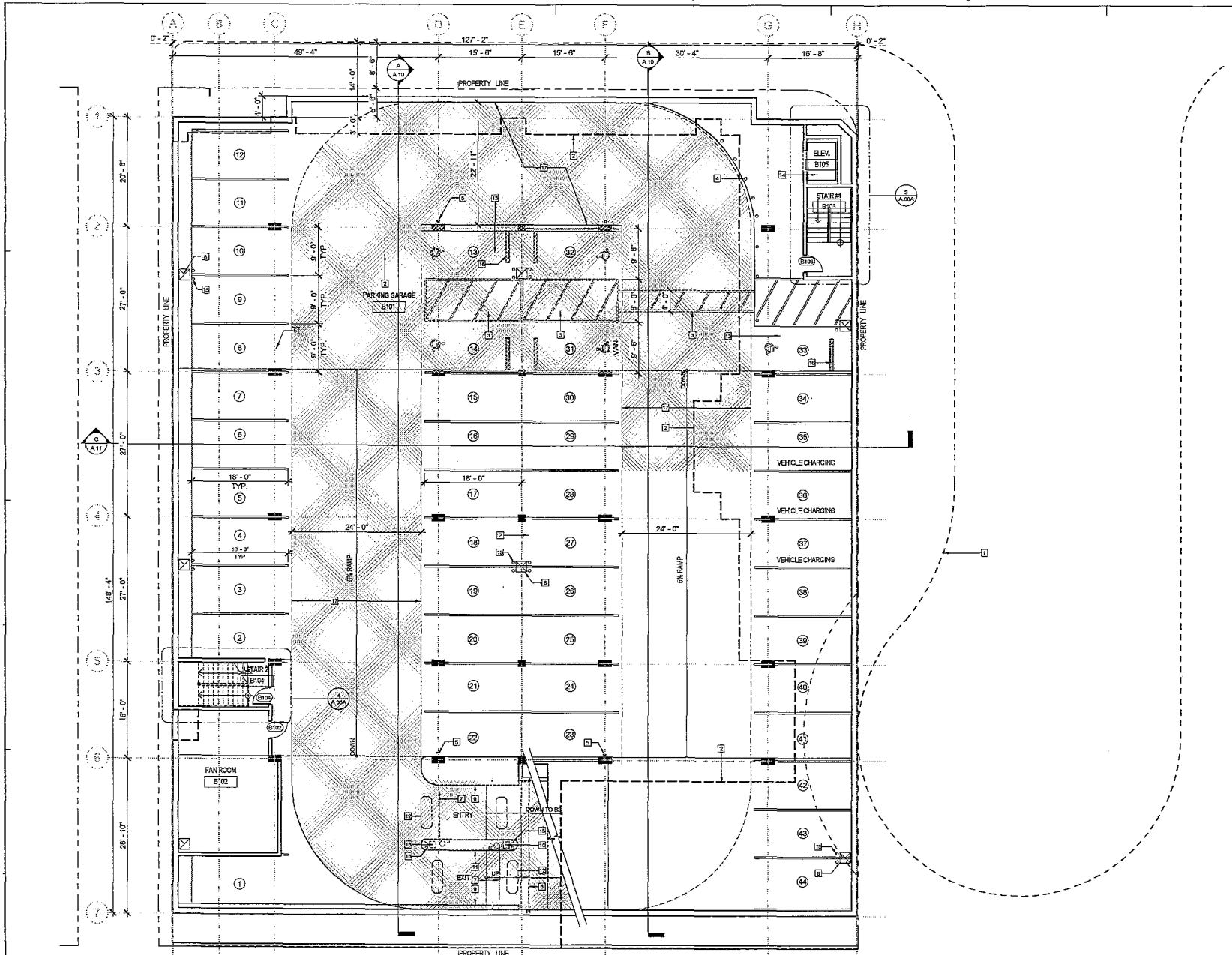
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS
DEPARTMENT/SHEET
W.D. 120
OF SHEET

NO. CITY ENGR. DATE SECTION HEAD
DESCRIPTION BY [APPROVED] DATE PREPARED PROJECT MANAGER

CONTRACTOR DATE STARTED 39037-D
INSPECTOR DATE COMPLETED

GROUND FLOOR PLAN
1/8" = 1'-0"

Appendix 6B Proposal (REV. July 2015)
Appendix 7 - Bridging Document (30% Plans) - Mission Hills / Hillcrest Library Design - Build Contract



PARKING BASEMENT PLAN LEVEL 1

1/8" = 1'-0"

KEYNOTES	
1	LINE OF STREET AND ENTRY ABOVE
2	LINE OF BUILDING ABOVE
3	ACCESSIBLE LOADING AISLE/PATH OF TRAVEL STOPPING, TYP.
4	VEHICULAR AISLE EDGE WELLDARD PROTECTION
5	AREA DRAIN ROUTE BELOW GRADE TO PUMP ROOM PER PLUMBING
6	POWER OPERATED ROLL-UP GRILLE
7	PARKING SYSTEM BARRIER, GATE ARM
8	GARAGE EXHAUST DUCTS PER MECHANICAL
9	CONCRETE CURB
10	PARKING SYSTEM ENTRY WITH TICKET DISPENSER AND TWO WAY INTERCOM UNIT
11	CONCRETE CURB ISLAND
12	PARKING SYSTEM LOOP FLOOR DETECTOR
13	ACCESSIBLE PARKING STALL
14	ACCESSIBLE ELEVATOR
15	X
16	CONCRETE WHEEL STOP
17	8'-2" CLEAR HEIGHT DRIVE AISLE
18	PARKING SYSTEM EXIT COLUMN WITH TICKET READER, CREDIT CARD PAY SYSTEM AND TWO WAY INTERCOM

PARKING SYSTEM NOTES	
1.	BASE OF DESIGN PARKING SYSTEM IS "SODATA AG APT450 SYSTEM. PROVIDE THIS SYSTEM OR EQUAL.
2.	PROVIDE INTERCOM CONNECTION TO LIBRARY CIRCULATION DESK
3.	PROVIDE TICKET VALIDATION REMOTE PARKING GATE AND ROLL-UP GRILLE OPENING CAPABILITY AT CIRCULATION DESK

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

	ARCHITECTS MOSENER DREW	Project Number	04012.02
	4225 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92118	C.P.F. NO.	140
	TELEPHONE (619) 223-2400		
	FAX NO. (619) 223-0817		

CITY CONTRACT SPECIAL SPECIFICATIONS NO.

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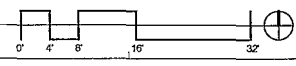
SHEET TITLE: PARKING BASEMENT PLAN LEVEL 1
SHEET NO: **A.03**

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS
DEPARTMENT/SUBSET OF SHEET

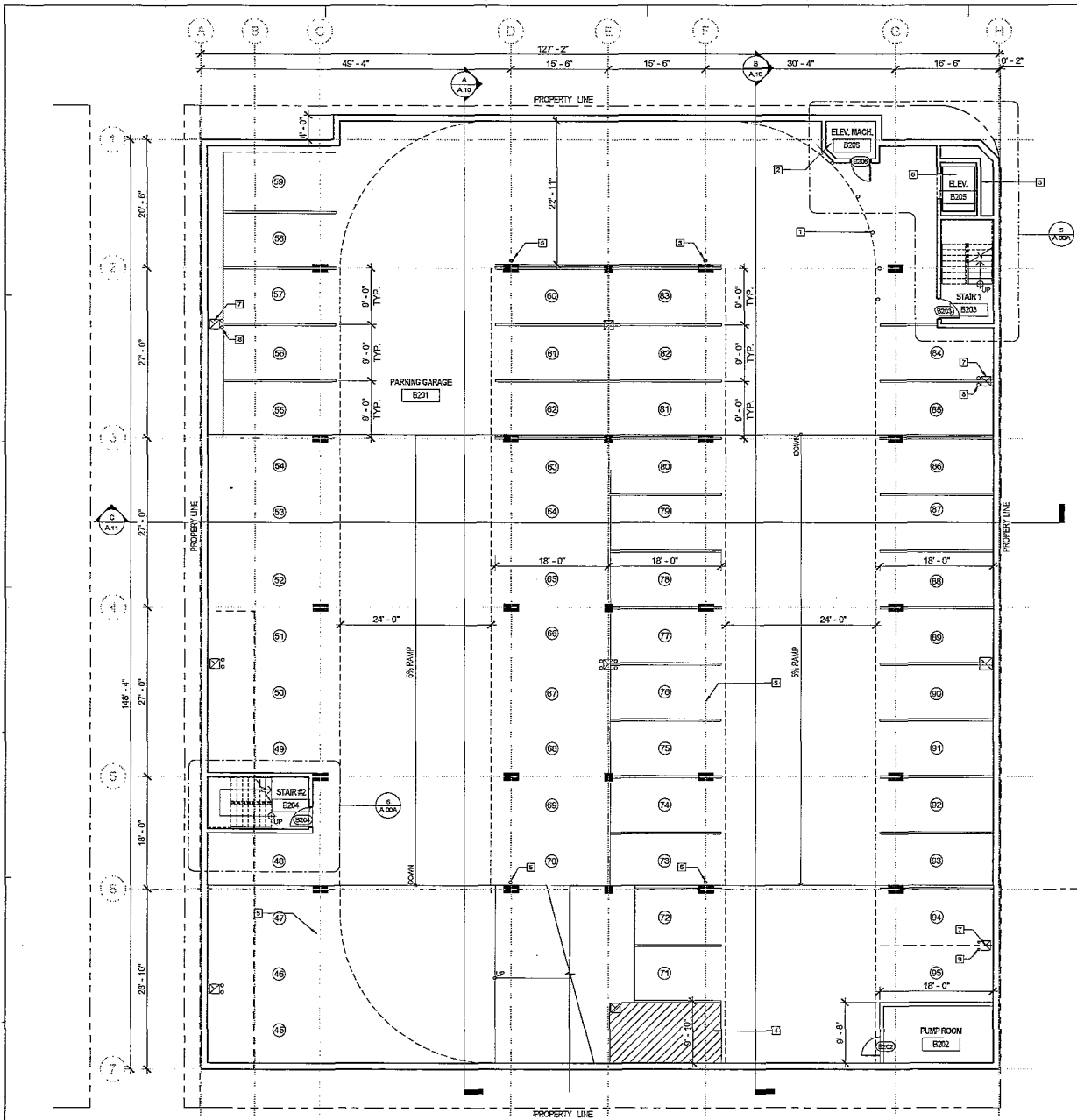
FOR CITY ENGINEER	DATE	SECTION/HEAD
DESCRIPTION	BY	APPROVED
	DATE	FILED

PROJECT MANAGER
CONTROL CERTIFICATION
39037-D

CONTRACTOR: DATE STARTED: PROJECT NO. 39037-D
INSPECTOR: DATE COMPLETED:



Request for Proposal (Rev. July 2005)
Appendix F - Bridging Document (30% Plans) - Mission Hills / Hillcrest Library Design - Build Contract



PARKING BASEMENT PLAN LEVEL 2
1/8" = 1'-0"

- KEYNOTES
- 1 VEHICULAR AISLE EDGE W/BOLLARD PROTECTION
 - 2 ELEVATOR MACHINE ROOM WITH SLUMP CONTAINMENT VESSEL
 - 3 ELEVATOR PIT WITH SLUMP LINE ROUTED TO ELEVATOR MACHINE ROOM
 - 4 TURNAROUND STALL WITH "NO PARKING" TEXT AND STRIPING
 - 5 AREA DRAIN ROUTE BELOW GRADE TO PUMP ROOM PER PLUMBING
 - 6 ACCESSIBLE ELEVATOR
 - 7 GARAGE EXHAUST DUCTS PER MECHANICAL
 - 8
 - 9

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

ARCHITECTS MOSHER DREW
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SUITE 200
SAN DIEGO, CALIFORNIA 92110
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FAX (619) 225-3977

CITY CONTRACT PROJECT NUMBER 04012.02
LEGAL SPECIFICATIONS DIV. CLIP 110

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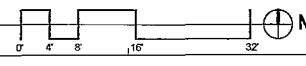
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PARKING BASEMENT PLAN LEVEL 2 A.04

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS
DEPARTMENTS/SET OF SHEET

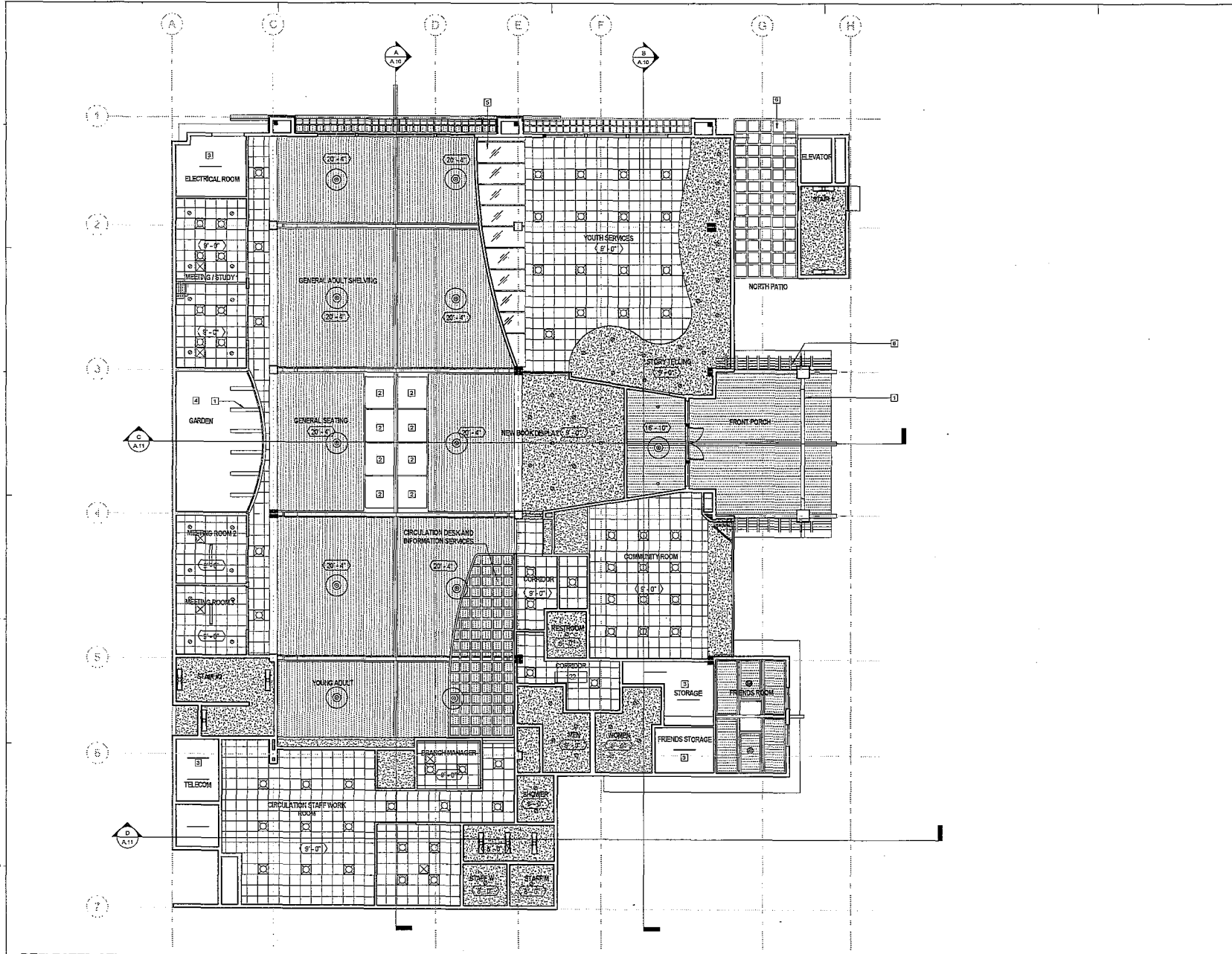
DATE APPROVED DATE FILED SECTION NUMBER
DESCRIPTION BY PROJECT MANAGER

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

CONTROL CERTIFICATION
39037-D



Appendix P - Bridging Documents (50% Plans) - Mission Hills / Hillcrest Library Design - Build Contract



REFLECTED CEILING PLAN LEGEND

- 2x2' SUSPENDED ACoustICAL TILE CEILING SYSTEM
- 2x2' SUSPENDED GRID SYSTEM
- HARDBOARD OR EQUAL
- SUSPENDED GLASS FRAMED SYSTEM
- FRAMED GYPSUM BOARD CEILING
- TRELLIS PER KEYNOTES

KEYNOTES

- 1 GALVANIZED TUBE STEEL RIDGE BEAM, PAINTED
- 2 SKYLIGHT
- 3 OPEN TO STRUCTURE ABOVE
- 4 OPEN TO SKY
- 5 INTERIOR GLAZED CEILING
- 6 GALVANIZED TUBE STEEL ROOF TRUSSES, PAINTED

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

ARCHITECTS
MOSHER DREW
 4296 WEST POINT LOMA BOULEVARD
 SUITE 200
 SAN DIEGO, CALIFORNIA 92116
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 FAX NO. (619) 223-3017

CITY CONTRACT SPECIAL SPECIFICATION 5.140 Project Number **04012.02**
 C.I.P. 140

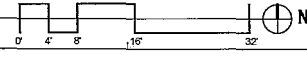
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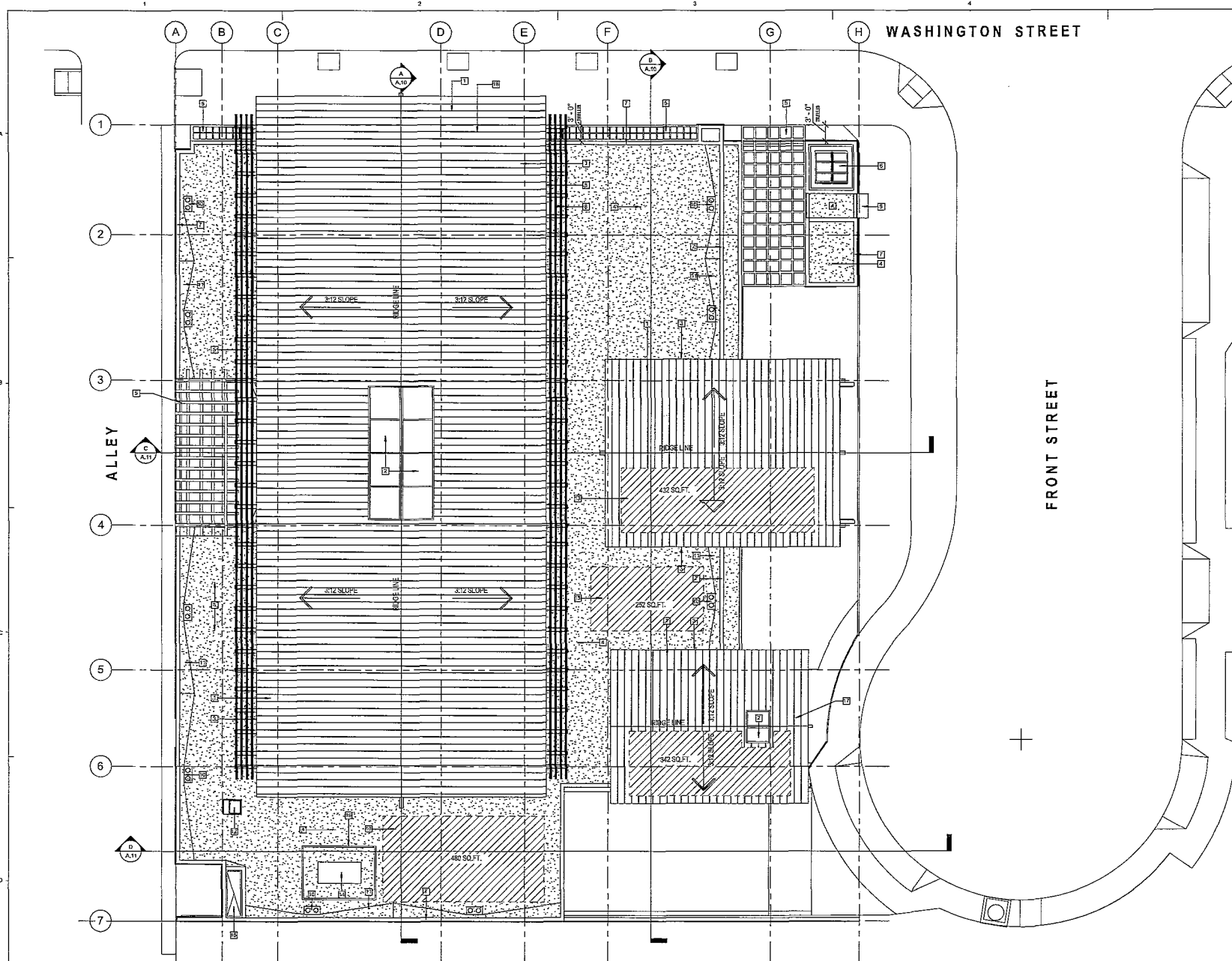
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SHEET TITLE		SHEET NO:
REFLECTED CEILING PLAN		A.05
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS		W. O. 111
DEPARTMENT	SHEET	
DESIGNED BY	DATE	SECTION HEAD
APPROVED BY	DATE	PROJECT MANAGER
		CITY SEAL CERTIFICATION
CONTRACTOR		39037-D
INSPECTOR	DATE STARTED	DATE COMPLETED

REFLECTED CEILING PLAN
1/8" = 1'-0"

Approved for Preparation (04/27/16) (JAB 2015)
Appendix P - Bridging Document (30% Plans) - Mission Hills / Hillcrest Library Design - Build Contract





KEYNOTES

- 1 STANDING SEAM METAL ROOFING SYSTEM, 3:12 SLOPE TYPICAL.
- 2 SKYLIGHT
- 3 CONTINUOUS SHEET METAL GUTTER
- 4 SINGLE PLY ROOFING SYSTEM
- 5 GALVANIZED TUBE STEEL LEAVE TRELLIS, PAINTED
- 6 2-1/4" x 4" FLUSH WITH FACE OF PLASTER
- 7 TINTED LOW-E GLASS
- 8 METAL COPING
- 9 GALVANIZED TUBE STEEL TRELLIS, PAINTED
- 10 METAL CANOPY
- 11 ROOF DRAIN AND OVERFLOW
- 12 ROOF CRACKS
- 13 ROOF HATCH
- 14 PHOTOVOLTAIC SYSTEM
- 15 ROOF MOUNTED HVAC SYSTEM
- 16 GARAGE EXHAUST DUCTS PER MECHANICAL
- 17 METAL LOUVERED ROOF EQUIPMENT SCREEN
- 18 TRELLIS BELOW PER EXTERIOR ELEVATIONS. TRELLIS PROJECTION IS 2'-0"
- 19 TRELLIS BELOW PER EXTERIOR ELEVATIONS. TRELLIS PROJECTION IS 3'-0"

30% BRIDGING DOCUMENTS
MAY 9, 2016

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400 WEST POINT LOMA BOULEVARD
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CITY CONTRACT Project Number 04012.02
SPECIAL SPECIFICATIONS NO. CLP. NO.

MISSION HILLS / HILLCREST
LIBRARY

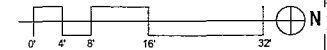
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ROOF PLAN A.06

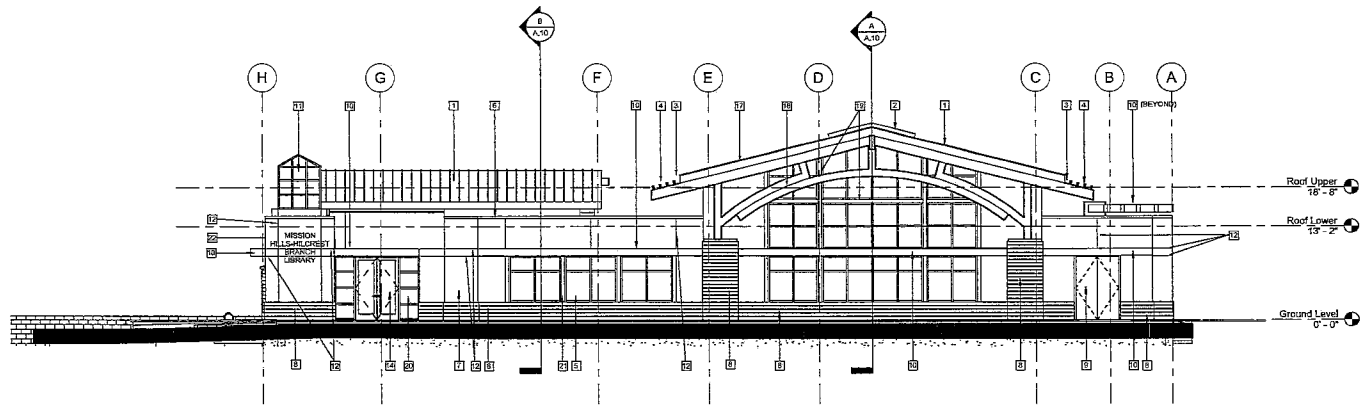
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS
DEPARTMENT

FOR CITY ENGINEER	DATE	SECTION HEAD
DESCRIPTION	BY	APPROVED DATE FILED
		PROJECT MANAGER
		CONTROL CERTIFICATION

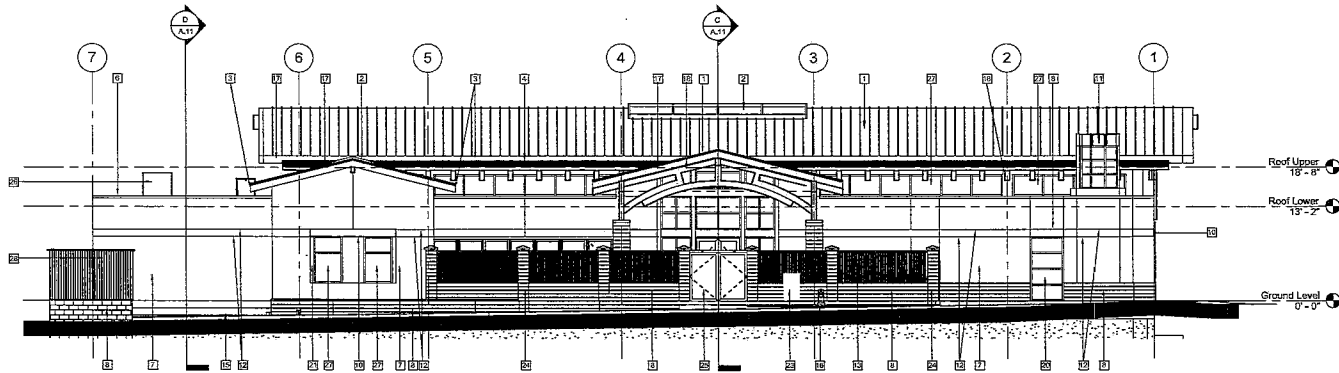
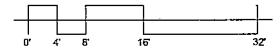
CONTRACTOR DATE STARTED 39037-D
INSPECTOR DATE COMPLETED

ROOF PLAN
1/8" = 1'-0"





NORTH ELEVATION
1/8" = 1'-0"



EAST ELEVATION
1/8" = 1'-0"



KEYNOTES

- 1 STANDING SEAM METAL ROOFING SYSTEM, 3:12 SLOPE TYPICAL
- 2 KALWALL (OR EQUAL) SKYLIGHT
- 3 CONTINUOUS SHEET METAL GUTTER, COPPER
- 4 GALVANIZED TUBE STEEL EAVE TRELLIS, PAINTED
- 5 INSULATED LOW-E GLAZING
- 6 METAL COPING, GALVANIZED AND PAINTED
- 7 EXTERIOR CEMENT PLASTER SYSTEM
- 8 LEDGER SET STONE VENEER WITH CAP
- 9 HOLLOW METAL DOOR AND FRAME, PAINTED
- 10 GALVANIZED TUBE STEEL TRELLIS, PAINTED
- 11 FROSTED GLASS BEADON WITH INTEGRAL COLOR ALUMINUM FRAME.
- 12 PLASTER CONTROL JOINT, METAL TYP.
- 13 ORNAMENTAL IRON FENCE, PAINTED
- 14 ALUMINUM STOREFRONT DOOR, INTEGRAL COLOR FRAME
- 15 VEHICLE RAMP TO BELOW GRADE PARKING
- 16 NEW FIRE HYDRANT, SEE CIVIL DRAWINGS.
- 17 METAL FASCIA TO MATCH ROOFING SYSTEM
- 18 GALVANIZED TUBE STEEL TRUSS, PAINTED
- 19 TUBE STEEL CURTAIN WALL SECONDARY STRUCTURE CLAD IN BREAK METAL TO MATCH ROOF
- 20 ALUMINUM STOREFRONT, INTEGRAL COLOR FRAME
- 21 TUBE STEEL COLUMNS CLAD IN BREAK METAL TO MATCH ROOF
- 22 BRONZE BUILDING LETTRES SET ON STANDOFFS
- 23 BOOK DROP
- 24 MASONRY PLASTERS WITH LEDGER SET STONE VENEER AND CAP
- 25 ORNAMENTAL IRON GATE, PAINTED
- 26 ROOF MOUNTED HVAC EQUIPMENT WITH LOUVERED SCREEN
- 27 ALUMINUM FRAMED WINDOWS, NON OPERABLE
- 28 7 FEET HEIGHT ORNAMENTAL IRON FENCE AT TOP OF RETAINING WALL

30% BRIDGING DOCUMENTS
MAY 9, 2016

ARCHITECTS MOSHER DREW
4256 WEST POINT LOMA BOULEVARD
SUITE 208
SAN DIEGO, CALIFORNIA 92110
TELEPHONE 619.225.3100
FAX NO. 619.225.3017

CITY CONTRACT Special Specifications No. Project Number XXXXXX
C.I.P. NO.

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SHEET TITLE EXTERIOR ELEVATIONS SHEET NO: A.07

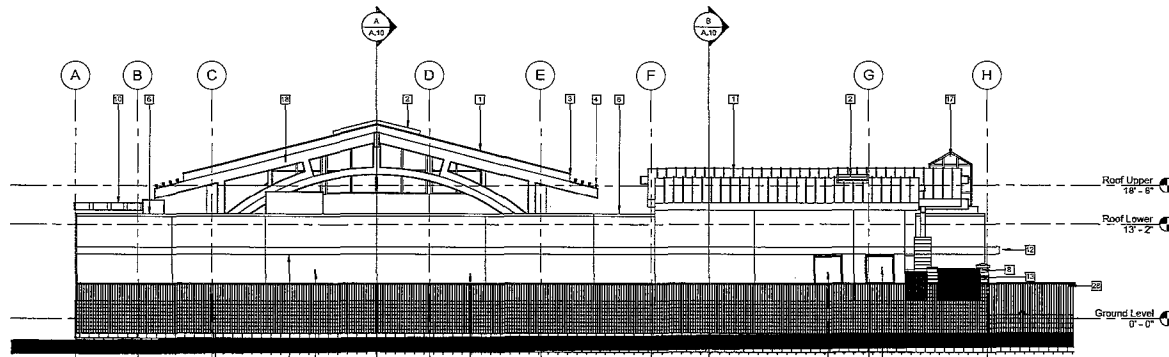
CITY OF SAN DIEGO, CALIFORNIA W.D. NO.
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

FOR CITY ENGINEER DATE SECTION HEAD
DESCRIPTION BY APPROVED DATE FILMED

PROJECT MANAGER

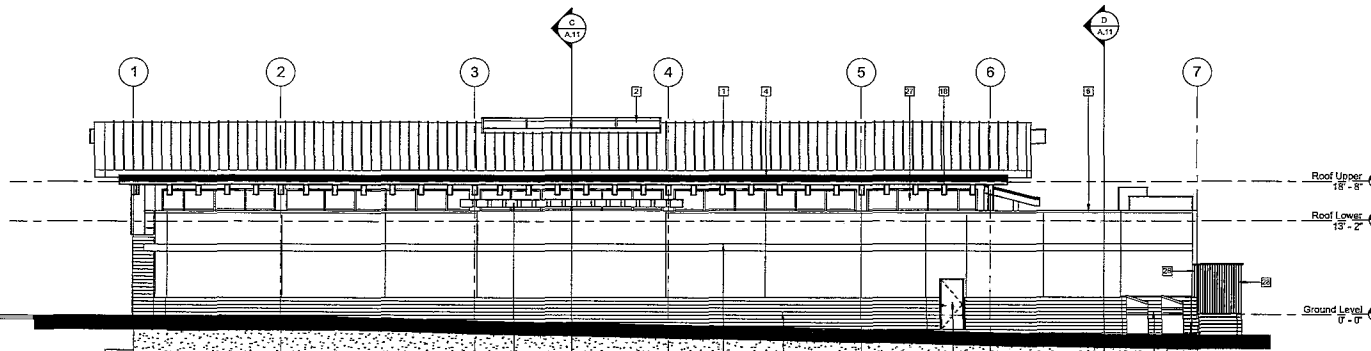
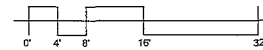
CONTROL CERTIFICATION

CONTRACTOR DATE STARTED 39037-D
INSPECTOR DATE COMPLETED



SOUTH ELEVATION
1/8" = 1'-0"

GREEN WALL FOR LANDSCAPE DRAWINGS



WEST ELEVATION
1/8" = 1'-0"



KEYNOTES

- 1 STANDING SEAM METAL ROOFING SYSTEM, 3:12 SLOPE TYPICAL
- 2 KALWALL (OR EQUAL) SKYLIGHT
- 3 CONTINUOUS SHEET METAL GUTTER, COPPER
- 4 GALVANIZED TUBE STEEL EAVE TRELLIS, PAINTED
- 5 INSULATED LOW-E GLAZING
- 6 METAL COPING, GALVANIZED AND PAINTED
- 7 EXTERIOR CEMENT PLASTER SYSTEM
- 8 LEDGER SET STONE VENEER WITH CAP
- 9 HOLLOW METAL DOOR AND FRAME, PAINTED
- 10 GALVANIZED TUBE STEEL TRELLIS, PAINTED
- 11 FROSTED GLASS BEACON WITH INTEGRAL COLOR ALUMINUM FRAME
- 12 PLASTER CONTROL JOINT, METAL TYP.
- 13 ORNAMENTAL IRON FENCE, PAINTED
- 14 ALUMINUM STOREFRONT DOOR, INTEGRAL COLOR FRAME
- 15 VEHICLE RAMP TO BELOW GRADE PARKING
- 16 NEW FIRE HYDRANT, SEE CIVIL DRAWINGS
- 17 METAL FASCIA TO MATCH ROOFING SYSTEM
- 18 GALVANIZED TUBE STEEL TRUSS, PAINTED
- 19 TUBE STEEL CURTAIN WALL SECONDARY STRUCTURE CLAD IN BREAK METAL TO MATCH ROOF
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- 27 ALUMINUM FRAMED WINDOWS, NON OPERABLE
- 28 7 FEET HEIGHT ORNAMENTAL IRON FENCE AT TOP OF RETAINING WALL

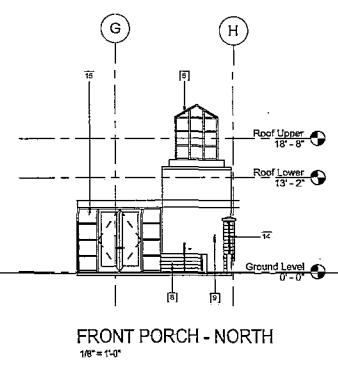
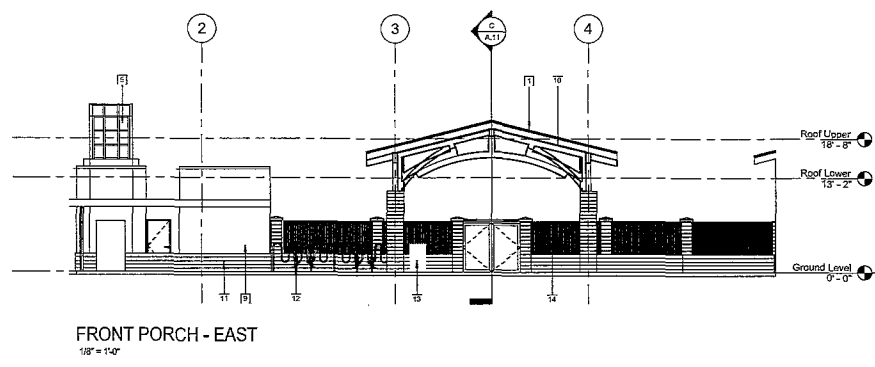
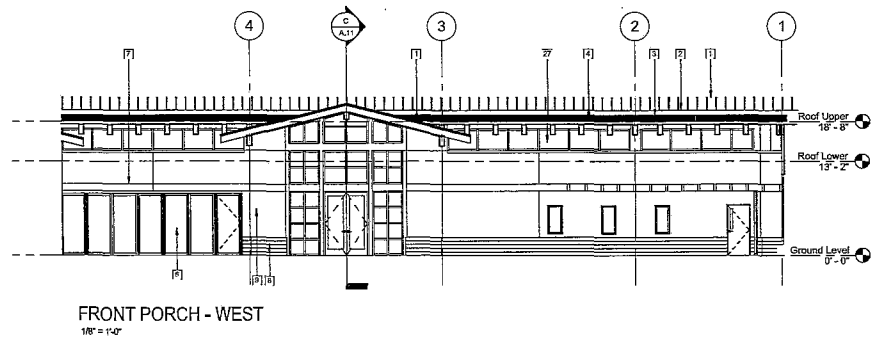
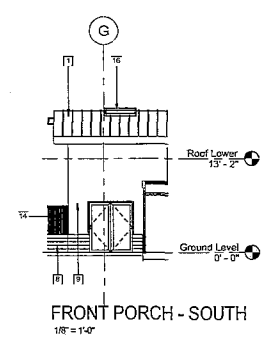
30% BRIDGING DOCUMENTS
MAY 9, 2016

ARCHITECTS MODER DREW
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SAN DIEGO, CALIFORNIA 92116
TELEPHONE 619 223-2400
FAX NO. 619 223-2077

CITY CONTRACT SPECIAL SPECIFICATIONS NO. PROJECT NUMBER XXXXXX C.L.P., INC.

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SHEET TITLE EXTERIOR ELEVATIONS		SHEET NO. A.08
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT		W.C. NO.
FOR CITY ENGINEER	DATE	SECTION HEAD
DESCRIPTION	BY	APPROVED DATE
		PROJECT MANAGER
		CONTROL CERTIFICATION
CONTRACTOR	DATE STARTED	39037-D
INSPECTOR	DATE COMPLETED	



- KEYNOTES
- 1 STANDING SEAM METAL ROOFING SYSTEM, 3:12 SLOPE TYPICAL
 - 2 KALWALL (OR EQUAL) SKYLIGHT
 - 3 CONTINUOUS SHEET METAL GUTTER, COPPER
 - 4 GALVANIZED TUBE STEEL EAVE TRELLIS, PAINTED
 - 5 INSULATED LOW-E GLAZING
 - 6 METAL COPING, GALVANIZED AND PAINTED
 - 7 EXTERIOR CEMENT PLASTER SYSTEM
 - 8 LEDGER SET STONE VENEER WITH CAP
 - 9 HOLLOW METAL DOOR AND FRAME, PAINTED
 - 10 GALVANIZED TUBE STEEL TRELLIS, PAINTED
 - 11 FROSTED GLASS BEACON WITH INTEGRAL COLOR ALUMINUM FRAME.
 - 12 PLASTER CONTROL JOINT, METAL, TYP.
 - 13 ORNAMENTAL IRON FENCE, PAINTED
 - 14 ALUMINUM STOREFRONT DOOR, INTEGRAL COLOR FRAME
 - 15 VEHICLE RAMP TO BELOW GRADE PARKING
 - 16 NEW FIRE HYDRANT, SEE CIVIL DRAWINGS.
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 - 26 ROOF MOUNTED HVAC EQUIPMENT WITH LOUVERED SCREEN
 - 27 ALUMINUM FRAMED WINDOWS, NON OPERABLE

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

ARCHITECTS MOSHER ERBE
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SAN DIEGO, CALIFORNIA 92110
TELEPHONE 619 223-3100
FAX NO. 619 223-3017

CITY CONTRACT SPECIAL SPECIFICATIONS NO. Project Number XXXXXX
CITY NO.

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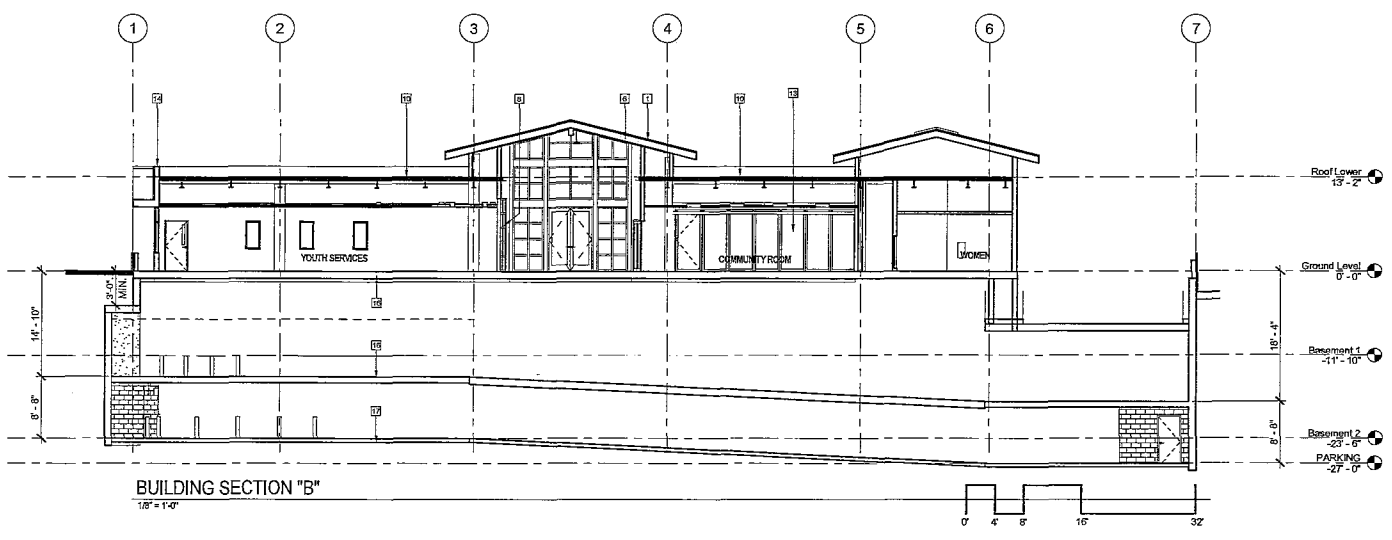
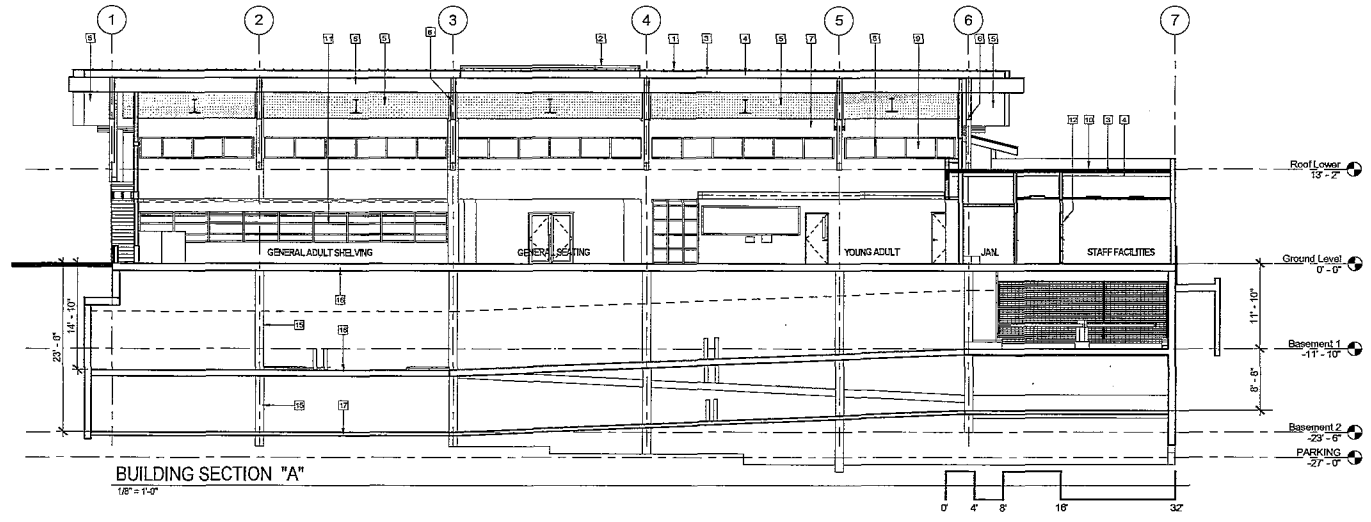
SHEET TITLE EXTERIOR ELEVATIONS SHEET NO: A.09

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

FOR CITY ENGINEER: DATE APPROVED DATE FILMED SECTION HEAD

DESCRIPTION BY PROJECT MANAGER CONTROL CERTIFICATION

CONTRACTOR INSPECTOR DATE STARTED DATE COMPLETED 39037-D



KEYNOTES

- 1 STANDING SEAM METAL ROOFING SYSTEM, 3:12 SLOPE TYPICAL
- 2 SKYLIGHT
- 3 GALVANIZED TUBE STEEL ROOF TRUSSES, PAINTED
- 4 ROOF BATT INSULATION
- 5 HARDBOARD (OR EQUAL)
- 6 GALVANIZED TUBE STEEL RIDGE BEAM, PAINTED
- 7 GYP
- 8 ALUMINUM STOREFRONT WINDOW SYSTEM
- 9 TINTED LOW-E GLASS
- 10 SINGLE PLY ROOFING SYSTEM
- 11 INTERIOR STOREFRONT SYSTEM/ WINDOW WALL
- 12 ALUMINUM STOREFRONT DOOR
- 13 FULL HEIGHT DEMOUNTABLE WALL AND DOOR SYSTEM; SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION
- 14 METAL COPING
- 15 CONCRETE COLUMNS
- 16 CONCRETE SLAB
- 17 CONCRETE SLAB ON GRADE

30% BRIDGING DOCUMENTS
 JANUARY 8, 2016

	ARCHITECTS MOSEKER BREW
	4206 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92110
	TELEPHONE (619) 723-2020 FAX NO (619) 723-3017
	PROJECT NUMBER 04012.02 C.I.P. 140

CITY CONTRACT SPECIAL SPECIFICATIONS NO. PROJECT NUMBER C.I.P. 140

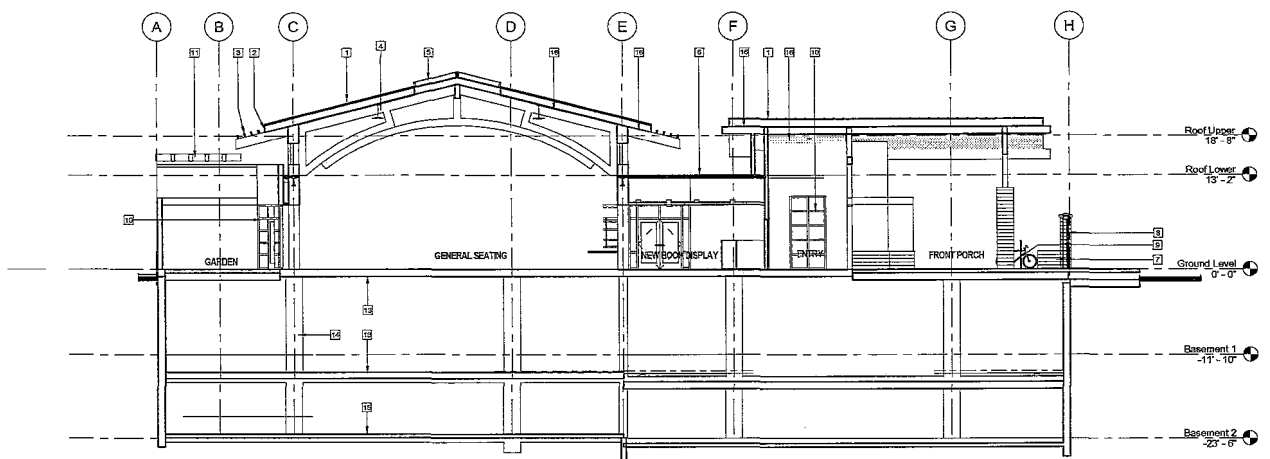
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SHEET TITLE: BUILDING SECTIONS
 SHEET NO: A.10

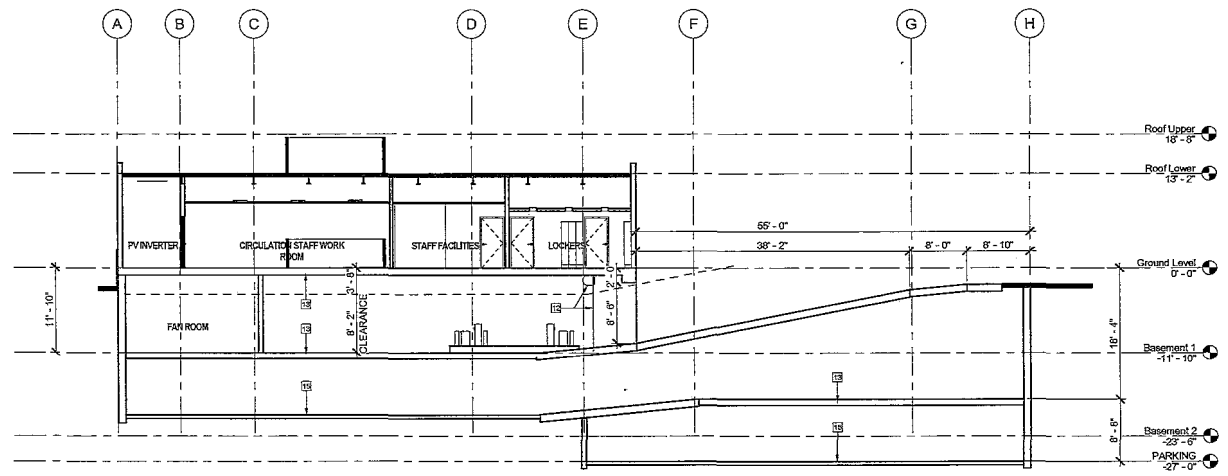
CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT/S&IT

FOR CITY ENGINEER	DATE	SECTION HEAD
DESCRIPTION	BY	APPROVED
	DATE	FILED
		PROJECT MANAGER
		CONTROL CERTIFICATION

CONTRACTOR: 39037-D
 INSPECTOR: DATE STARTED: DATE COMPLETED:



BUILDING SECTION "C"
1/8" = 1'-0"



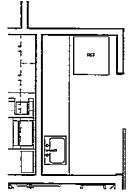
BUILDING SECTION "D"
1/8" = 1'-0"

KEYNOTES

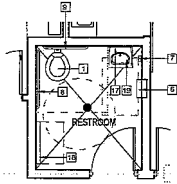
- 1 STANDING SEAM METAL ROOFING SYSTEM, 3:12 SLOPE TYPICAL
- 2 CONTINUOUS SHEET METAL GUTTER
- 3 GALVANIZED TUBE STEEL EAVE TRELLIS, PAINTED
- 4 GALVANIZED TUBE STEEL RIDGE BEAM, PAINTED
- 5 SKYLIGHT
- 6 SINGLE PLY ROOFING SYSTEM
- 7 STONE VENEER BASE
- 8 METAL FENCE
- 9 BIKE RACK(S), AFFIXED TO GRADE
- 10 ALUMINUM STOREFRONT WINDOW SYSTEM
- 11 GALVANIZED TUBE STEEL TRELLIS, PAINTED
- 12 POWER OPERATED ROLL-UP GRILLE
- 13 CONCRETE SLAB
- 14 CONCRETE COLLUMNS
- 15 CONCRETE SLAB ON GRADE
- 16 HARDIBOARD (OR EQUAL)

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

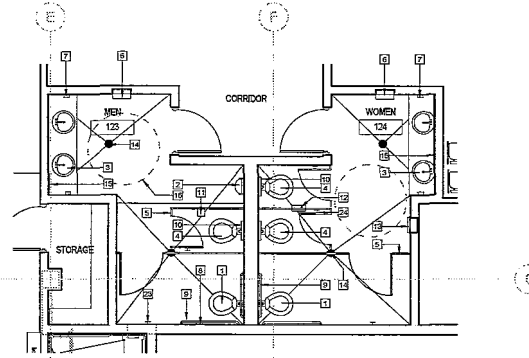
CITY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS PROJECT NO. 04012.02	ARCHITECTS MOSHER DREW 4226 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92110 TELEPHONE (619) 223-2400 FAX (619) 223-3617	Project Number 04012.02 C.I.P. 100
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SHEET TITLE BUILDING SECTIONS		SHEET NO. A.11
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT-BELT DIV SHEET		W/C JLD
FOR CITY ENGINEER DESCRIPTION BY APPROVED DATE FILMED SECTION HEAD		PROJECT MANAGER
CONTRACTOR DATE STARTED DATE COMPLETED		CONTROL CERTIFICATION 39037-D



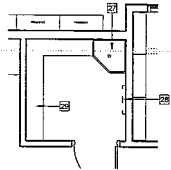
ENLARGED KITCHEN PLAN
1/4" = 1'-0"



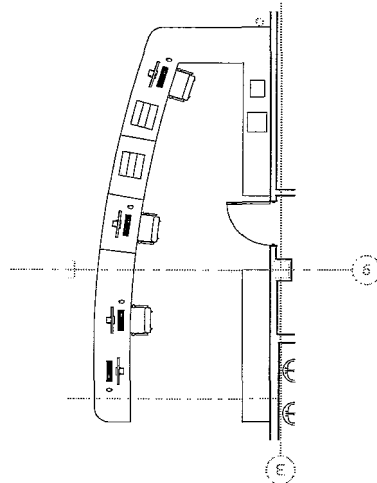
ENLARGED UNISEX PLAN
1/4" = 1'-0"



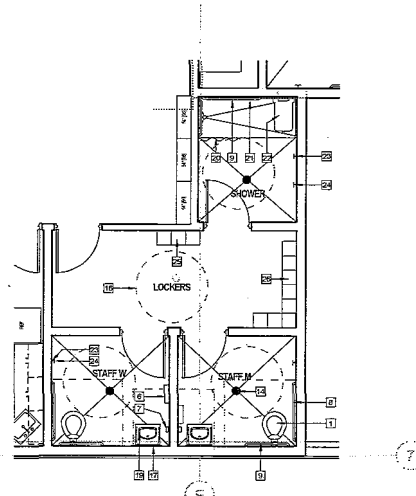
ENLARGED TOILET PLAN
1/4" = 1'-0"



ENLARGED JANITOR ROOM
1/4" = 1'-0"



ENLARGED INFORMATION DESK PLAN
1/4" = 1'-0"



ENLARGED STAFF TOILET PLAN
1/4" = 1'-0"

KEYNOTES

- 1 ACCESSIBLE WALL MOUNTED WATER CLOSET
- 2 ACCESSIBLE WALL MOUNTED URINAL
- 3 ACCESSIBLE COUNTER TOP LAVATORY
- 4 STANDARD WALL MOUNTED WATER CLOSET
- 5 FLOOR MOUNTED TOILET PARTITION
- 6 RECESSED TOWEL DISPENSER AND WASTE RECEPTACLE
- 7 SURFACE-MOUNTED SOAP DISPENSER
- 8 RECESSED SEAT-COVER DISPENSER AND TOILET TISSUE DISPENSER
- 9 STAINLESS STEEL GRAB BAR
- 10 SURFACE-MOUNTED SEAT-COVER DISPENSER
- 11 SURFACE-MOUNTED TOILET TISSUE DISPENSER
- 12 PARTITION MOUNTED TOILET TISSUE DISPENSER
- 13 RECESSED SANITARY NAPKIN DISPOSAL/TAMPON VENDOR
- 14 FLOOR DRAIN
- 15 FULL WIDTH X 3'-0" STAINLESS STEEL FRAMED MIRROR ABOVE BACKSPASH
- 16 32" MIN. DIAMETER TURNING CLEAR RADIUS
- 17 24" X 36" FRAME MIRROR
- 18 SURFACE-MOUNTED BABY CHANGING STATION
- 19 ACCESSIBLE WALL MOUNTED LAVATORY
- 20 SHOWER CURTAIN AND ROD AT 6'-0" A.F.F.
- 21 FLEXIBLE HAND-HELD SHOWER SPRAY HOSE WITH SHOWER CONTROL PANEL
- 22 FOLDING SHOWER SEAT
- 23 SURFACE-MOUNTED ROBE HOOK AT 4'-0" A.F.F.
- 24 SURFACE-MOUNTED ROBE HOOK AT 6'-0" A.F.F.
- 25 ACCESSIBLE LOCKERS
- 26 STANDARD LOCKERS
- 27 MOP SINK
- 28 SHELF WITH MOP AND BROOM HOLDER
- 29 ADJUSTABLE SHELVES

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

CITY OF SAN DIEGO PUBLIC WORKS DEPARTMENT	ARCHITECTS MOSHER DEWEY
	4206 WEST POINT LOMA BOULEVARD
	SUITE 200
	SAN DIEGO, CALIFORNIA 92116
	TELEPHONE (619) 233-2400
	FAX NO. (619) 233-3017

CITY CONTRACT: Project Number 04012.02
SPECIAL SPECIFICATION 5110: C.I.P. 110

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SHEET TITLE: ENLARGED TOILET PLANS
SHEET NO.: A.12

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND ARCHITECTURAL PROJECTS
DEPARTMENT SHEET OF SHEET

FOR CITY ENGINEER	DATE	SECTION HEAD
DESCRIPTION	BY	APPROVED
	DATE	FILMED
		PROJECT MANAGER
		CONTROL CERTIFICATE

CONTRACTOR: DATE STARTED: 39037-D
INSPECTOR: DATE COMPLETED:

MATERIAL LIST

SYSTEM	MANUFACTURER	PRODUCT	FINISH	COLOR
EXTERIOR - ROOF				
STANDING SEAM METAL ROOF	ALF SPAN	DIVEN SPAN II	OURATECH 6000	WEATHERED COPPER COOL
SINGLE PLY ROOFING	JOHN'S MANVILLE	JM PVC-60 MIL	FACTORY FINISH	SANDSTONE
SKYLIGHTS	KALLWALL	CUSTOM GABLE SKYLIGHT, SIMILAR TO FLAT CURB TYPE.	FACTORY FINISH	ALUMINUM CURB WITH MANUFACTURER'S HIGH PERFORMANCE GEAR FINL. COLOR TO MATCH STANDING SEAM ROOF.
PV PANELS	SUNPOWER	3X45 (45W) HIGH EFFICIENCY MODULE	WOOD GRAIN	T8D
EAVE SOFFIT AND PORCH UNDERSIDE	JAMES HARDE	6" WIDE FIBERCEMENT BOARDS		T8D
EXPOSED ROOF STRUCTURE	FRAZEE PAINT			T8D
TRELLIS				
EXTERIOR - WALLS				
EXTERIOR CEMENT PLASTER	EXPO STUCCO	THRE COAT CEMENT PLASTER	SANTA BARBARA	97 EGGSHELL
LEDGER SET STONE VENEER	MSI INTERNATIONAL INC.	CLASSIC LEDGER PANELS	NATURAL	CALIFORNIA GOLD
TRIM PAINT	FRAZEE PAINT			
EXTERIOR - WALL OPENINGS				
CURTAIN WALL	KAWNEER	1600 WALL SYSTEM 1	MANUFACTURER'S FLOUROPOLYMER HIGH PERFORMANCE COATING.	TO MATCH FRAZEE COLOR CL-2828A
STOREFRONT	KAWNEER	TRIFAB 45/UT THERMAL FRAMING SYSTEM	MANUFACTURER'S FLOUROPOLYMER HIGH PERFORMANCE COATING.	TO MATCH FRAZEE COLOR CL-2828A
WINDOWS	KAWNEER	AA6600 THERMAL WINDOWS	MANUFACTURER'S FLOUROPOLYMER HIGH PERFORMANCE COATING.	TO MATCH FRAZEE COLOR CL-2828A
WINDOW GLAZING	YARCOOM	1" INSULATING	T8D	T8D
BEACON TOWER GLAZING	T8D	1/2" PROTECTED TEMPERED GLASS	T8D	T8D
METAL LOUVERS	ARCHITECTURAL LOUVERS INC.	64DP	T8D	T8D
EXTERIOR - DOOR OPENINGS				
FOLDING GLASS DOOR	HANNAWALL	SL-70	MANUFACTURER'S FLOUROPOLYMER HIGH PERFORMANCE COATING.	TO MATCH FRAZEE COLOR CL-2828A
HOLLOW METAL DOORS AND FRAMES		PER SPECS	MANUFACTURER'S FLOUROPOLYMER HIGH PERFORMANCE COATING.	T8D
STOREFRONT DOORS	VORTEX	660 BRUSH GOLD THERMAL ENTRANCE DOOR	PER SPECS	T8D
EXTERIOR DOOR GLAZING	KAWNEER	1" INSULATED	T8D	T8D
ROLL-UP GARAGE GRILLE DOOR	COOKSON	CYCLEMASTER STRAIGHT PATTERN (100,000 CYCLES)	FACTORY FINISH	STAINLESS STEEL GRILLE
EXTERIOR - FENCES AND GUARDRAILS				
CUSTOM ORNAMENTAL IRON FENCE		HIGH PERFORMANCE COATING	PAINT	T8D
CUSTOM ORNAMENTAL IRON GATES		HIGH PERFORMANCE COATING	PAINT	T8D
BALANCED PIPE GUARDRAILS		TRAFFI PAINT		
EXTERIOR - STONE VENEER				
LEDGER SET STONE VENEER (PLANTER WALLS)	MSI INTERNATIONAL INC.	CLASSIC LEDGER PANELS	NATURAL	CALIFORNIA GOLD
EXTERIOR - HARDSCAPE				
COLOR-SET/PAVED CONCRETE	INTEGRAL COLORED CONCRETE	STAMPED GRID PATTERN AS INDICATED	NON SLP	T8D
QUARRY TILE	METROPOLITAN CERAMICS	JUNGLAZED CERAMIC QUARRY TILE, 6"x6"	NON-SLP	1230 ALUBRN
BACKSPLASH	MAI SINC.	DRY TRAK DEEP RECESSED	FACTORY FINISH	SEATTLE COLLECTION
INTERIOR - CEILING				
DECORATIVE WOOD DECKING	DOUGLASS FIR	TONGUE AND GROOVE DECKING	TRANSPARENT STAIN	T8D
SUSPENDED GRID SYSTEM	ARMSTRONG	SONATA 914" SYSTEM	FACTORY FINISH	MANUFACTURER'S STANDARD WHITE
ACOUSTICAL PANEL CEILING		24"x24" OPTIMA REGULAR	FINE TEXTURE	MANUFACTURER'S STANDARD WHITE
GYPSSUM BOARD	ARMSTRONG	5/8" TYPE "X" GYPSSUM BOARD	PAINT	T8D
WATER RESISTANT GYPSSUM BOARD	US GYPSSUM BOARD	5/8" TYPE "X" WATER RESISTANT GYP BOARD	PAINT	T8D
CEILING GLAZING	WRKAMCO	1" INSULATED	T8D	T8D
EXPOSED TRUSSES		CUSTOM STEEL TUBE TRUSSES	PAINT	T8D
INTERIOR - FLOOR				
CARPET TILE	PANIK CENTRA	#3598 24"x24" ATMOSPHERE		TRUCK PINE #46601, RANDOM
LUXURY VINYL TILE	MOHAWK	LUXURY VINYL TILE	NON SLP FINISH	T8D
MONI COMPOSITION TILE	JARVIS DINGS	CHRISMA SPIN	FACTORY FINISH	T8D
PORCELAIN TILE	FLORIDA USA	BASALTINE 6"x24"	NON SLP FINISH	SAND
CONCRETE		SEALED CONCRETE	NON SLP FINISH	
INTERIOR - WALLS				
GYPSSUM BOARD	US GYPSSUM BOARD	5/8" TYPE "X" GYPSSUM BOARD	PAINT	T8D
WATER RESISTANT GYPSSUM BOARD	US GYPSSUM BOARD	5/8" TYPE "X" WATER RESISTANT GYP BOARD	PAINT	T8D
PORCELAIN TILE	FLORIDA USA	INSULATED 6"x24"	NON SLP FINISH	SAND
RUBBER TOP SET BASE	ROFF CORPORATION	PINNACLE 4" RUBBER BASE	FACTORY FINISH	T8D
WOOD WALL BASE	MILLED OAK WALL BASE	6" WALL BASE	TRANSPARENT FINISH	T8D

FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR		BASE		WALL		CEILING		HEIGHT	REMARKS
		MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH		
101	ENTRY	OTC	FF	OTC	FF	GB	PT	WOK	STO		
102	NEW BOOK DISPLAY	OTC	FF	WD	STT	GB	PT	GB	PT		
103	YOUTH SERVICES	CP	FF	WD	SIT	GB	PT	ACT/GB	FF/PT		
104	STORY TELLING	CP	FF	WD	SIT	GB	PT	ACT/GB	FF/PT		
105	GENERAL ADULT SEATING	CP	FF	WD	SIT	GB	PT	WOK	STO		
106	GENERAL ADULT SEATING	CP	FF	WD	SIT	GB	PT	WOK	STO		
107	GENERAL SEATING	CP	FF	WD	SIT	GB	PT	WOK	STO		
108	NON PRINT YOUNG ADULT	CP	FF	WD	SIT	GB	PT	WOK	STO		
109	PERIODICALS	CP	FF	WD	SIT	GB	PT	WOK	STO		
110	PERIODICALS	CP	FF	WD	SIT	GB	PT	WOK	STO		
111	CIRCULATION DESK AND INFORMATION SERVICES	CP	FF	WD	SIT	GB	PT	GRI	FF		
112	PHOTOCENTER	LVT	FF	WD	SIT	GB	PT	ACT/GB	FF/PT		
113	ELECTRICAL ROOM	SC	NS	TS	FF	GB	PT	EXP	-		
114	MEETING STUDY 1	CP	FF	WD	SIT	GB	PT	ACT	FF		
115	MEETING ROOM 2	CP	FF	WD	SIT	GB	PT	ACT	FF		
116	MEETING ROOM 3	CP	FF	WD	SIT	GB	PT	ACT	-		
117	COMMUNITY ROOM	CP	FF	WD	SIT	GB	PT	ACT/GB	FF/PT		
118	STORAGE	VCT	FF	TS	FF	GB	PT	EXP	-		
119	FRIENDS ROOM	CP	FF	WD	SIT	GB	PT	WOK	STO		
120	FRIENDS STORAGE	VCT	FF	TS	FF	GB	PT	EXP	-		
121	RESTROOM	CT	FF	CT	FF	CT/GB	FF/PT	GB	PT		1
122	CORRIDOR	LVT	FF	WD	SIT	GB	PT	ACT	FF		
123	MEN	CT	FF	CT	FF	CT/GB	FF/PT	GB	PT		1
124	WOMEN	CT	FF	CT	FF	CT/GB	FF/PT	GB	PT		1
125	STORAGE	CP	FF	TS	FF	GB	PT	GB	PT		
126	BRANCH MANAGER	CP	FF	WD	SIT	GB	PT	ACT	FF		
127	JAN	VCT	FF	TS	FF	GB	PT	GB	PT		
128	SHOWER	CT	FF	CT	FF	CT	FF	GBM	PT		
129	LOCKERS	CT	FF	CT	FF	GB	PT	GB	PT		
130	STAFF M	CT	FF	CT	FF	CT/GB	FF/PT	GB	PT		
131	STAFF W	CT	FF	CT	FF	CT/GB	FF	GB	PT		
132	STAFF FACILITIES	LVT	FF	WD	SIT	GB	PT	ACT	FF		
133	CIRCULATION STAFF WORK ROOM	VCT	FF	TS	FF	GB	PT	ACT	FF		
134	TELECOM	SC	NS	TS	FF	GB	PT	EXP	-		
135	STAR 1	SC	NS	TS	FF	GB	PT	P	-		
136	STAR #2	SC	NS	TS	FF	GB	PT	GB	PT		
137	ELEVATOR	-	-	-	-	-	-	-	-		2
138	GARDEN	-	-	P	-	-	-	TR	PT		
139	FRONT PORCH	OTC	FF	-	-	-	-	WOK	STO		
140	NORTH PATIO	INTOC	NS	-	-	-	-	TR	PT		
141	SOUTH PATIO	INTOC	NS	-	-	-	-	-	-		
142	PV INVERTER	SC	NS	TS	FF	GB	PT	EXP	-		
B101	PARKING GARAGE	SC	NS	-	-	SC	-	SC	-		
B102	FAN ROOM	SC	NS	-	-	SC	-	SC	-		
B103	STAR #1	SC	NS	-	-	SC	-	SC	-		
B104	STAR 2	SC	NS	-	-	SC	-	SC	-		
B105	ELEV	-	-	-	-	-	-	-	-		
B201	PARKING GARAGE	SC	NS	-	-	SC	-	SC	-		
B202	PUMP ROOM	SC	NS	-	-	GB	-	SC	-		
B203	STAR 1	SC	NS	-	-	SC	-	SC	-		
B204	STAR #2	SC	NS	-	-	SC	-	SC	-		
B205	ELEV	-	-	-	-	-	-	-	-		
B206	ELEV MACH	SC	NS	-	-	SC	-	SC	-		

MATERIAL AND FINISH ABBREVIATIONS

FINISH NOTES

ACT	SUSPENDED ACOUSTICAL PANEL CEILING
CP	CERAMIC TILE
CT	CERAMIC TILE
EXP	EXPOSED TO STRUCTURE
FF	FACTORY FINISH
INCC	INTEGRAL COLORED CONCRETE
GB	GYPSSUM BOARD
GR	WATER RESISTANT GYPSSUM BOARD
GRI	SUSPENDED CEILING GRID SYSTEM
LVT	LUXURY VINYL TILE
NS	NON SLP
P	CEMENT PLASTER
PT	PAINT
PTILE	PORCELAIN TILE
OTC	QUARRY TILE PAVERS
SC	SEALED CONCRETE
STO	GRANITE STAIN
STT	TRANSLUCENT STAIN
TR	TRELLIS
TS	RUBBER TOP SET BASE
VCT	VINYL COMPOSITION TILE
WO	WOOD
WOK	T & G DECKING

- 4" HIGHER CERAMIC TILE W/ROOF ALL WALLS.
- SEE LANSCAPE DRAWINGS

30% BRIDGING DOCUMENTS
MAY 9 2016

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017 CONTRACT SPECIAL SPECIFICATIONS NO. Project Number 04012.02
CIP NO.

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SHEET TITLE FINISH SCHEDULE SHEET NO. A.13

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET 01 SHEET

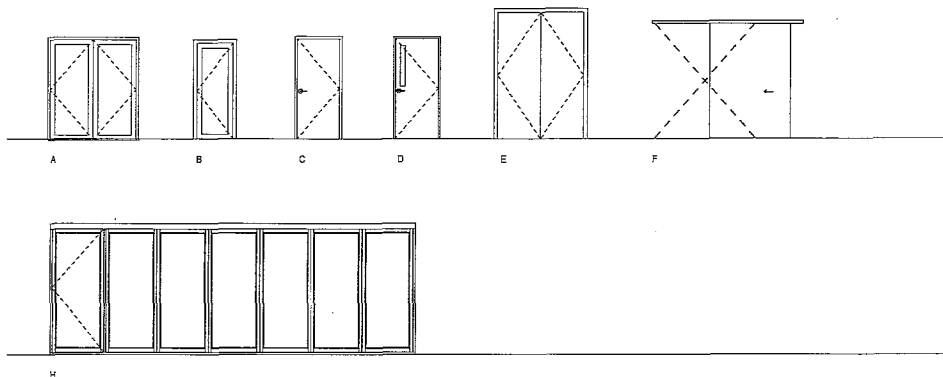
FOR CITY ENGINEER	DATE	SECTION HEAD
DESCRIPTION	BY	APPROVED
DATE	FILED	PROJECT MANAGER

CONTRACTOR INSPECTOR DATE STARTED DATE COMPLETED CONTROL CERTIFICATION 39037-D


DOOR SCHEDULE

DOOR NUMBER	TYPE	HARDWARE GROUP	WIDTH	HEIGHT	THICKNESS	MATERIAL	Door Finish	Door Rating	Door STC Rating	FRAME			DETAILS		REMARKS
										MATERIAL	FINISH	HEAD	JAMB	THRESHOLD	
101	A		6'-0"	8'-9 1/2"	1 3/4"					ALUM.	PAINT				PANIC HARDWARE
102	A		6'-0"	7'-0"	1 3/4"	ALUM.	FACT.			ALUM.	PAINT				PANIC HARDWARE
103A	D		3'-0"	7'-0"	1 3/4"	H.M.	PAINT			H.M.	PAINT				PANIC HARDWARE
103B	A		6'-0"	7'-0"	1 3/4"	ALUM.	FACT.			ALUM.	FACT.				
111	D		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
113	E		6'-0"	8'-10"	1 3/4"	H.M.	PAINT			H.M.	PAINT				
114A	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
114B	C		3'-0"	7'-0"	1 3/4"	WOOD	PAINT			ALUM.	FACT.				
115	C		3'-0"	7'-0"	1 3/4"	WOOD	PAINT			ALUM.	FACT.				
116	C		3'-0"	7'-0"	1 3/4"	WOOD	PAINT			ALUM.	FACT.				
117A	H		25'-6"	9'-0"	2 5/8"	FACT.	FACT.			FACT.	FACT.				
117B	A		6'-0"	7'-0"	1 3/4"	ALUM.	PAINT			ALUM.	FACT.				
117C	G		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
117D	F		7'-0"	8'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
118	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
119	A		6'-0"	7'-0"	1 3/4"	ALUM.	FACT.			ALUM.	FACT.				
120	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
121	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
122	D		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
123	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
124	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
125	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
126	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
127	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
128	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
129	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
130	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
131	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
132	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
134	C		3'-0"	7'-0"	1 3/4"	WOOD	STAIN			ALUM.	FACT.				
135	C		3'-0"	7'-0"	1 3/4"	H.M.	PAINT	2-HOUR		H.M.	PAINT				
136A	C		3'-0"	7'-0"	1 3/4"	H.M.	PAINT			H.M.	PAINT				
136B	C		3'-0"	7'-0"	1 3/4"	H.M.	PAINT	2-HOUR		H.M.	PAINT				
136C	C		3'-0"	7'-0"	1 3/4"	H.M.	PAINT	2-HOUR		H.M.	PAINT				
138A	B		3'-0"	7'-0"	1 3/4"	ALUM.	FACT.			ALUM.	FACT.				
138B	B		3'-0"	7'-0"	1 3/4"	ALUM.	FACT.			ALUM.	FACT.				
140	A		6'-0"	8'-9 1/2"	1 3/4"	ALUM.	FACT.			ALUM.	FACT.				
141	W		8'-0"	8'-10"	2"										DECORATIVE WROUGHT IRON GATE
142	C		3'-0"	7'-0"	1 3/4"	H.M.	PAINT			H.M.	PAINT				
B102	C		3'-0"	7'-0"	1 3/4"	H.M.	PAINT			H.M.	PAINT				
B103	C		3'-0"	7'-0"	1 3/4"	H.M.	PAINT	3-HOUR		H.M.	PAINT				
B104	C		3'-0"	7'-0"	1 3/4"	H.M.	PAINT	3-HOUR		H.M.	PAINT				
B202	C		3'-0"	7'-0"	1 3/4"	H.M.	PAINT			H.M.	PAINT				
B203	C		3'-0"	7'-0"	1 3/4"	H.M.	PAINT	3-HOUR		H.M.	PAINT				
B204	C		3'-0"	7'-0"	1 3/4"	H.M.	PAINT	3-HOUR		H.M.	PAINT				
B206	C		3'-0"	7'-0"	1 3/4"	H.M.	PAINT			H.M.	PAINT				

DOOR TYPES



30% BRIDGING DOCUMENTS
MAY 9 2016


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CITY CONTRACT SPECIAL SPECIFICATIONS NO. _____ Project Number 04012.02
 C.I.P. NO. _____

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SHEET TITLE DOOR SCHEDULE SHEET NO. **A.14**

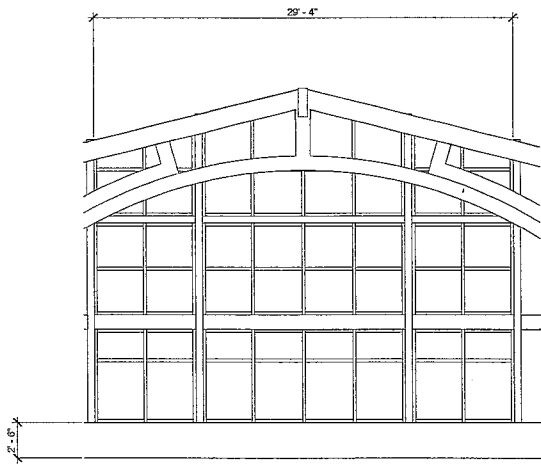
CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
 SHEET NO. _____ W.C. NO. _____

FOR CITY ENGINEER	DATE	SECTION HEAD
DESCRIPTION	BY	APPROVED
	DATE	DATE
		PROJECT MANAGER

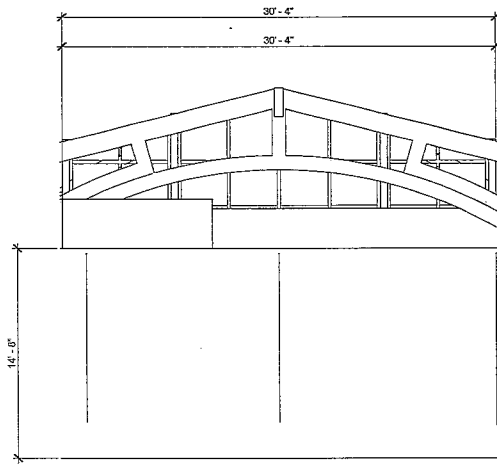
CONTROL CERTIFICATION
39037-D

CONTRACTOR _____ DATE STARTED _____
 INSPECTOR _____ DATE COMPLETED _____

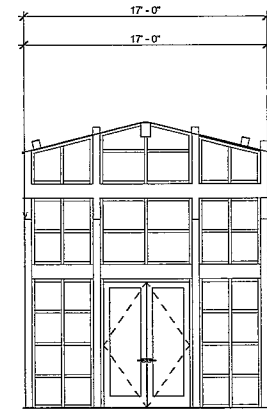
WINDOW TYPES



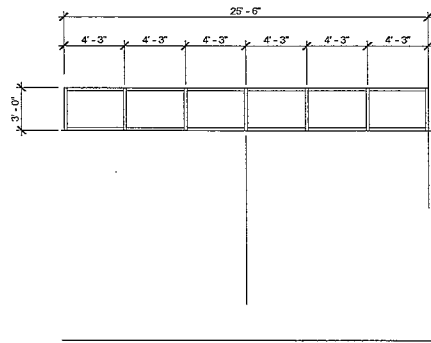
NORTH ELEVATION
1/4" = 1'-0"



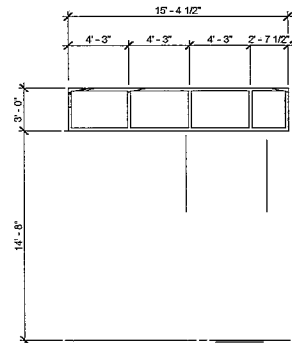
SOUTH ELEVATION
1/4" = 1'-0"



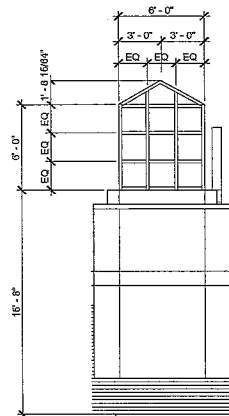
EAST FRONT PORCH ELEVATION
1/4" = 1'-0"



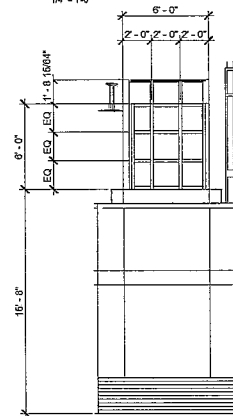
EAST AND WEST HIGH WINDOW ELEVATION
1/4" = 1'-0"



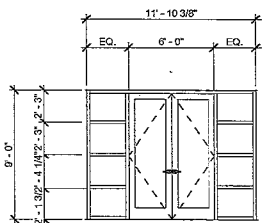
EAST AND WEST HIGH WINDOW ELEV.
1/4" = 1'-0"



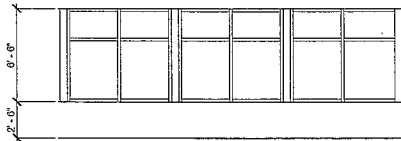
NORTH AND SOUTH TOWER ELEVATION
1/4" = 1'-0"



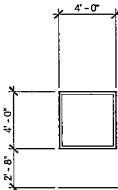
EAST AND WEST TOWER ELEVATION
1/4" = 1'-0"



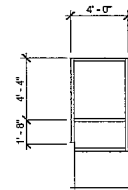
NORTH PATIO ELEVATION
1/4" = 1'-0"



NOTH YOUTH SERVICES ELEVATION
1/4" = 1'-0"



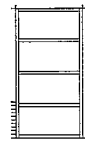
SOUTH FRIENDS ELEV.
1/4" = 1'-0"



NORTH FRIENDS ELEV.
1/4" = 1'-0"



NORTH PATIO
1/4" = 1'-0"



STAIR #1 ELEVATION
1/4" = 1'-0"

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

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CITY CONTRACT SPECIAL SPECIFICATIONS 151-102 PROJECT NUMBER 04012.02
CLIP 102

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SHEET TITLE WINDOW TYPES SHEET NO. A.15

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CONTROL PRODUCTS
DEPARTMENT SHEET 3851

FOR CITY USE ONLY
DISCUSSION BY APPROVED DATE FILED SECTION LEAD
PROJECT MANAGER

CONTRACTOR DATE STARTED 39037-D
INSPECTOR DATE COMPLETED

CONCRETE MASONRY (CBC CHAPTER 21)

- MATERIALS**
 - COMPRESSIVE STRENGTH OF MASONRY SHALL BE VERIFIED BY THE UNIT STRENGTH METHOD FOR Fm 1500 PSI FROM TESTING SHALL BE USED FOR Fm GREATER THAN 1500 PSI FROM AND DURING CONSTRUCTION AS SPECIFIED IN CBC SECTION 2105.2.
 - CONCRETE BLOCK
 - MEDIAN WEIGHT (ON 8" UNITS CONFORM TO ASTM C90-12) WITH MAXIMUM SHRINKAGE OF 0.05%
 - GRAVITY AT 28 DAYS 2000 PPI
 - MOISTURE CONTENT AT 28 DAYS IS 5% BE WITH 3% MAXIMUM AGGREGATE.
 - MORTAR
 - MORTAR SHALL BE TYPE "S" CONFORMING TO CBC SECTION 2103.9.
 - BLOCK LAYOUT, RUNNING BOND, CONCAVE CONCRETE JOINTS AND INVERTED BOND BEAM UNITS FOR STARTING COURSES.
 - ALL HORIZONTAL REINFORCEMENT SHALL BE PLACED IN BOND BEAM OR UNITS, LEAD BEAM UNITS, ALL BOND BEAM BLOCK SHALL BE "DEEP CUT" UNITS.
 - GROUTING
 - ALL CELLS SHALL BE SOLID GROUTED.
 - ALL GROUT SHALL BE CONSOLIDATED WITH MECHANICAL VIBRATOR AT THE TIME OF PLACEMENT AND THEN RECONSOLIDATED BEFORE PLASTICITY IS LOST.
 - WIRE FOOTINGS SHALL BE FOR ONE HOUR CONCR. HORZ. CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT FOUR (4) FEET TOP OF THE UPPERMOST UNIT.
 - POURS OVER 5 FEET: PROVIDE CEMENTS IN BOLT COURSE AS VERTICAL REINFORCEMENT (2 INCHES MAX). SPECIAL INSPECTION IS REQUIRED.
 - GROUT SHALL BE PLACED IN A CONTINUOUS POUR GROUT UNITS NOT EXCEEDING FIVE FEET.
 - ANCHOR BOLTS MUST BE SET WITH TEMPLATES AND HELD IN PLACE PRIOR TO GROUTING. PROVIDE AT LEAST ONE INCH OF GROUT BETWEEN ANCHOR BOLT AND MASONRY.
 - FOUNDATIONS TO BE SET BY THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL DOWELS PRIOR TO CONCRETE PLACEMENT.
 - SPLICES (IF ANY) AS SPECIFIED IN DRAWINGS.
 - NO CONDUIT OVER 2" DIA. SHALL BE PLACED IN CMU WALLS WITHOUT ENGINEER APPROVAL.

WOOD (CBC CHAPTER 23)

- ALL WOOD MEMBERS SHALL BE DOUGLAS FIR (DF) OR LARCH GRADE MARKED BY A RECOGNIZED GRADING AGENCY (MCS & WPPA)
- WOOD GRADES
 - FOR HORIZONTAL MEMBERS
 - 2x4 & 2x6 PULPITS: GRADE #1 FOR PANELIZED CONSTRUCTION
 - 2x4 & 2x6 LEAKERS: GRADE #2
 - ALL OTHERS: GRADE #2
 - FOR VERTICAL MEMBERS
 - 2x4 & LARGER STUDS: GRADE #2
 - POSTS: GRADE #1
- APA RATED SHEATHING CONFORMING TO APA 208 PDS SHALL BE USED FOR FLOOR, ROOF, AND WALL SHEATHING IN ACCORDANCE WITH CBC SECTION 2303.1.4.
- KNOTCHING AND BORING OF STUDS AND JOISTS SHALL BE PERMITTED ONLY AS DETAILED OR APPROVED BY THE ENGINEER.
- AS A MINIMUM, ALL NAILING SHALL BE WITH COMMON NAILS, EXCEPT AS NOTED IN CBC TABLE 2303.1.6.
- 10x2 1/2" COMMON NAILS CAN BE USED FOR ATTACHMENT OF PLYWOOD SHEATHING.
- ALL SILLS OR PLATES RESTING ON CONCRETE OR MASONRY, WHICH ARE IN CONTACT WITH EARTH OR RESTING ON FOUNDATIONS, SHALL BE PRESSURE TREATED DOUGLAS FIR. NEWLY EXPOSED SURFACES RESULTING FROM FIELD CUTTING, BORING OR HANDLING SHALL BE FIELD TREATED IN ACCORDANCE WITH WPPA 14.4.
- BOLTS: ALL BOLT HOLES IN WOOD SHALL BE DRILLED 1/32" DIAMETER LARGER THAN NOMINAL BOLT DIAMETERS. BOLTS IN WOOD SHALL NOT BE LESS THAN 3 DIAMETERS FROM THE END AND 4 DIAMETERS FROM THE EDGE OF THE MEMBER. THRESH PROTECTION SHALL BE 1/8" (2X) MINIMUM. ALL NUTS SHALL BE TIGHTENED WHEN INSTALLED AND RE-TIGHTENED AT THE COMPLETION OF WORK OR BEFORE CLOSING.
- MACHINE BOLT ANCHOR BOLTS SHALL BE PROVIDED WITH FULL BODY DIAMETER AS FOLLOWS:

NOMINAL SIZE (INCHES)	BODY OR SHANK DIAMETER (INCHES)	MIN	MAX
1/2	0.500	0.515	0.525
5/8	0.625	0.642	0.655
3/4	0.750	0.768	0.782
7/8	0.875	0.892	0.908
1	1.000	1.022	0.978

 A. ADDED FROM ANS I 18.1.2.1.
 B. FOR BOLT DIAMETERS NOT INDICATED, REFER TO ANS I 18.1.2.1 AND B18.2.5.
 C. THE BODY AND SHANK OF A BOLT IS THE SHORTEST PORTION BETWEEN THE HEAD AND THE THREADS.
 D. LAG SCREWS SHALL BE FULL BODY DIAMETER ACCORDING TO ANS B18.2.1. FREDERICK LEAD WITH A BIT SIZE OF 40% TO 70% OF THE SHANK DIAMETER FOR THE THREADED PORTION. CLEARANCE HOLES TO BE THE SAME LENGTH AND DIAMETER AS THE UN-THREADED SHANK. LUBRICATE LAGS AND SCREW IN PLACE.
 E. WOOD SCREENS SHALL BE CUT THREAD ACCORDING TO ANS B18.1.1.
 F. WAGERS: ALL BOLT HEADS, LAG SCREWS AND NUTS STRAPS ON WOOD SHALL HAVE STANDARD OUT WAGERS.
 G. ALL FRAMING ANCHORS, POST CAPS, BASES, HANGERS, STRAPS, ETC. SHALL BE AS MANUFACTURED BY SIMMONS STRONG'S COMPANY. LATEST CATALOG OR ENGINEER APPROVED EQUIV. SUBMIT LOCAL COMPANIES WITH CATALOG AND COPIES REPORTS TO THE ENGINEER FOR APPROVAL.
 H. TOP PLATES OF ALL WOOD STUD WALLS TO BE 2X2 MINIMUM (SAME WIDTH AS STUDS), LAP 4F. MINIMUM, WITH NOT LESS THAN 100 NAILS AT EACH LAP AND NOT MORE THAN 12" BETWEEN NAILS. MOST USE CONTENT OF WOOD AT THE TOP OF WALLS NOT EXCEED 10%.
 I. OVER DRIVING OF NAILS THROUGH SHEAR WALLS, OR FLOOR SHEATHING IS NOT ALLOWED. NAILS SHALL BE DRIVEN SO THAT THE HEADS ARE FLUSH WITH THE SURFACE OF SHEATHING.
 J. MACHINE APPLIED NAILING TO WOOD FRAMING OR PLYWOOD, SUBJECT TO SATISFACTORY JOB SITE DEMONSTRATION FOR THIS PROJECT AND APPROVAL BY THE ENGINEER AND BUILDING DEPT. IF NAIL HEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR HAND HAMMER OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY AND MACHINE NAILING SHALL BE DISCONTINUED.
 K. WHERE ADJACENT WALLS ARE SHEATHED, PROVIDE SHEATHING OVER AND UNDER OPENINGS AND REWARDER OF UNSHEATHED WALLS.
 L. FASTENERS, NAILS AND CONNECTIONS IN CONTACT WITH PRESERVATIVE TREATED WOOD SHALL BE GALVANIZED IN ACCORDANCE WITH ANS A551-HOT DIPPED ZINC COATED GALVANIZED OR SHALL BE STAINLESS STEEL.
 M. WHEN HARDWARE THAT REQUIRE 105+ 12" NAILS ARE INSTALLED OVER SHEATHING THE LENGTH OF THE NAILS USED SHALL BE INCREASED BY THE THICKNESS OF THE SHEATHING.

GLUED-LAMINATED TIMBERS (CBC CHAPTER 23)

- MANUFACTURE OF GLUED-LAMINATED TIMBERS SHALL BE IN CONFORMANCE WITH ANS I 18.1.1.
- MATERIALS
 - COMBINATION: 2F4M SIMPLE SPANS
 - COMBINATION: 2F4V OVER CENTER OR MULTI-SPAN BEAMS
 - LUMBER: 2X4 & 2X6 FULL GRADE
 - LAMINATION: 2 INCH NOMINAL
 - APPEARANCE: INDUSTRIAL UNLESS OTHERWISE NOTED
 - CONDITION OF USE: DRY
 - ADDRESSES: ANS D269 WEI USE
- GLUED-LAMINATED TIMBERS SHALL BE FABRICATED IN A PLANT WITH AN APPROVED QUALITY CONTROL SYSTEM LICENSED BY AIC.
- MANUFACTURER OF GLUED-LAMINATED TIMBERS SHALL STAMP MEMBERS WITH A QUALITY MARK OF A QUALIFIED CENTRAL INSPECTION ORGANIZATION AND SHALL SUBMIT AN AIC INSPECTION CERTIFICATE TO THE BUILDING INSPECTION DEPARTMENT AND ENGINEER BEFORE INSTALLATION.

REINFORCING STEEL

- BAR REINFORCEMENT SHALL BE ASTM A631, GRADE 60 DEFORMED BARS.
- SPECIAL CONCRETE MEMBER FRAME AND SPECIAL BOUNDARY MEMBER REINFORCEMENT SHALL BE ASTM A708, GRADE 80.
- BAR REINFORCEMENT THAT IS TO BE WELDED SHALL BE ASTM A631, GRADE 60.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A186 AND SHALL BE SPACED 2 INCHES MINIMUM.
- MINIMUM LAP SPLICES OF REINFORCING BARS SHALL BE AS SPECIFIED IN THE DRAWINGS.
- VERTICAL BARS IN CONCRETE WALLS SHALL BE ACCURATELY POSITIONED AT THE CENTER OF THE WALL UNLESS OTHERWISE NOTED IN THE DRAWINGS.
- VERTICAL BARS IN MASONRY WALLS SHALL BE ACCURATELY POSITIONED AT THE CENTER OF THE WALL UNLESS OTHERWISE NOTED ON PLANS AND SHALL BE TIED IN POSITION TOP AND BOTTOM AND AT INTERSECTIONS NOT EXCEEDING 48 INCHES CENTER.
- REINFORCING DETAILS, BENDING, AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE'S MANUAL OF STANDARD PRACTICE, LATEST EDITION.
- REINFORCING STEEL SHALL BE PROVIDED WITH THE FOLLOWING MINIMUM CONCRETE COVER FOR CAST IN PLACE CONCRETE:
 - CONCRETE EXPOSED AGAINST EARTH: 3"
 - CONCRETE SURFACE FORMED EXPOSED TO EARTH OR WEATHER:
 - #3 THROUGH #8 BARS: 1-1/2"
 - #9 BAR AND SMALLER: 2"
 - CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
 - SLABS, WALLS AND JOISTS: 1/2" AND #9 BARS: 1/2"
 - #1 BARS AND SMALLER: 3/4"
 - CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
 - PIERS, COLUMNS, TIE BARS, SPIRALS: 1-1/2"
- ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, HOLLOW ANCHORS AND INSERTS SHALL BE WELL SECURED IN POSITION WITH WIRE POSITIONERS PRIOR TO FOUNDATION INSPECTION AND BEFORE PLACING CONCRETE OR GROUT.
- DOWELS BETWEEN FOOTINGS AND WALLS SHALL BE THE SAME GRADE, SIZE, AND SPACING AS VERTICAL WALL REINFORCING UNLESS OTHERWISE NOTED ON PLANS.
- FURNISH 8" SPACER LATHES AT APPROXIMATELY 2' ON CENTER IN ALL BEAMS AND FOOTINGS TO SECURE REINFORCING STEEL.
- WELDING OF REINFORCING BARS SHALL CONFORM TO THE LATEST EDITION OF ANS D1.1. ERWOK ELECTRODES SHALL BE USED FOR BAR TO BAR AND ERWOK ELECTRODES SHALL BE USED FOR REINFORCING TO STRUCTURAL STEEL.
- CONTRACTOR NOTE: THE CONTRACTOR SHALL PROVIDE A TOTAL 4000 LBS. REINFORCEMENT CONTINGENCY FOR UNLINED AS DIRECTED BY THE ENGINEER UPON FIELD OBSERVATION ANY UNLINED PORTION OF THE CONSTRUCTION SHALL BE CREDITED BACK TO THE OWNER.
- CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.

STRUCTURAL STEEL (CBC CHAPTER 22)

- ALL WORKMANSHIP AND MATERIALS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS SHALL CONFORM TO THE 14th EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION.
- MATERIALS
 - WIDE FLANGE: ASTM A 992, GRADE 50
 - CHANNELS: ASTM A 36, GRADE 36
 - ANGLES, PLATES & FLOORS: ASTM A 36, GRADE 36
 - HSS (TUBING): ASTM A 500, GRADE B P1 & 48 KSI
 - HSS (ROUND): ASTM A 500, GRADE B P1 & 48 KSI
 - Pipe: ASTM A 53, GRADE B P1 & 48 KSI
 - MACHINE BOLTS: ASTM A 307, GRADE A
 - NUTS: ASTM A 307, HEX. GRADE A
 - ANCHOR BOLT (RODS): ASTM A 36, HEAVY HEX. GRADE (D)
 - NUTS: ASTM A 307, HEAVY HEX. GRADE A
 - HIGH STRENGTH BOLTS: ASTM A 508, HEAVY HEX. GRADE C
 - HENKEL BOLTS: ASTM A 108
 - HARDENED WASHERS: ASTM F 436
 - HENKEL STUDS: ASTM F 100
 - NON-STANDARD GROUT: ASTM C-107, 7000 PSI (NON-METALLIC)
- ROOF STRUCTURAL SHAPES SHALL BEAR ALL IDENTIFICATION MARKS IN CONFORMANCE WITH ASTM A598. HSS TUBES AND RODS SHALL BE IDENTIFICATION IN ACCORDANCE WITH ASTM A 500 AND HSS PIPES IN ACCORDANCE WITH ASTM A 500.
- WHEN FABRICATING BEAMS, PLACE NATURAL CAMBER UP.
- PROVIDE HARDENED WAGERS AS REQUIRED PER THE SPECIFICATION FOR STRUCTURAL JOINTS USING ANS I 18.2 OR ANS I 18.9 BOLTS BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS.
- BOLT HOLES:
 - TYPICAL STEEL TO STEEL CONNECTIONS: BOLT DIAMETER + 1/8 INCH
 - ANCHOR BOLTS (RODS): BOLT DIAMETER + 3/16 INCH
- WELDED HEAD AND "H" HEAD ANCHORS: NELSON SELF-FLUXED ANCHORS.
- NON-SHEARING GROUT SHALL BE INSTALLED IMMEDIATELY AFTER COLUMNS ARE PLUMBED. CONTRACTOR SHALL NOT LOAD COLUMN ANCHOR BOLTS BEFORE PLACEMENT OF NON-SHEARING GROUT WITHOUT TAKING MEASURES TO PREVENT BUCKLING OF ANCHOR BOLTS UNDER CONSTRUCTION LOADS.
- ALL WELDING SHALL BE DONE BY THE FUSION PROCESS USING APPROVED ELECTRODES PER ANS SPECIFICATION ERWOK (LOW HYDROGEN ELECTRODES). WELDING SHALL CONFORM TO THE LATEST EDITION OF ANS D1.1 AND ANS D1.4 AND SHALL BE PERFORMED BY CERTIFIED WELDERS QUALIFIED UNDER THE PROCEDURES CONTAINED THEREIN.
- WHERE WELD LENGTHS NOT SHOWN, IT SHALL BE THE FULL LENGTH OF THE JOINT.
- WHERE MINIMUM ANS F110 WELD THICKNESS REQUIREMENT EXCEEDS WELDS SHOWN ON DETAILS, PROVIDE MINIMUM ANS F110 WELD.
- ALL WELDS USED IN PRIMARY MEMBERS AND CONNECTIONS IN THE LATERAL FORCE RESISTING SYSTEM SHALL BE MADE WITH FILLER METAL THAT HAS A MINIMUM CHARPY V NOTCH TOUGHNESS OF 20 FT LBS AT MINUS 20 DEGREES FAHRENHEIT AS DETERMINED BY ANS QUALIFICATION OR MANUFACTURE CERTIFICATION AND 40 FT LBS AT 10 DEGREES FAHRENHEIT.
- WELDS INSTALLED AS REQUIRED CONTINUOUS OR PERIODIC SPECIAL INSPECTION NEED NOT HAVE SPECIAL INSPECTION WHEN THE WELDING IS DONE IN AN APPROVED FABRICATOR'S SHOP. HOWEVER, THE APPROVED FABRICATOR MUST SUBMIT A CERTIFICATE OF COMPLIANCE IN ACCORDANCE WITH CBC SECTION 2202.2.
- ALL FULL PENETRATION CONNECTIONS SHALL BE ULTRASONICALLY INSPECTED BY AN APPROVED TESTING AGENCY AND SHALL CONFORM TO LATEST EDITION OF ANS D1.1, SECTIONS A AND B.
- ALL PLATE STIFFENER PLATES AND CAP PLATES USED IN MOMENT CONNECTIONS SHALL BE ORIENTED SO THAT THE ROLLING DIRECTION OF THE PLATE IS PARALLEL WITH THE DIRECTION OF PRINCIPAL STRESS.
- WELDING OF MOMENT CONNECTIONS SHALL BE DONE PRIOR TO TIGHTENING OF HIGH STRENGTH BOLTS.
- HIGH STRENGTH BOLTING:
 - ALL STEEL TO STEEL CONNECTIONS SHALL HAVE HIGH STRENGTH BOLTS (AS360 CONNECTIONS).
 - ALL BRACED FRAME AND MOMENT FRAME CONNECTIONS ARE "SLIP CRITICAL" CONNECTIONS (AS360 DESIGN VALUES WITH SPECIAL INSPECTION).
 - AS360 DESIGN VALUES WITH SPECIAL INSPECTION.
 - ALL CONNECTIONS ALONG CHORD AND DRAG LINES, AS SHOWN ON PLANS, ARE "SLIP CRITICAL" CONNECTIONS (AS360 DESIGN VALUES WITH SPECIAL INSPECTION).
 - STARTS SHALL BE DESIGNED IN ACCORDANCE WITH ANS D1.1, SECTIONS A AND B AND DEFLECTION CRITERIA. CALCULATIONS AND DRAWINGS SIGNED BY A CALIFORNIA REGISTERED CIVIL ENGINEER SHALL BE SUBMITTED TO AND REVIEWED BY THE ENGINEER AND BUILDING DEPARTMENT BEFORE FABRICATION.
 - STRESSES OCCURRING DURING FABRICATION, SHIPMENT, AND ERECTION SHALL BE TEMPORARY AND NOT EXCESSIVE. STRESSES AT ALL TIMES SHALL BE LESS THAN DESIGN AND ALL CORNER STRESSES, THE FULL LENGTH AND LOW CARVING SHALL BE TO BE MAINTAINED DUE TO FABRICATION, SHIPMENT, OR ERECTION PROCEDURES. THROUGHOUT THE COMPLETE PROCESS, THE STABILITY OF INDIVIDUAL MEMBERS AND ASSEMBLIES SHALL BE MAINTAINED.
 - ALL ADDITIONAL STRESSES, INCLUDING LOADS FROM TO BE REDUCING INSPECTIONS FOR STEEL FRAME, FLOOR SHEATHING OR ROOF SHEATHING INSPECTION, WHICHEVER OCCURS FIRST.
 - IDENTIFICATIONS FROM THE STEEL FABRICATOR SHALL BE PROVIDED TO THE CITY BUILDING DIVISION FOR ALL STEEL DELIVERED TO THE JOB SITE FIRST TO REDUCING INSPECTIONS FOR STEEL FRAME, FLOOR SHEATHING OR ROOF SHEATHING INSPECTION, WHICHEVER OCCURS FIRST.
 - STRUCTURAL STEEL SHOP DRAWINGS SHALL BE SUBMITTED TO AND REVIEWED BY THE ENGINEER BEFORE FABRICATION.
 - ALL EXTERIOR EXPOSED STEEL SHALL BE PAINTED OR GALVANIZED. SEE ARCHITECTURAL DRAWINGS FOR REQUIREMENTS.

DESIGN CRITERIA

- VERTICAL LOADS
 - DEAD LOADS:
 - ROOF (FLAT): 15 PSF
 - ROOF (SLOPED): 15 PSF
 - WIND LOADS: PER ASCE 7-10 UNLESS OTHERWISE NOTED.
 - ROOF: 20 PSF
 - FLOOR: 10 PSF
- WIND: PER ASCE 7-10 (IBC 2102)
 - BASIC WIND SPEED AT SECOND GUST (Vw): 115 MPH
 - DESIGN WIND SPEED (Vw): 115 MPH
 - RISK CATEGORY: II
 - EXPOSURE CATEGORY: C
 - ENCLOSURE CLASSIFICATION: ENCLOSURED
 - SEISMIC PER ASCE 7-10 (IBC 2112)
 - RISK CATEGORY: II
 - SEISMIC IMPORTANCE FACTOR (I): 1.0
 - RHO (NS): 1.0
 - RHO (E-W): 1.0
 - RHO (E-W): 1.0
 - MAPPED SPECTRAL RESPONSE ACCELERATIONS:
 - Ss: 1.20 G
 - S1: 0.483 G
 - S2: 0.977 G
 - S3: 0.483 G
 - SPECTRAL RESPONSE COEFFICIENTS:
 - S1: 0.977 G
 - S2: 0.483 G

FOUNDATION

- THE SOILS REPORT RECOMMENDATIONS SHALL BE COMPLIED WITH BY THE CONTRACTOR.
- SOILS INFORMATION:
 - SEE SOILS REPORT BY MTS
 - DATE: MAY 20, 2015
 - TESTING ENGINEERS DATED: MARCH 26, 2007
 - FOUNDATION MATERIAL:
 - SOIL DESIGN PARAMETERS:
 - ALL OVERALL BEARING CAPACITY: 7000 PSF
 - CANTILEVER ACTIVE (LEVEL): 40 PSF
 - CANTILEVER ACTIVE (21 SLOPE): 60 PSF
 - RESTRAINING AT REST (LEVEL): 80 PSF
 - RESTRAINING AT REST (21 SLOPE): 75 PSF
 - LATERAL BEARING (PASSIVE) PRESSURE: 250 PSF
 - COEFFICIENT OF FRICTION: 0.32
 - MINIMUM CONTINUOUS FOOTING WIDTH: 18 INCHES
 - MINIMUM SPREAD FOOTING WIDTH: 18 INCHES
 - BOTTOM OF FOOTINGS SHALL BE AT LEAST 6 INCHES BELOW LOWEST ADJACENT BASEMENT GRADE.
 - ALL FOUNDATION WORK SHALL BE FOUND ON FIRM UNDISTURBED NATURAL SOILS OR APPROVED COMPACTED SOILS.
 - ALL SITE WORK SHALL BE DONE UNDER THE DIRECT OBSERVATION OF THE SOILS ENGINEER.
 - SOILS ENGINEER SHALL VERIFY IN WRITING TO THE ENGINEER THAT THE SITE SOIL WORK COMPLIES WITH ALL OF THE RECOMMENDATIONS AND CONCLUSIONS OF THE SOILS REPORT.
 - THE FRESH EXCAVATION FOR FOUNDATIONS SHALL BE KEPT AT TRUE TO LINE.
 - FOUNDATION EXCAVATIONS SHALL BE KEPT FREE OF LOOSE MATERIAL AND STANDING WATER AND SHALL BE CHECKED AND APPROVED BY THE SOILS ENGINEER BEFORE THE PLACEMENT OF ANY CONCRETE.
 - THE TESTING LAB SHALL SUBMIT COMPARISON REPORTS FOR ALL FILL TO THE ENGINEER BEFORE RECEIVING FOUNDATION INSPECTION. ALL LOOSE SOIL AND FILL, INCLUDING BACKFILL BEHIND RETAINING WALLS, SHALL BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY, OR GREATER AS REQUIRED BY THE SOILS REPORT.
 - SOILS FOR ALL RETAINING WALLS SHALL BE NON-EXPANSIVE PERIODIC MATERIAL APPROVED BY THE SOILS ENGINEER. SOILS SHALL NOT BE PLACED UNTIL MASONRY OR CONCRETE RETAINING MEMBERS HAVE BEEN IN PLACE A MINIMUM OF 14 DAYS AND HAVE OBTAINED 75% OF THE DESIGN STRENGTH.
 - PROVIDE TEMPORARY BRACING FOR ALL WALLS RETAINING EARTH, PRIOR TO BACKFILLING.
 - TEMPORARY BRACING FOR ALL RETAINING WALLS REQUIRING PERMANENT STRUCTURAL SUPPORT AT THE TOP OF THE WALL SHALL REMAIN IN PLACE UNTIL SUCH SUPPORTS ARE INSTALLED, AND IN THE CASE OF CONCRETE SUPPORTS, THE SHORING SHALL REMAIN IN PLACE A MINIMUM OF 7 DAYS AFTER CONCRETE PLACEMENT.

REINFORCED CONCRETE (CBC CHAPTER 19)

- CONCRETE SHALL CONFORM TO ASTM C150, TYPE II.
- AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33.
- READY-MIX CONCRETE SHALL BE ORDERED AND DELIVERED IN ACCORDANCE WITH ASTM C94.
- CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ANS 210.1, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", EXCEPT AS MODIFIED BY THESE NOTES.
- CONCRETE SHALL BE STANDARD WEIGHT CONCRETE (145 PCF) AND HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:

ELEMENT	STRENGTH	AGE	W/C RATIO (MAX)
FOOTINGS	3000 PSI	1"	.57
GRADE BEAMS	3000 PSI	1"	.57
SLAB ON GRADE	3000 PSI	1"	.57
WALLS & COLUMNS	4000 PSI	1"	.45
STRUCTURAL SLABS & BEAMS	4000 PSI	1"	.45
- CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR CONCRETE DESIGN STRENGTH IS EXCEEDING 2500 PSI.
- CONCRETE SHALL BE PROPORTIONED SUCH THAT THE 7 DAY STRENGTHS ARE A MINIMUM OF SEVENTY PERCENT OF THE SPECIFIED 28 DAY STRENGTH FOR ANY CONCRETE CONSTRUCTION REQUIRING SHORING, BRACING OR TO RECEIVE CONSTRUCTION LOADS. ALSO, SLABS ON GRADE SHALL HAVE A COMPRESSION STRENGTH OF 1800 PSI MINIMUM AT 7 DAYS SUBJECT TO CONSTRUCTION TRAFFIC ADJUSTMENTS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER. ADMIXTURES SHALL COMPLY WITH ANS C618 AND C619 AND BE OF A TYPE THAT INCREASES THE WORKABILITY OF THE CONCRETE, BUT SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM DESIGN COMBUSTION CALORIC VALUE SHALL NOT BE USED.
- ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, HOLLOW-DOWN ANCHORS, AND INSERTS SHALL BE WELL SECURED IN POSITION WITH WIRE POSITIONERS PRIOR TO FOUNDATION INSPECTION AND BEFORE PLACING CONCRETE.
- NO CONCRETE PLACED IN A CONCRETE SLAB SHALL HAVE AN OUTSIDE DIAMETER GREATER THAN 10 THE THICKNESS OF THE SLAB UNLESS OTHERWISE NOTED. THE SPACING SHALL BE LESS THAN 2% OF THE THICKNESS OF ALL CONCRETE OFFSETS, MINIMUM CLEAR DISTANCE BETWEEN CONCRETE SHALL BE THREE TIMES DIAMETER ON CENTER.
- STRUCTURAL JOINTS OF SLABS, BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH A "W" CHAMFER.
- REFER TO DRAWINGS OF OTHER DISCIPLINES FOR MOULDS, GROOVES, CUTS, ORNAMENTS, OR DETAILS REQUIRED TO BE CAST INTO CONCRETE.
- CONSTRUCTION JOINTS IN ALL FOUNDATIONS, WALLS, SUPPORTED SLABS, AND CONCRETE FRAMING BEAMS SHALL NOT BE SPACED FURTHER APART THAN 48 INCHES.
- LOCATION OF ALL CONSTRUCTION, CONTROL, AND WEAKENED JUNCTIONS NOT SPECIALLY INDICATED ON THE DRAWINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO REINFORCEMENT PLACEMENT.
- ALL CONSTRUCTION JOINTS IN WALLS OR OTHER ELEMENTS NOT HAVING PREFORMED KEYS SHALL BE WELL BRUSHED AND ROUGHENED TO A MINIMUM AMPLITUDE OF 1/4 INCH CLEANED, AND MOSTERED IMMEDIATELY PRIOR TO PLACEMENT OF HIGH CONCRETE.
- FOUNDATIONS TO RECEIVE CONCRETE OR MASONRY WALLS: ROUGHEN TOP OF FOOTINGS TO A MINIMUM AMPLITUDE OF 1/4 INCH AND ABSOLUTELY CLEAN.
- CONTRACTOR SHALL SUBMIT MIX DESIGNS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.

GENERAL NOTES

- NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER THESE STANDARD STRUCTURAL NOTES. TYPICAL DETAILS SHALL BE USED WHENEVER APPLICABLE. REFER TO SPECIFICATIONS FOR INFORMATION NOT COVERED BY THESE NOTES OR DRAWINGS. THESE NOTES TAKE PRECEDENCE OVER ANY OTHER BOOK SPECIFICATIONS.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK, AND THE ENGINEER ARCHITECT SHALL BE IMMEDIATELY NOTIFIED, IN WRITING, OF ANY DISCREPANCIES. IN NO CASE SHALL DIMENSIONS BE SCALED FROM NOTES, SECTIONS, OR DETAILS ON THE STRUCTURAL DRAWINGS.
- ALL OMISSIONS AND CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF, AND RESOLVED WITH, THE ENGINEER BEFORE PROCEEDING WITH ANY WORK ON THESE DRAWINGS.
- WHERE A CONSTRUCTION DETAIL IS NOT SHOWN OR NOTED, THE DETAIL SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
- THE CONTRACTOR SHALL DETERMINE THE LOCATION OF UTILITY SERVICES IN THE AREA TO BE EXCAVATED, BEFORE BEGINNING EXCAVATION.
- NO PIPES, DUCTS, SLEEVES, CHASIS, ETC. SHALL BE PLACED IN SLABS, BEAMS, OR WALLS, NOR SHALL ANY STRUCTURAL MEMBERS CUT THROUGH PIPES, DUCTS, ETC. THE CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.
- ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE 2013 CALIFORNIA BUILDING CODE (CBC).
- THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE ENGINEER FREE AND HARMLESS FROM ALL CLAIMS, DEMANDS, AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE ENGINEER.
- SITE VISITS PERFORMED BY THE ARCHITECT/ENGINEER DO NOT INCLUDE INSPECTIONS OF MEANS AND METHODS OF CONSTRUCTION PERFORMED BY THE CONTRACTOR, ALSO, SITE VISITS DO NOT GUARANTEE CONTRACTOR PERFORMANCE AND SHALL NOT BE CONSIDERED AS SUPERVISION OF CONSTRUCTION.
- RETAIN A CALIFORNIA REGISTERED CIVIL ENGINEER TO DESIGN ALL TEMPORARY BRACING, SHORING, AND SUPPORT REQUIRED DURING CONSTRUCTION.
- INCLUDE ENGINEERING FEES, ENGINEERING DESIGN, TIME, AND BUILDING DEPARTMENT APPROVAL. THE IN-COST OF PROPOSED MATERIALS, SERVICES, CONTACT ENGINEER FOR FEE AMOUNT. SUBMIT MATERIAL ALTERNATE FOR REVIEW BEFORE CONSTRUCTION.
- STRUCTURAL CAD DRAWINGS SHALL NOT BE USED FOR SHOP DRAWINGS UNLESS AN AGREEMENT BETWEEN THE STRUCTURAL ENGINEER AND ARCHITECT HAS BEEN ESTABLISHED ACCORDING TO CASE DOCUMENT 11. CONTRACT ENGINEER FOR FEE AMOUNT.
- SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW FOR COMPLETENESS AND COMPLIANCE WITH CONTRACT DOCUMENTS. CONTRACTOR SHALL STAMP SHOP DRAWINGS PRIOR TO SUBMISSION TO ARCHITECT/ENGINEER. THE ARCHITECT/ENGINEER REVIEW OF THE SHOP DRAWINGS SHALL NOT BE CONSIDERED AS AN AUTHORIZATION OF ANY CONDITIONS ON THE CONTRACT DOCUMENTS. ALSO, SHOP DRAWINGS WILL NOT BE PROCESSED DUE TO INCOMPLETENESS, LACK OF COORDINATION WITH RELATED PORTIONS OF CONTRACT DOCUMENTS, LACK OF CALCULATIONS WHEN REQUIRED, OR WHERE DIMENSIONS, MODIFICATIONS OR CONDITIONS ARE INDICATED WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT/ENGINEER.
- ANY REFERENCE TO THE WORDS "APPROVED" OR "APPROVAL" IN THESE DOCUMENTS SHALL BE HERE DEFINED TO MEAN GENERAL ACCEPTANCE OR REVIEW AND SHALL NOT RELIEVE THE CONTRACTOR AND/OR SUB-CONTRACTORS OF ANY LIABILITY IN FURNISHING THE REQUIRED MATERIALS OR LABOR PREPARED.
- CONNECTION OF ALL ITEMS SUPPORTED BY THE STRUCTURE ARE THE RESPONSIBILITY OF THE DISCIPLINE WHO ARE MAKING THESE ATTACHMENTS. THESE ATTACHMENTS SHALL BE DESIGNED TO RESIST ALL GRAVITY, WIND, SEISMIC, THERMAL LOADS, ETC. SPRINKLER PIPING SHALL BE SUPPORTED AND BRACED PER APPLICABLE STANDARDS. SUSPENDED CEILING SYSTEMS OF ACCESSIONAL, THE OR LAY-PANELS SHALL BE SECURED AND BRACED PER CURRENT CODE REQUIREMENTS, SEE ARCHITECTURAL DRAWINGS.

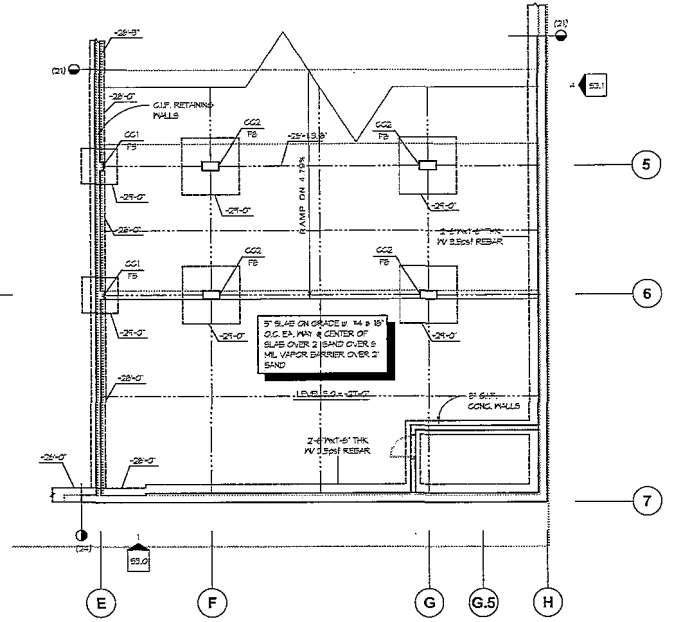
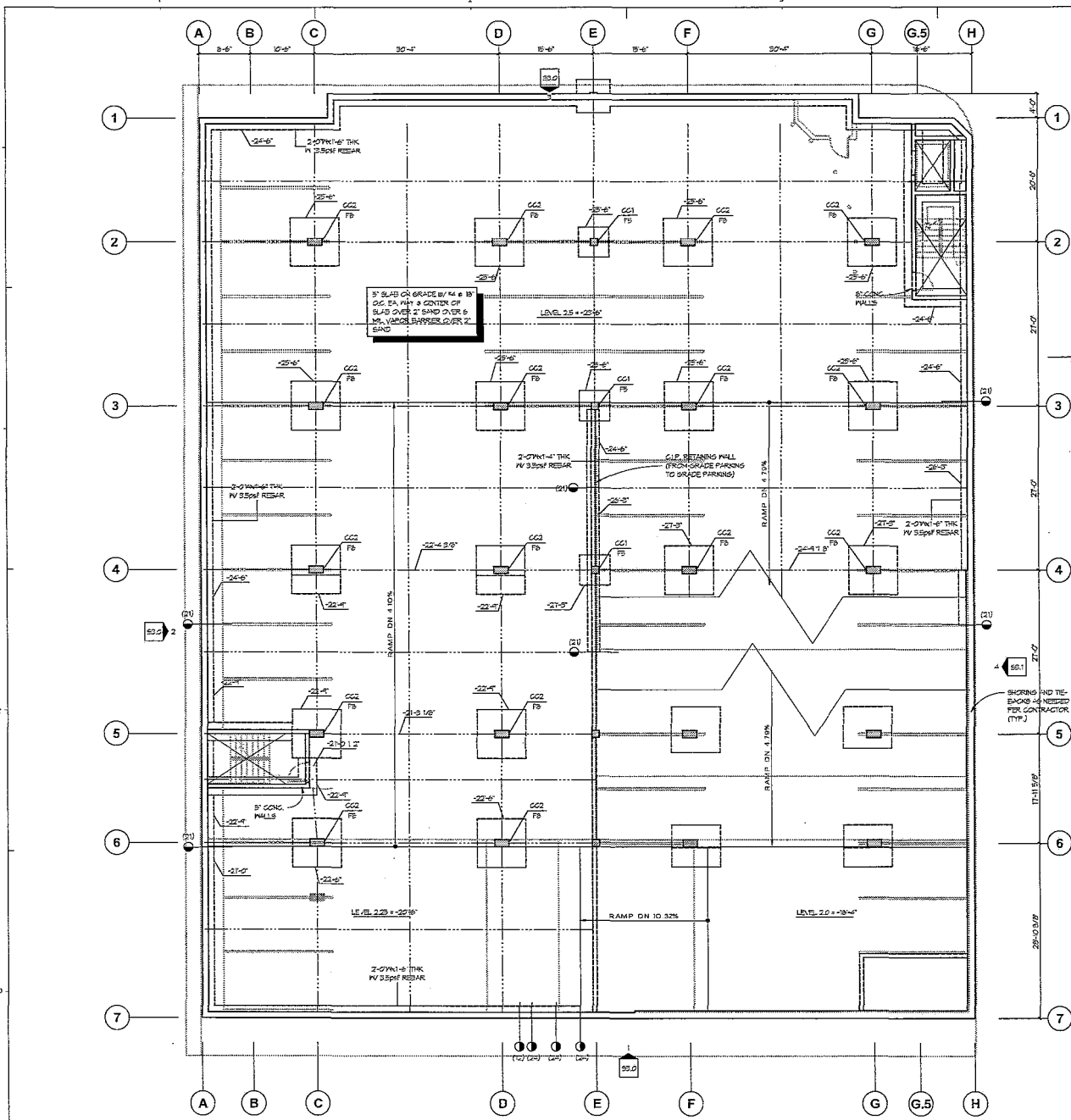
PREFABRICATED WOOD JOISTS

- PREFABRICATED WOOD JOISTS SHALL BE MANUFACTURED BY RED BUILT LLC, AND MEET THE REQUIREMENTS OF CBC 2303.2.2.
- PREFABRICATED OPEN WEB WOOD JOISTS SHALL BE MANUFACTURED BY RED BUILT LLC, AND MEET THE REQUIREMENTS OF CBC 2303.17.4.
- JOISTS AND JOIST HANGERS SHALL BE DESIGNED IN ACCORDANCE WITH THE LOAD AND DEFLECTION CRITERIA PROVIDED, INCLUDING ANY SPECIAL LOADS SUCH AS MECHANICAL EQUIPMENT LOADS AND WIND AND SEISMIC LOADS. DESIGN SHALL INCLUDE SUCH AS BRIDGING, BRACING, OR SHORING REQUIRED DURING AND AFTER CONSTRUCTION. CALCULATIONS AND DRAWINGS SIGNED BY A CALIFORNIA REGISTERED CIVIL ENGINEER SHALL BE SUBMITTED TO AND REVIEWED BY THE ENGINEER AND BUILDING DEPARTMENT BEFORE FABRICATION.
- REFER TO PLANS FOR REGIONAL AND DETECTION CRITERIA.
- OBTAIN WRITTEN APPROVAL FROM THE ENGINEER TO CHANGE JOIST TYPE, DEPTH, OR SPACING.

4844 S. MISSION HILLS RD. SUITE 200 SAN DIEGO, CALIFORNIA 92108 TEL: 619 594-3300 FAX: 619 594-3317 WWW.WISERMANROHY.COM	30% BRIDGING DOCUMENTS JANUARY 8, 2016

ARCHITECTS MEMBER ORDER 4206 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92116 TELEPHONE: 619 223-3200 FAX NO: 619 223-3017	
CITY CONTRACT NO. 14032.00 SPECIAL SPECIFICATIONS NO. G.L.P. NO.	
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SHEET TITLE STRUCTURAL NOTES		SHEET NO: S1.0	
CITY OF SAN DIEGO, CALIFORNIA ENGINEER/ARCHITECT/PROJECT DEPARTMENT SHEET NO.		W.C. NO.	
FOR CITY ENGINEER	DATE	SECTION HEAD	
DESCRIPTION	BY	APPROVED	DATE
PROJECT MANAGER		CONTROL	
39037-D		DATE COMPLETED	



PARKING LEVEL-BASEMENT
1/8" = 1'-0"

CONCRETE COLUMN...

MARK	SIZE	DESIGN FACTORS
CC1	14"x14"	F ₅₀₅ C ₄₀ SI IV 10.00% REBAR
CC2	14"x20"	F ₅₀₅ C ₄₀ SI IV 20.00% REBAR

STRUCTURAL FOUNDATION...

MARK	SIZE	REINFORCEMENT
FB	3'-0"x8'-0"x18"	(EA. WAY BOTTOM)
FSA	5'-0"x5'-0"x18"	
FB	8'-0"x8'-0"x20"	

PARKING LEVEL 2
1/8" = 1'-0"

WISEMAN | ROHY
STRUCTURAL ENGINEERS

401 West Point Loma Blvd., Suite 200
San Diego, CA 92161
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3075 BRIDGING DOCUMENTS
JANUARY 8, 2016

ARCHITECTS MOSHER DREW
4208 WEST POINT LOMA BOULEVARD
SUITE 200
SAN DIEGO, CALIFORNIA 92116
TELEPHONE: 619.223.2800
FAX NO.: 619.223.2817

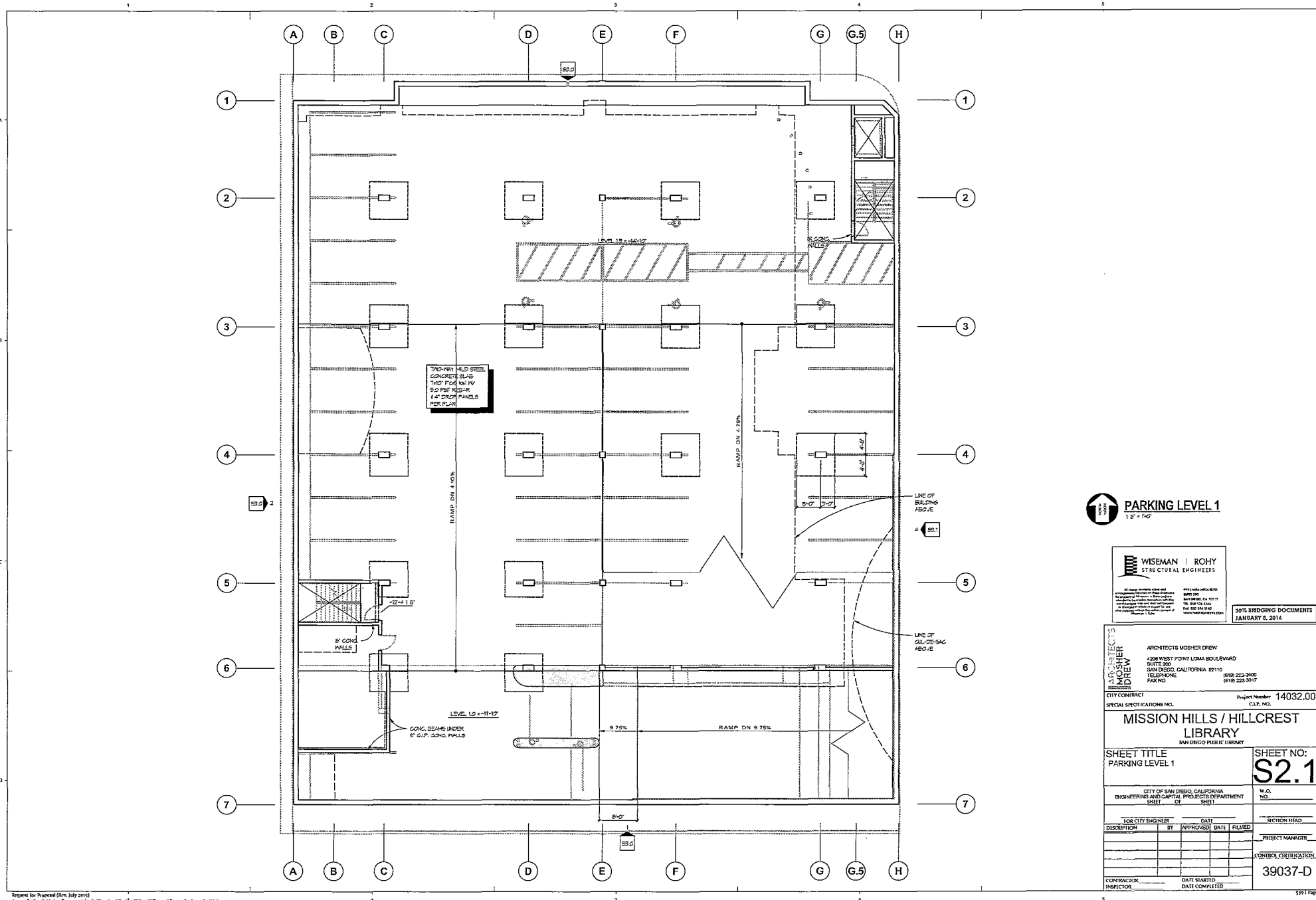
CITY CONTRACT: Project Number: 14032.00
SPECIAL SPECIFICATIONS NO.: C.D. NO.:

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SHEET TITLE: **PARKING LEVEL 2 & BASEMENT** SHEET NO: **S2.0**
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET: W.O. NO.:

FOR CITY ENGINEER		DATE		SECTION HEAD
DESCRIPTION	BY	APPROVED	DATE	FILMED
				PROJECT MANAGER
				CONTROL CALCULATION
				39037-D

CONTRACTOR: DATE STARTED:
INSPECTOR: DATE COMPLETED:



PARKING LEVEL 1
18' x 18'

WISEMAN | ROHY
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San Diego, CA 92101
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3075 SENDING DOCUMENTS
JANUARY 8, 2014

ARCHITECTS MOSHER DREW
4208 WEST POINT LOMA BOULEVARD
SUITE 200
SAN DIEGO, CALIFORNIA 92110
TELEPHONE 619.223.3400
FAX 619.223.3017

CITY CONTRACT SPECIAL SPECIFICATIONS NO. PROJECT NUMBER: 14032.00
C.I.F. NO.

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SHEET TITLE: PARKING LEVEL 1
SHEET NO.: S2.1

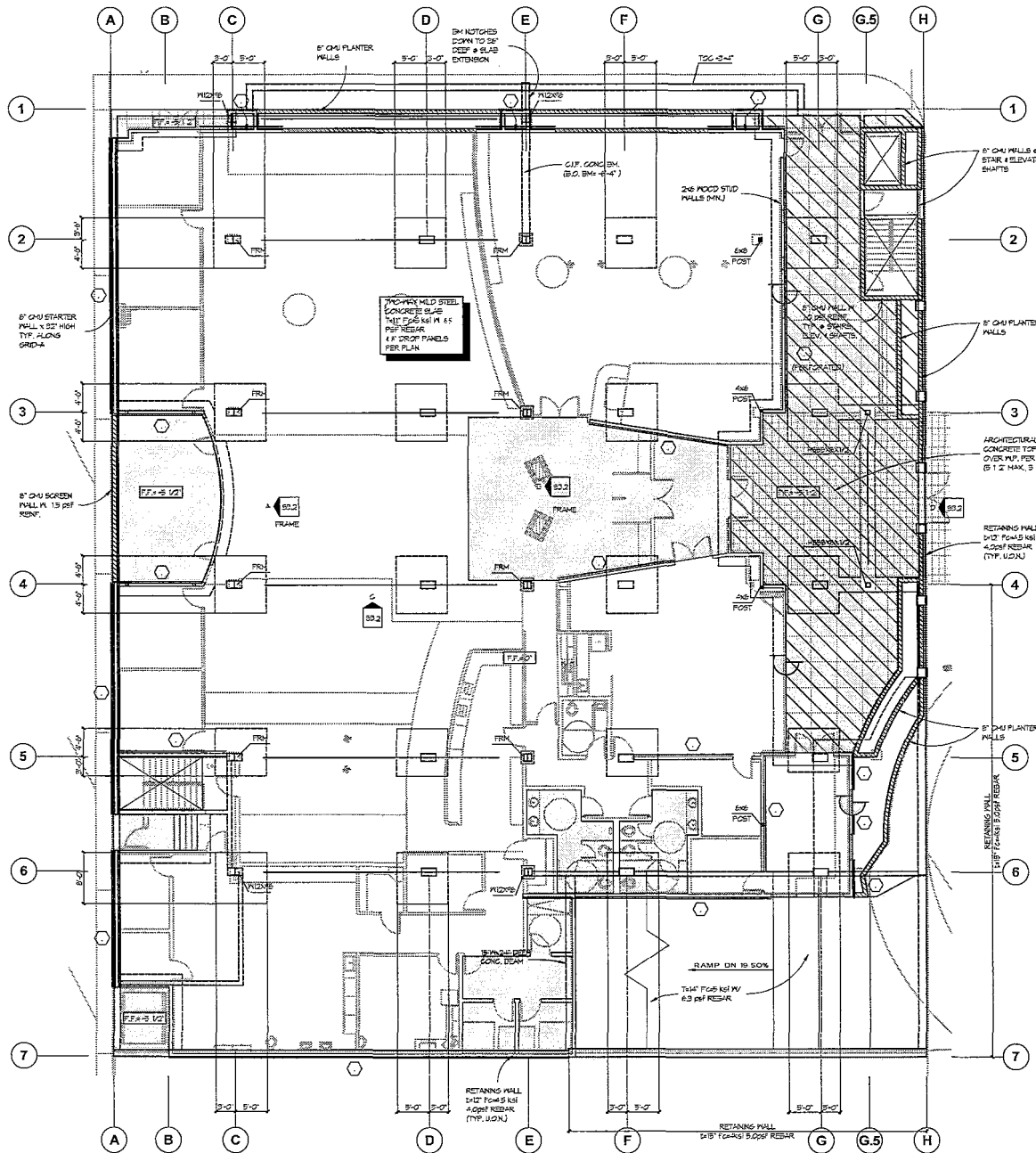
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET NO.

FOR CITY ENGINEER	DATE	SECTION HEAD
DESCRIPTION	BY	APPROVED
		DATE
		PLASD

PROJECT MANAGER

CONTROL CERTIFICATIONS

CONTRACTOR: DATE STARTED: 39037-D
INSPECTOR: DATE COMPLETED



LOCATION OF 15\"/>

 AREA OF WHERE TOP OF CONCRETE IS OTHER THAN TYPICAL

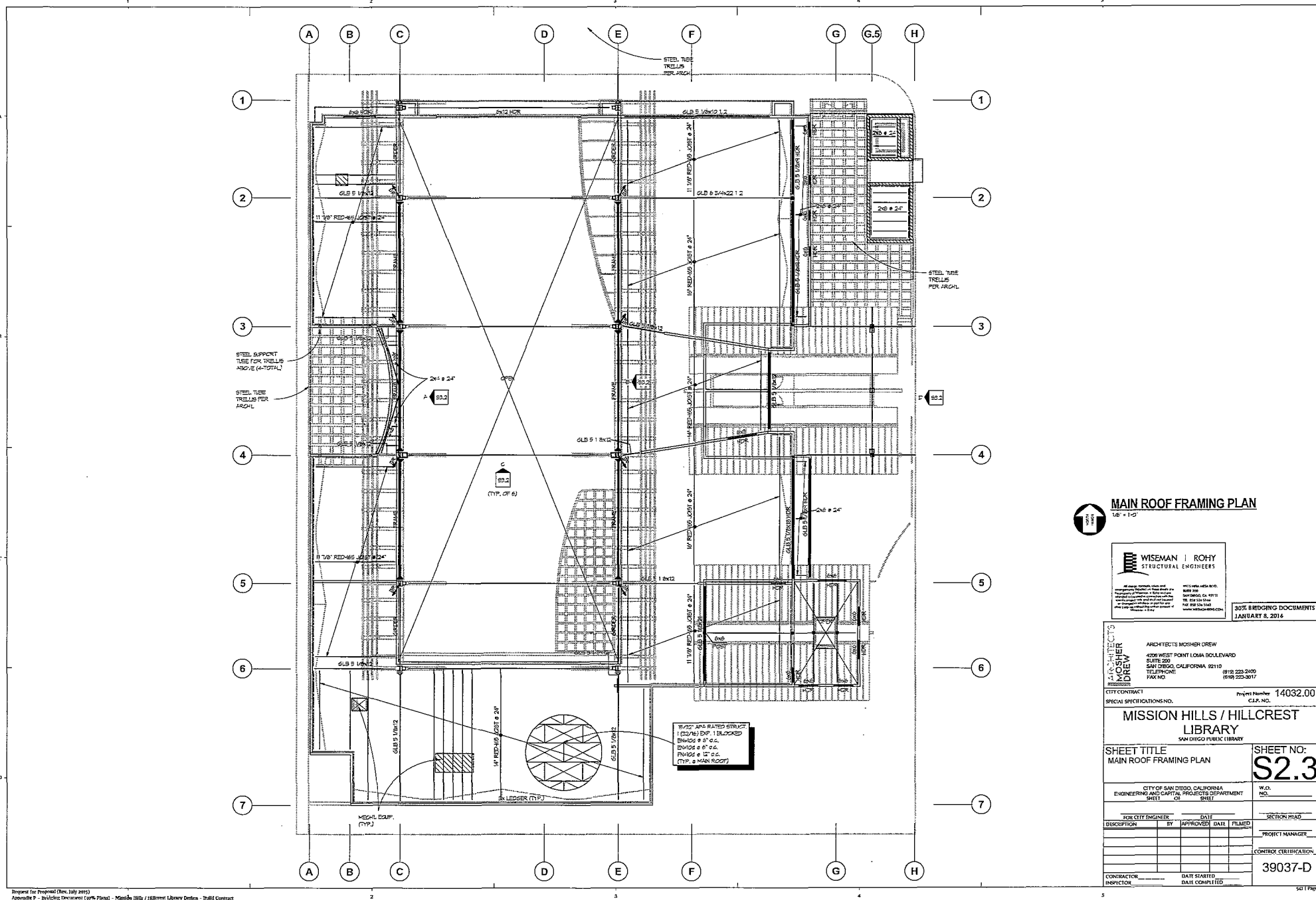
GROUND LEVEL FRAMING PLAN
1/8\"/>

WISEMAN | ROHY
 STRUCTURAL ENGINEERS

4150 LA JOLLA VILLAGE ROAD, SUITE 100, SAN DIEGO, CA 92161
 TEL: 619.594.1400 FAX: 619.594.1444
 WWW.WISEMANROHY.COM

30% BRIDGING DOCUMENTS MAY 9, 2016

PROJECT NO. 14032.00 SHEET NO. S2.2	ARCHITECTS MOSHER DREW 4205 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92110 TELEPHONE (619) 223-2400 FAX NO. (619) 223-2417	CITY CONTRACT SPECIAL SPECIFICATIONS NO. _____ PROJECT NUMBER 14032.00 C.I.P. NO. _____
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SHEET TITLE GROUND LEVEL FRAMING PLAN	SHEET NO. S2.2	W.O. NO. _____ DATE _____
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET OF _____		SECTION HEAD _____ PROJECT MANAGER _____ CONTROL CERTIFICATION _____
FOR CITY ENGINEER _____ DESCRIPTION _____ BY _____ DATE _____	GALT _____ APPROVED _____ DATE _____ FILMED _____	PROJECT MANAGER _____ CONTROL CERTIFICATION _____
CONTRACTOR _____ INSPECTOR _____	DATE STARTED _____ DATE COMPLETED _____	39037-D



MAIN ROOF FRAMING PLAN
1/8" = 1'-0"



WISEMAN | ROHY
STRUCTURAL ENGINEERS

400 West Point Loma Blvd.
Suite 200
San Diego, California 92110
Tel: 619-594-1500
Fax: 619-594-1501
www.wiseman-rohy.com

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JANUARY 8, 2016

ARCHITECTS MOSHER DREW
4096 WEST POINT LOMA BOULEVARD
SUITE 200
SAN DIEGO, CALIFORNIA 92110
TELEPHONE 619 223 2000
FAX NO 619 223 2017

CITY CONTRACT SPECIAL SPECIFICATIONS NO. _____ Project Number 14032.00
CLP. NO. _____

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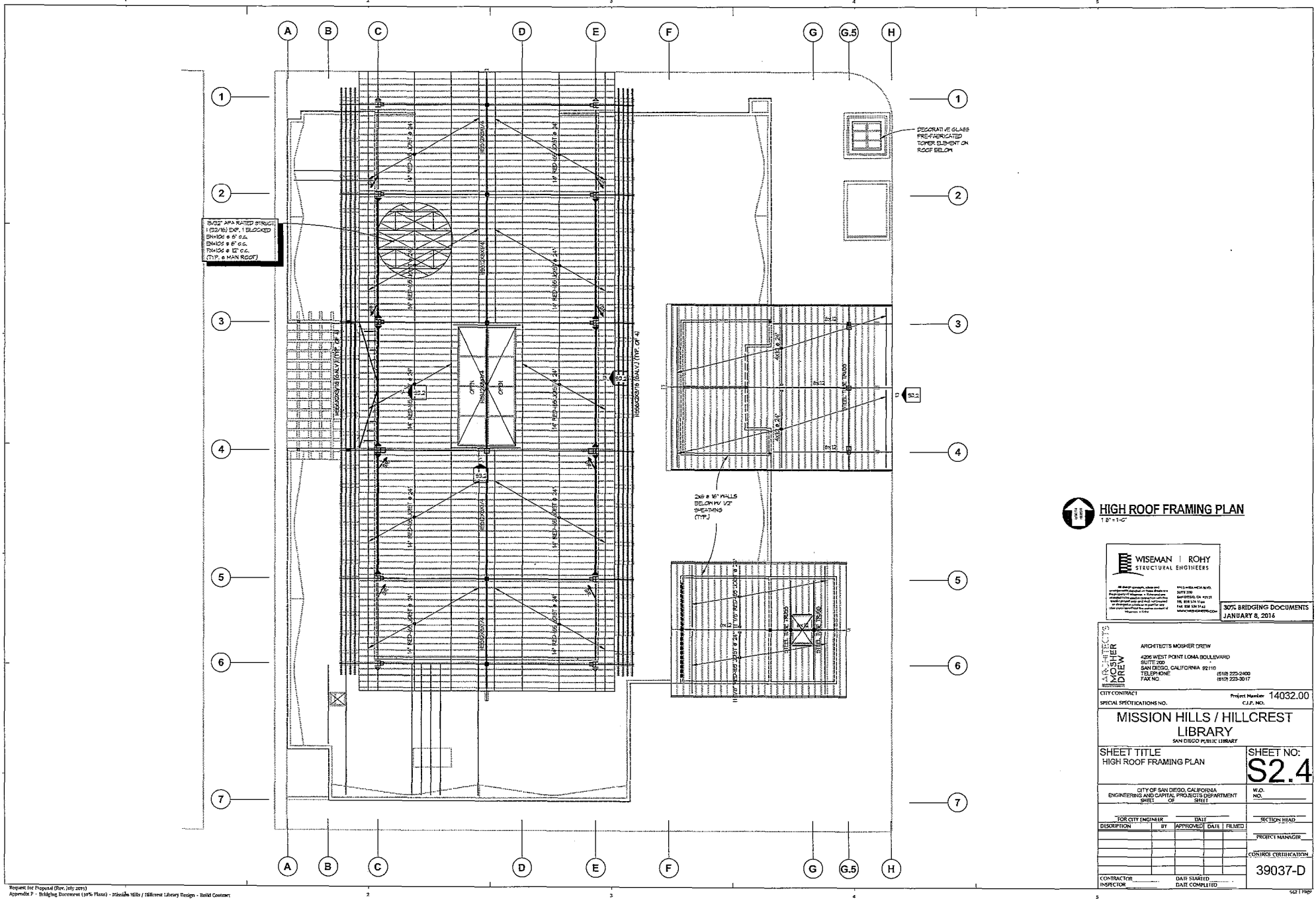
SHEET TITLE: MAIN ROOF FRAMING PLAN SHEET NO: **S2.3**

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 01

JOB CITY ENGINEER: _____ DATE: _____ SECTION HEAD: _____
BY: _____ APPROVED: _____ DATE: _____ FILMED: _____ PROJECT MANAGER: _____

CONTRACTOR: _____ DATE STARTED: _____ CONTROL CERTIFICATION: _____
INSPECTOR: _____ DATE COMPLETED: _____

39037-D



8/22' APA RATED STRUCT
1 (22/18) DOP, 1 BLOKED
ENHDC # 6' 6"
ENHDC # 6' 6"
TR#102 # 12' C.C.
(TRP. # MAN RIGID)

DECORATIVE GLASS
PREFABRICATED
TOWER ELEMENT ON
ROOF BELOW

26 # 11 WALLS
BELOW 1/2"
SHEATHING
(TRP.)

HIGH ROOF FRAMING PLAN
1-P-1-C

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ARCHITECTS MOSHER CREW
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TELEPHONE: 619 222-2400
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CITY CONTRACT SPECIAL SPECIFICATIONS NO. PROJECT NUMBER 14032.00 C.J.Z. NO.

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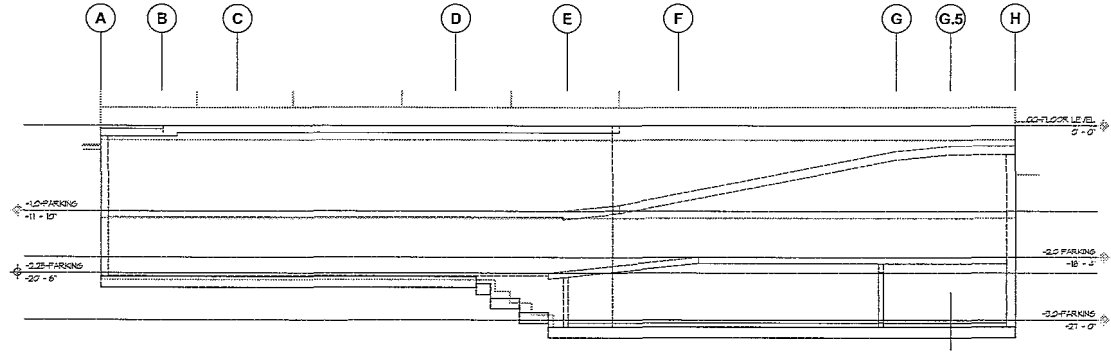
SHEET TITLE HIGH ROOF FRAMING PLAN SHEET NO: **S2.4**

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET NO. _____

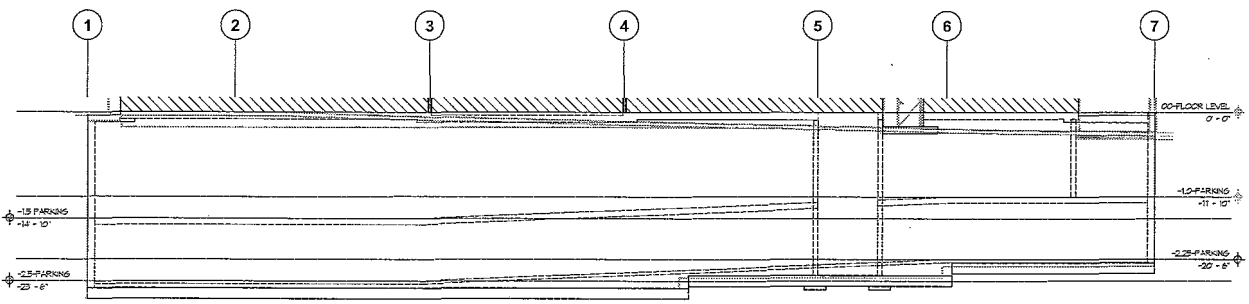
DATE	BY	DATE	FILED	SECTION HEAD
				PROJECT MANAGER
				CONTROL CERTIFICATION

CONTRACTOR INSPECTOR DATE STARTED DATE COMPLETED

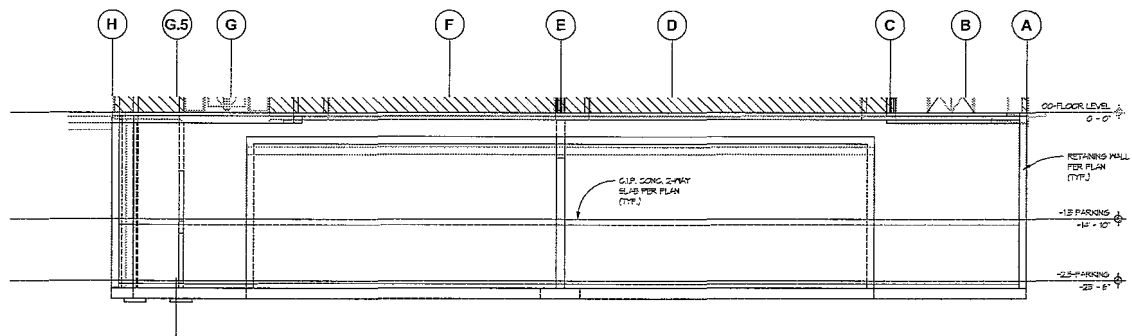
39037-D



1 CONCRETE WALL ELEVATION @ GRID 7
1/8" = 1'-0"



2 CONCRETE WALL ELEVATION @ GRID A
1/8" = 1'-0"



3 CONCRETE WALL ELEVATION @ GRID 1
1/8" = 1'-0"

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3055 BRIDGING DOCUMENTS
JANUARY 8, 2016

ARCHITECTS MOSHER DEW
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CITY CONTRACT Special Specifications No. Project Number 14032.00
C.I.P. NO.

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SHEET TITLE CONCRETE WALL ELEVATIONS SHEET NO: **S3.0**

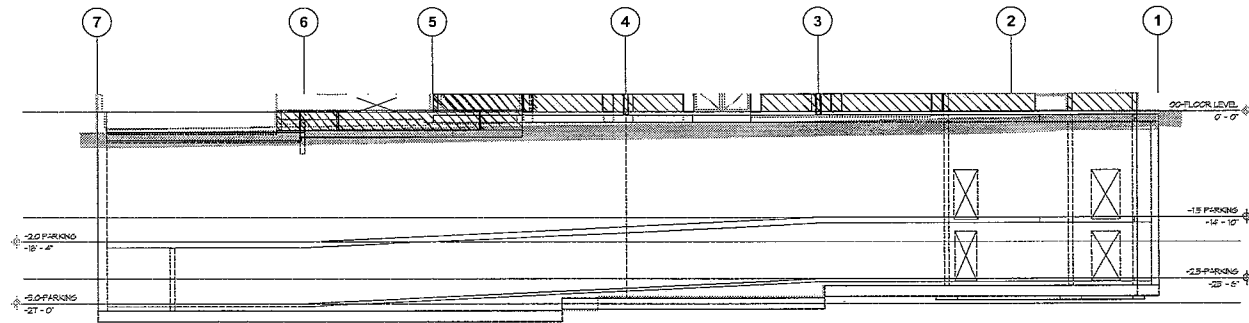
CITY OF SAN DIEGO CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET OF SHEET

DATE CITY ENGINEER BY DATE APPROVED DATE FILMED SECTION HEAD

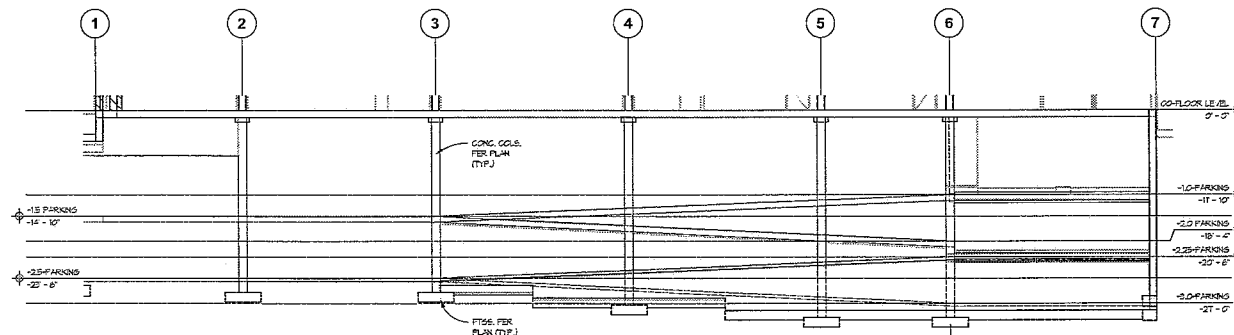
PROJECT MANAGER

CONTRACTOR INSPECTOR DATE STARTED DATE COMPLETED

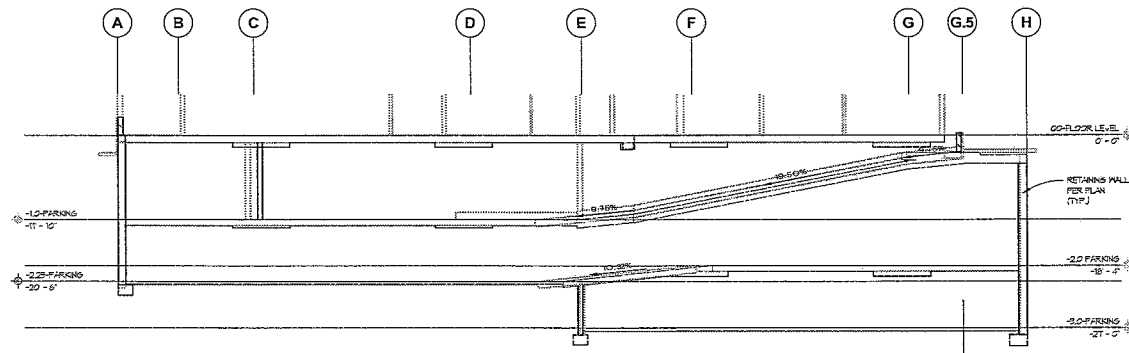
39037-D



④ CONCRETE WALL ELEVATION @ GRID H
1/8" = 1'-0"



① SECTION AT SCISSOR RAMPS
1/8" = 1'-0"



③ SECTION AT SPEED RAMP
1/8" = 1'-0"

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619-594-5143

30% BIDDING DOCUMENTS
JANUARY 8, 2014

ARCHITECTS MOSHER DREW
4205 WEST POINT LOMA BOULEVARD
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SAN DIEGO, CALIFORNIA 92110
TELEPHONE: 619-525-9400
FAX NO: 619-525-3217

CITY CONTRACT SPECIAL SPECIFICATIONS NO. 14032.00

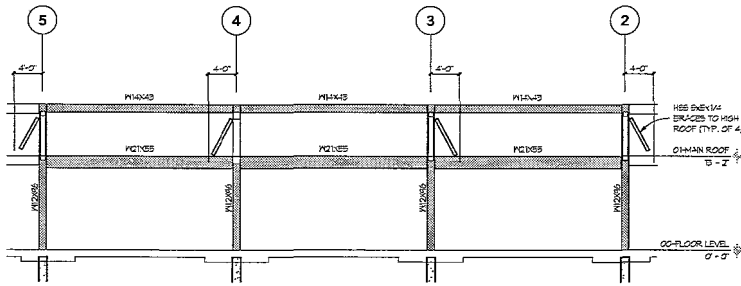
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SHEET TITLE: CONCRETE WALL ELEVATIONS
SHEET NO.: S3.1

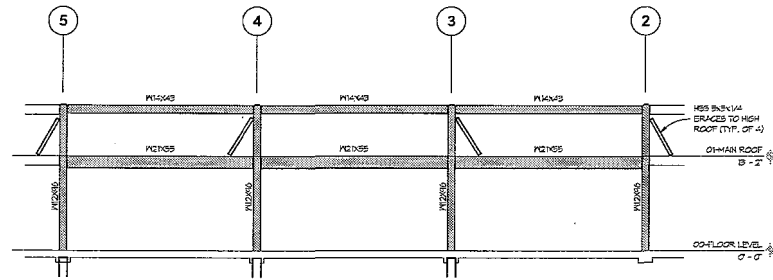
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET OF SHEET

W.D. NO.
NO.

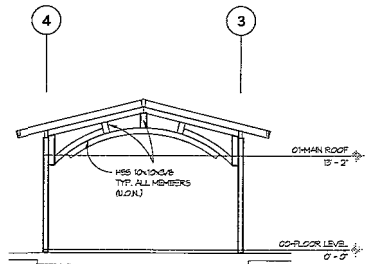
DESIGNER	DATE	SECTION HEAD
CITY ENGINEER	DATE	SECTION HEAD
BY	APPROVED	DATE
DATE STARTED	DATE COMPLETED	
CONTRACTOR INSPECTOR		PROJECT MANAGER
		CONTROL CERTIFICATION
		39037-D



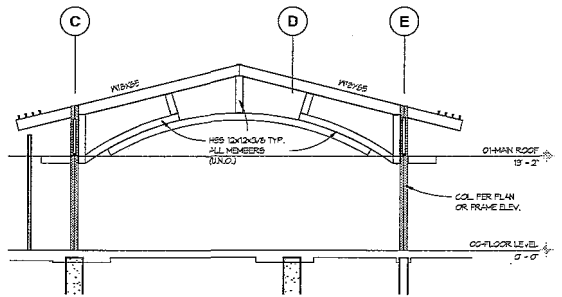
A FRAME ELEVATION @ GRID C
1/8" = 1'-0"



B FRAME ELEVATION @ GRID E
1/8" = 1'-0"



D FRAME ELEVATION @ GRID C
1/8" = 1'-0"



C TYP. FRAME ELEVATION @ GRID 4
1/8" = 1'-0"

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CITY CONTRACT 14032.00
SPECIAL SPECIFICATIONS NO. C.J.P. NO.

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SHEET TITLE
FRAME ELEVATIONS

SHEET NO.
S3.2

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET

W.O. NO.

DESIGNED BY	DATE	SECTION HEAD
APPROVED BY	DATE	PROJECT MANAGER
CONTROL CERTIFICATION		
CONTRACTOR	DATE STARTED	39037-D
INSPECTOR	DATE COMPLETED	

SPLIT SYSTEM AIR CONDITIONING UNIT SCHEDULE (COOLING ONLY)

Table with columns: SYMBOL, DESCRIPTION, AREA SERVED, MOTOR, ELECTRICAL DATA, FUSES, UNIT DATA, DESCRIPTION, COOLING CAPACITY, REMARKS. Includes rows for outdoor fan section and indoor fan section.

VARIABLE REFRIGERANT VOLUME SYSTEM INDOOR FAN SECTION SCHEDULE

Table with columns: SYMBOL, DESCRIPTION, SERVICE, INDOOR FAN MOTOR, CONDENSER UNIT, HEATING CAPACITY, COOLING CAPACITY, REMARKS. Lists various indoor fan units for different rooms.

EXHAUST FAN SCHEDULE

Table with columns: SYMBOL, DESCRIPTION, AREA SERVED, MOTOR, REMARKS. Lists exhaust fan units for various areas.

VARIABLE REFRIGERANT FLOW SYSTEM OUTDOOR CONDENSING UNIT

Table with columns: SYMBOL, DESCRIPTION, COOLING, HEATING, ELECTRICAL DATA, REMARKS. Lists outdoor condensing units for different systems.

GRAVITY VENT SCHEDULE

Table with columns: SYMBOL, DESCRIPTION, AREA SERVED, GRAVITY VENT, REMARKS. Lists gravity vent units for various rooms.

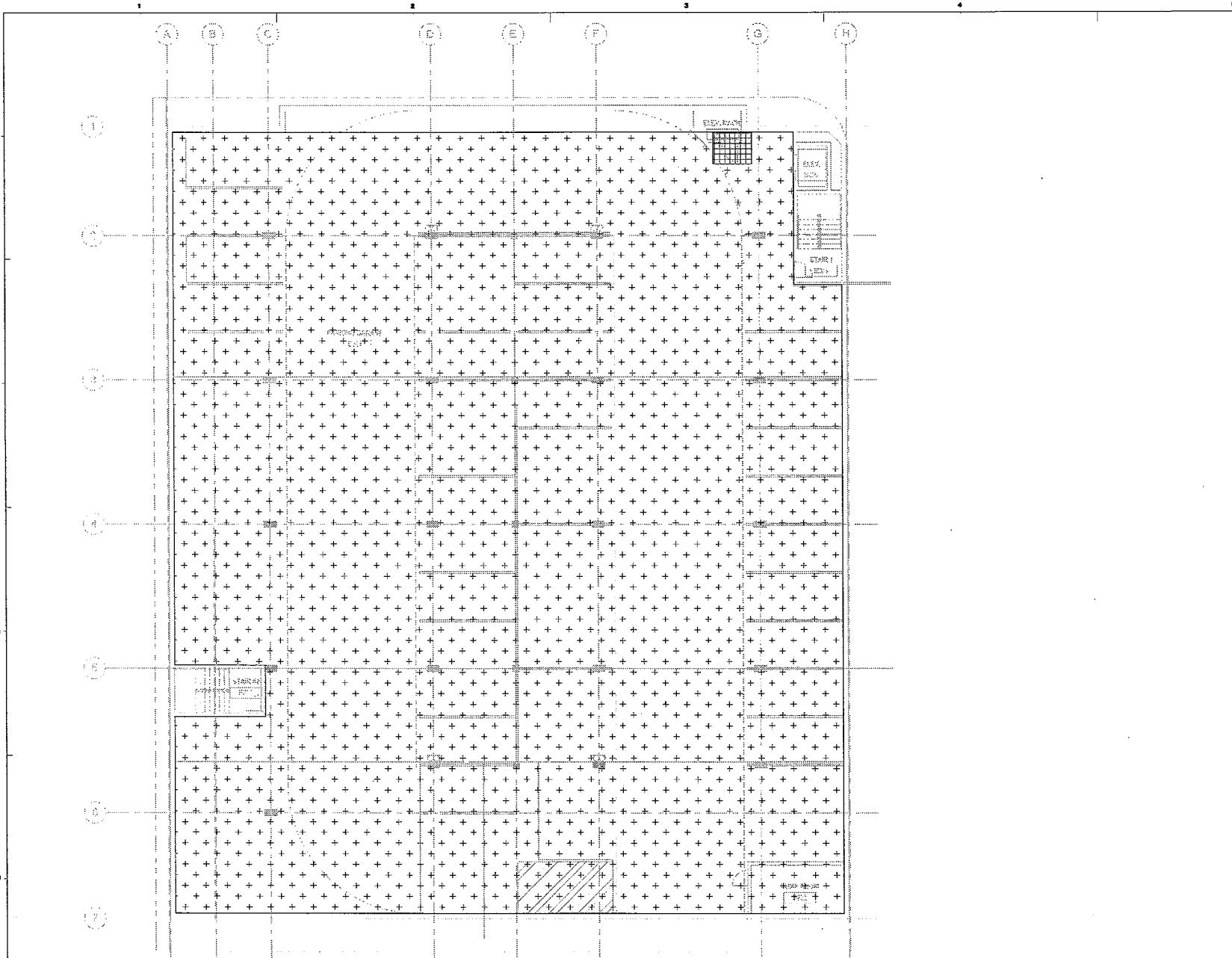
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JANUARY 8, 2016

ARCHITECTS: MAGER & ERICK
4200 WEST POINT LOMA BOULEVARD
SAN DIEGO, CALIFORNIA 92119

CITY CONTRACT: 3000000000000000
PROJECT NUMBER: 040102.00
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SHEET NO.: M.02
MECHANICAL SCHEDULES
ENGINEER: JAMES G. WILSON, INC.
DATE: 01/08/16

39037-D
DATE COMPLETED: 01/08/16



GENERAL NOTES

1. THESE DRAWINGS ARE INTENDED TO SERVE AS BRIDGING DOCUMENTS ONLY AND ARE NOT FOR THE USE IN OBTAINING PERMITS AND ARE NOT TO BE USED FOR CONSTRUCTION.
2. THE FINAL DESIGNER OF RECORD IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES. THE FINAL DESIGNER OF RECORD SHALL PROVIDE FINAL CALCULATIONS INCLUDING TITLE 24 COMPLIANCE.
3. COORDINATE WITH FINAL ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY AND PROVIDE FINAL EQUIPMENT SIZES AND LAYOUTS. EQUIPMENT AND LAYOUTS PROVIDED ARE BASED ON BEST AVAILABLE INFORMATION AT THE SUBMISSION AND ARE ONLY SHOWN TO OVER A BASIS OF DESIGN.
4. THE FINAL DESIGN AND CONSTRUCTION TEAM SHALL COORDINATE WITH ALL MECHANICAL SYSTEMS THAT AFFECT ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DISCIPLINES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND ALL REQUIRED ACCESS CLEARANCES, BOTH MANUFACTURER RECOMMENDATION AND CODE REQUIREMENTS.

LEGEND

- VENTILATION (CA)
COOLING (VRF SYSTEM W/HEAT RECOVERY)
HEATING (VRF SYSTEM W/HEAT RECOVERY)
- VENTILATION (CA)
COOLING (VRF SYSTEM HEAT PUMP)
HEATING (VRF SYSTEM HEAT PUMP)
- COOLING SPLIT SYSTEM
- EXHAUST (EP)
- GARAGE EXHAUST

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JANUARY 8, 2016**

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TELEPHONE: (619) 223-3400
FAX NO.: (619) 223-3017

CITY CONTRACT: PROJECT NUMBER 04012.00
APPROVAL: SPECIFICATIONS NO. CUP, 02

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SHEET TITLE: MECHANICAL ZONING BASEMENT LEVEL 2 PLAN
SHEET NO.: M1.0
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET OF

FOR CITY BUSINESS	DATE	SECTION HEAD
DESCRIPTION	BY APPROVED DATE FILMED	PROJECT MANAGER
		CONTROL OPERATIONS
		39037-D

MECHANICAL ZONING BASEMENT LEVEL 2 PLAN
1/8" = 1'-0"



Request for Proposal (Rev. July 2015)
Appendix P - Bridging Document (90% Plans) - Mission Hills / Hillcrest Library Design - BML Contract

GENERAL NOTES

1. THESE DRAWINGS ARE INTENDED TO SHOW A BIDDING DOCUMENTS SET AND ARE NOT TO BE USED FOR CONSTRUCTION.
2. THE FINAL DESIGNER OF RECORD IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE REGULATIONS AND ORDINANCES. THE CONTRACTOR SHALL VERIFY ALL REGULATIONS AND ORDINANCES WITH THE DESIGNER OF RECORD.
3. COORDINATE WITH FINAL ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY AND PROVIDE FINAL EQUIPMENT SIZES AND LOCATIONS. EQUIPMENT AND APPROVED ARE BASED ON THE DESIGNER OF RECORD'S REVISIONS AND THE FINAL DESIGNER OF RECORD'S BASIS OF DESIGN.
4. THE FINAL DESIGN AND CONSTRUCTION TEAM SHALL COORDINATE ANY AND ALL MECHANICAL SYSTEMS WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL REQUIREMENTS. THE CONTRACTOR SHALL VERIFY ALL MECHANICAL AND ELECTRICAL REQUIREMENTS, BOTH MANUFACTURE RECOMMENDATION AND CODE REQUIREMENTS.

LEGEND

- VENTILATION (OA)
- HEATING (RF) SYSTEM (WHEAT RECOVERY)
- VENTILATION (OA)
- COOLING (RF) SYSTEM (HEAT PUMP)
- HEATING (RF) SYSTEM (HEAT PUMP)
- COOLING SPLIT SYSTEM
- ROOM EXHAUSTED
- GARAGE EXHAUST

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

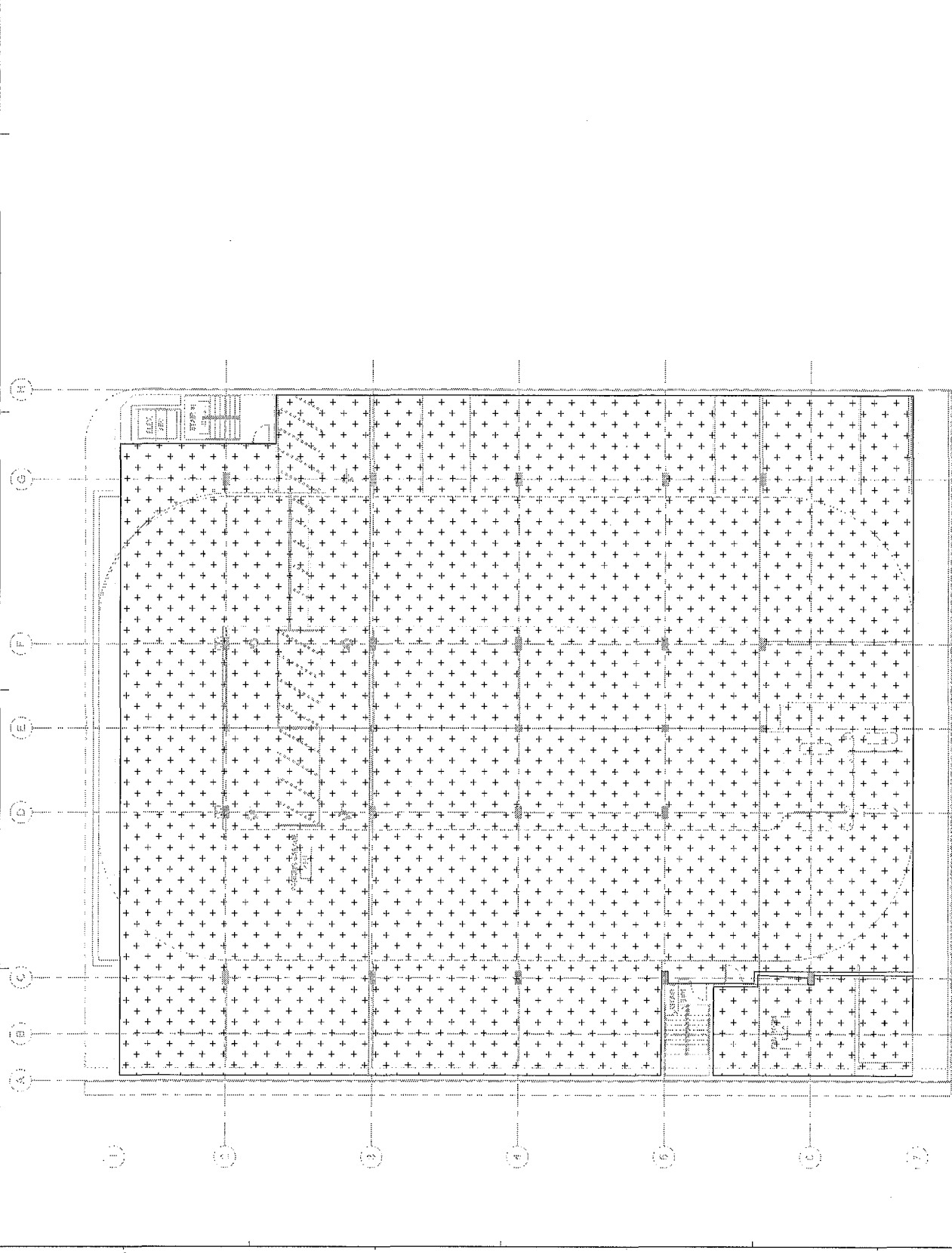
ARCHITECTS: MODISER GROUP
4200 WEST POINT LOMA BOULEVARD
SAN DIEGO, CALIFORNIA 92110
TEL: 619.594.1000
WWW.MODISERGROUP.COM
PROJECT NO. 16-0001
SHEET NO. M1.1

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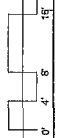
**MECHANICAL ZONING BASEMENT
LEVEL 1 PLAN**

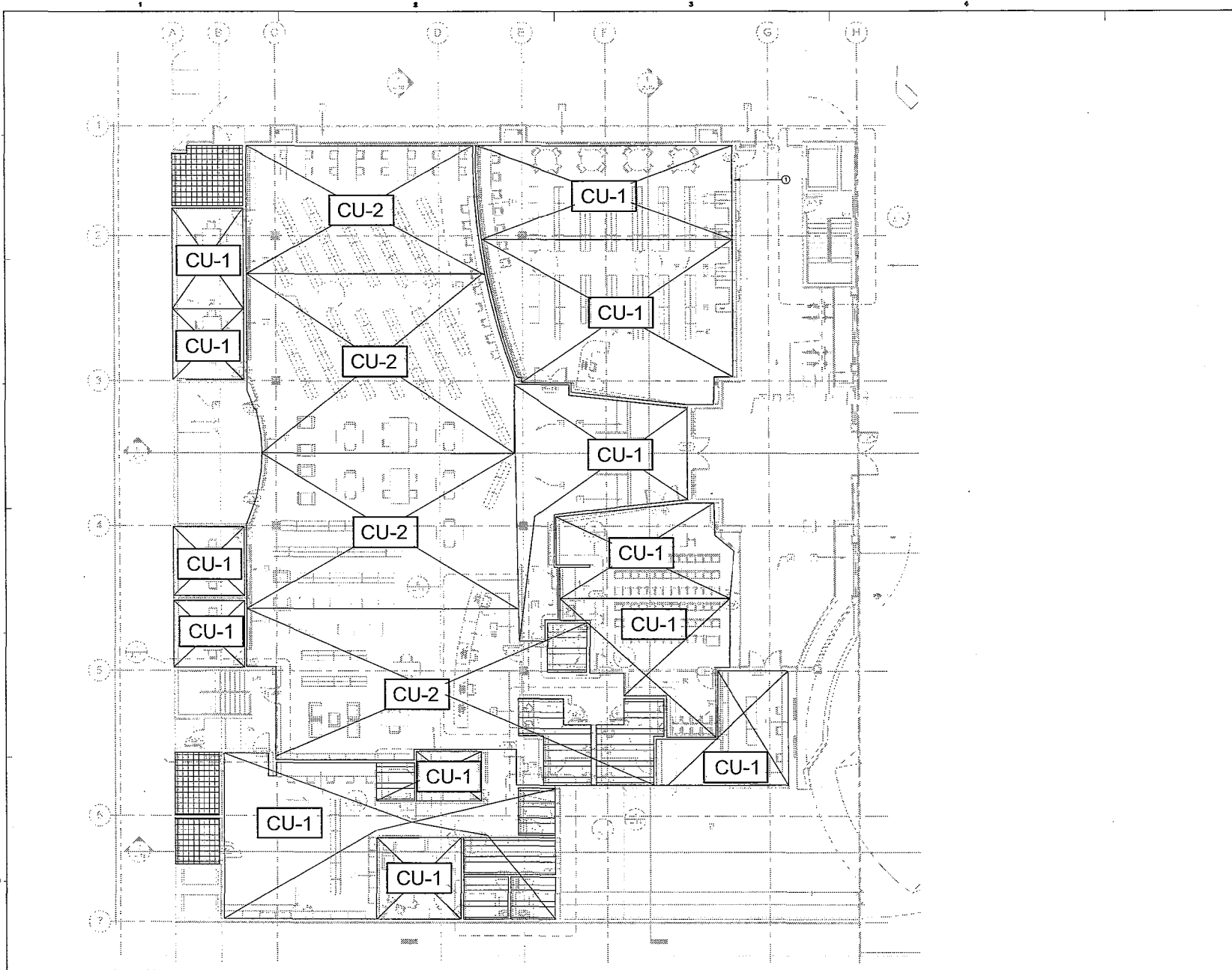
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MECHANICAL ZONING BASEMENT LEVEL 1 PLAN

1/8" = 1'-0"





MECHANICAL ZONING FLOOR PLAN
1/8" = 1'-0"

GENERAL NOTES

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2. THE FINAL DESIGNER OF RECORD IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES. THE FINAL DESIGNER OF RECORD SHALL PROVIDE FINAL CALCULATIONS INCLUDING TITLE-24 COMPLIANCE.
3. COORDINATE WITH FINAL ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY AND PROVIDE FINAL EQUIPMENT SIZES AND LAYOUTS. EQUIPMENT AND LAYOUTS PROVIDED ARE BASED ON BEST AVAILABLE INFORMATION AT THE SUBMISSION AND ARE ONLY SHOWN TO GIVE A BASIS OF DESIGN.
4. THE FINAL DESIGN AND CONSTRUCTION TEAM SHALL COORDINATE ANY AND ALL MECHANICAL SYSTEMS THAT AFFECT ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DISCIPLINES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND ALL REQUIRED ACCESS CLEARANCES, BOTH MANUFACTURER RECOMMENDATION AND CODE REQUIREMENTS.

KEY NOTES

- ① PROVIDE VRF SYSTEM WITH SIMULTANEOUS COOLING AND HEATING TO ZONE CU-1

LEGEND

- ☒ VENTILATION (OA)
- ☒ COOLING (VRF SYSTEM HEAT PUMP)
- ☒ HEATING (VRF SYSTEM HEAT PUMP)
- ☒ COOLING SPLIT SYSTEM
- ☒ ROOM EXHAUSTED (EF)
- ☒ GARAGE EXHAUST

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

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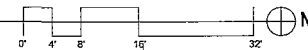
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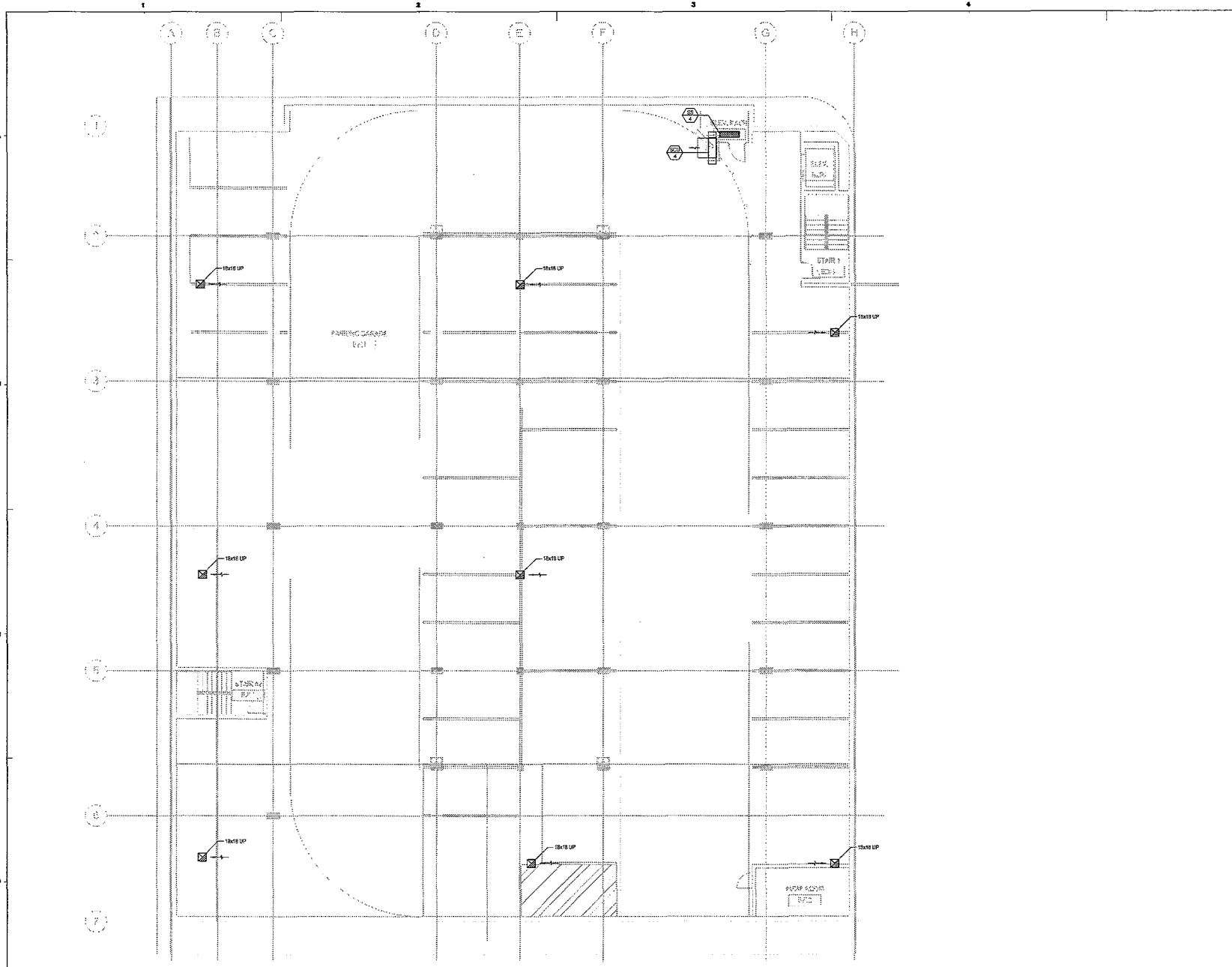
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SHEET TITLE MECHANICAL ZONING FLOOR PLAN SHEET NO. **M1.2**
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET OF SHEET

FOR CITY REVIEW	DATE	SECTION HEAD
DESIGNED BY	APPROVED DATE	PROJECT MANAGER
CHECKED BY	DATE	CONTROL ENGINEERING
CONTRACTOR	DATE STARTED	39037-D
INSPECTOR	DATE COMPLETED	

Request for Proposal (Rev. July 2015)
Appendix P - Bridging Document (new format) - Mission Hills / Hillcrest Library Design - initial contract





- GENERAL NOTES**
1. THESE DRAWINGS ARE INTENDED TO SERVE AS BUILDING DOCUMENTS ONLY AND ARE NOT FOR THE USE IN OBTAINING BUILDING PERMITS AND ARE NOT TO BE USED FOR CONSTRUCTION.
 2. THE FINAL DESIGNER OF RECORD IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES. THE FINAL DESIGNER OF RECORD SHALL PERFORM FINAL CALCULATIONS INCLUDING TITLE 24 COMPLIANCE.
 3. COORDINATE WITH FINAL ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY AND PROVIDE FINAL EQUIPMENT SIZES AND LAYOUTS. EQUIPMENT AND LAYOUTS PROVIDED ARE BASED ON BEST AVAILABLE INFORMATION AT THE SUBMISSION AND ARE ONLY SHOWN TO OPEN A BASIS OF DESIGN.
 4. THE FINAL DESIGN AND CONSTRUCTION TEAM SHALL COORDINATE ANY AND ALL MECHANICAL SYSTEMS THAT AFFECT ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DISCIPLINES.
 5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND ALL REQUIRED ACCESS CLEARANCES, BOTH MANUFACTURER RECOMMENDATION AND CODE REQUIREMENTS.

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

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TELEPHONE 619.223.3400
FAX NO. 619.223.3017

CITY CONTRACT SPECIAL SPECIFICATIONS NO. Project Number 04012.00
CLIP NO.

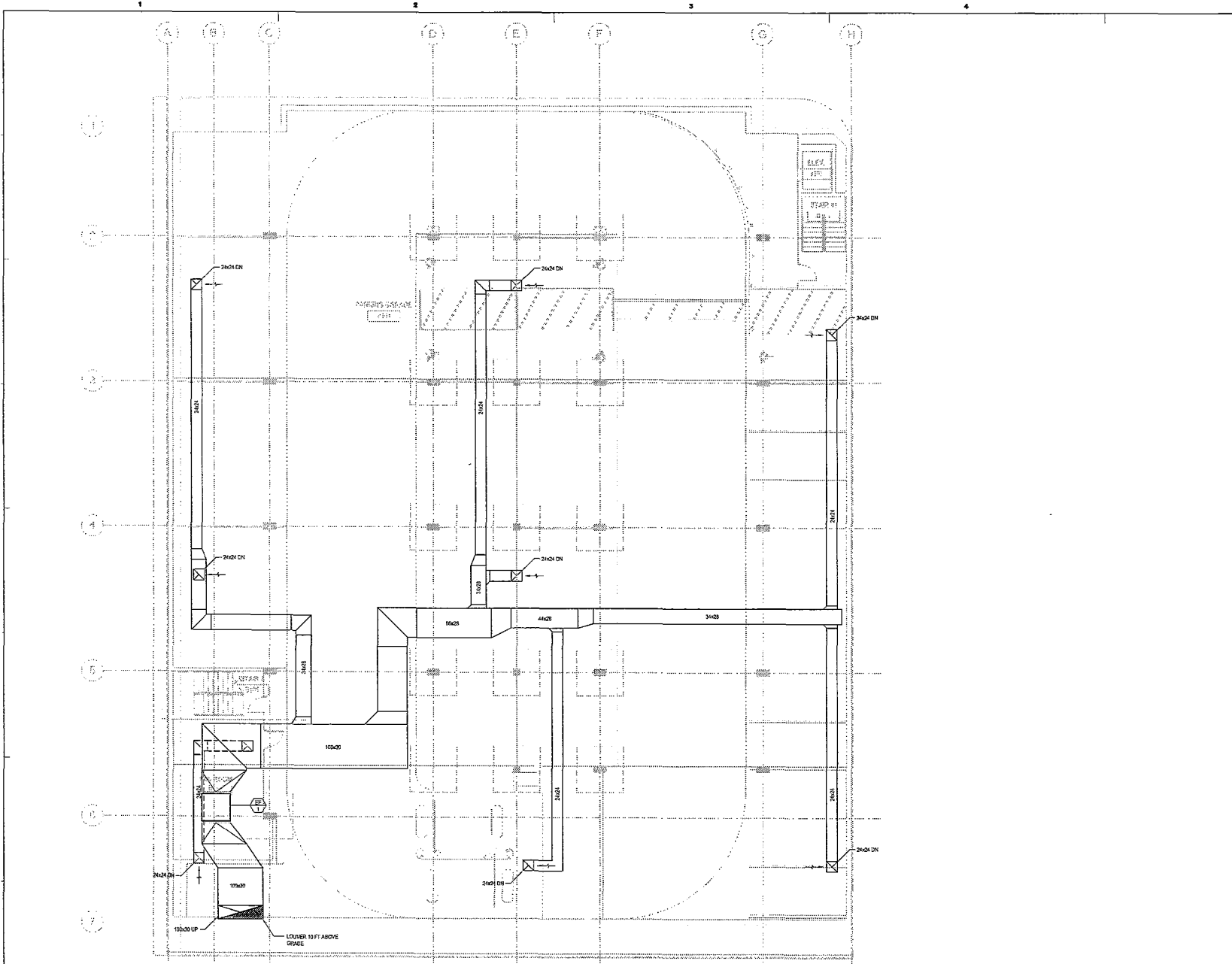
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SHEET TITLE MECHANICAL BASEMENT LEVEL 2 PLAN
SHEET NO: M2.0

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET OF SHEET

FOR CITY BRIDGE:		DATE	SECTION HEAD
DESCRIPTION	BY	APPROVED	DATE

CONTRACTOR DATE STARTED 39037-D
INSPECTOR DATE COMPLETED



- GENERAL NOTES**
1. THESE DRAWINGS ARE INTENDED TO SERVE AS ENDING DOCUMENTS ONLY AND ARE NOT FOR THE USE IN OBTAINING BUILDING PERMITS AND ARE NOT TO BE USED FOR CONSTRUCTION.
 2. THE FINAL DESIGNER OF RECORD IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES. THE FINAL DESIGNER OF RECORD SHALL PERFORM FINAL CALCULATIONS INCLUDING TRUCK COMPLIANCE.
 3. COORDINATE WITH FINAL ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY AND PROVIDE FINAL EQUIPMENT SIZES AND LAYOUTS. EQUIPMENT AND LAYOUTS PROVIDED ARE BASED ON BEST AVAILABLE INFORMATION AT THE SUBMISSION AND ARE ONLY SHOWN TO GIVE A BASIS OF DESIGN.
 4. THE FINAL DESIGN AND CONSTRUCTION TEAM SHALL COORDINATE ANY AND ALL MECHANICAL SYSTEMS THAT AFFECT ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DISCIPLINES.
 5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND ALL REQUIRED ACCESS CLEARANCES, BOTH MANUFACTURER RECOMMENDATION AND CODE REQUIREMENTS.

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

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4226 WEST POINT LOMA BOULEVARD
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SAN DIEGO, CALIFORNIA 92110
TEL: (619) 222-2400
FAX: (619) 222-2017

CITY CONTRACT: Project Number 04012.00
SPECIAL SPECIFICATIONS NO. CLP, INC.

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SHEET TITLE: MECHANICAL BASEMENT LEVEL 1 PLAN
SHEET NO.: M2.1

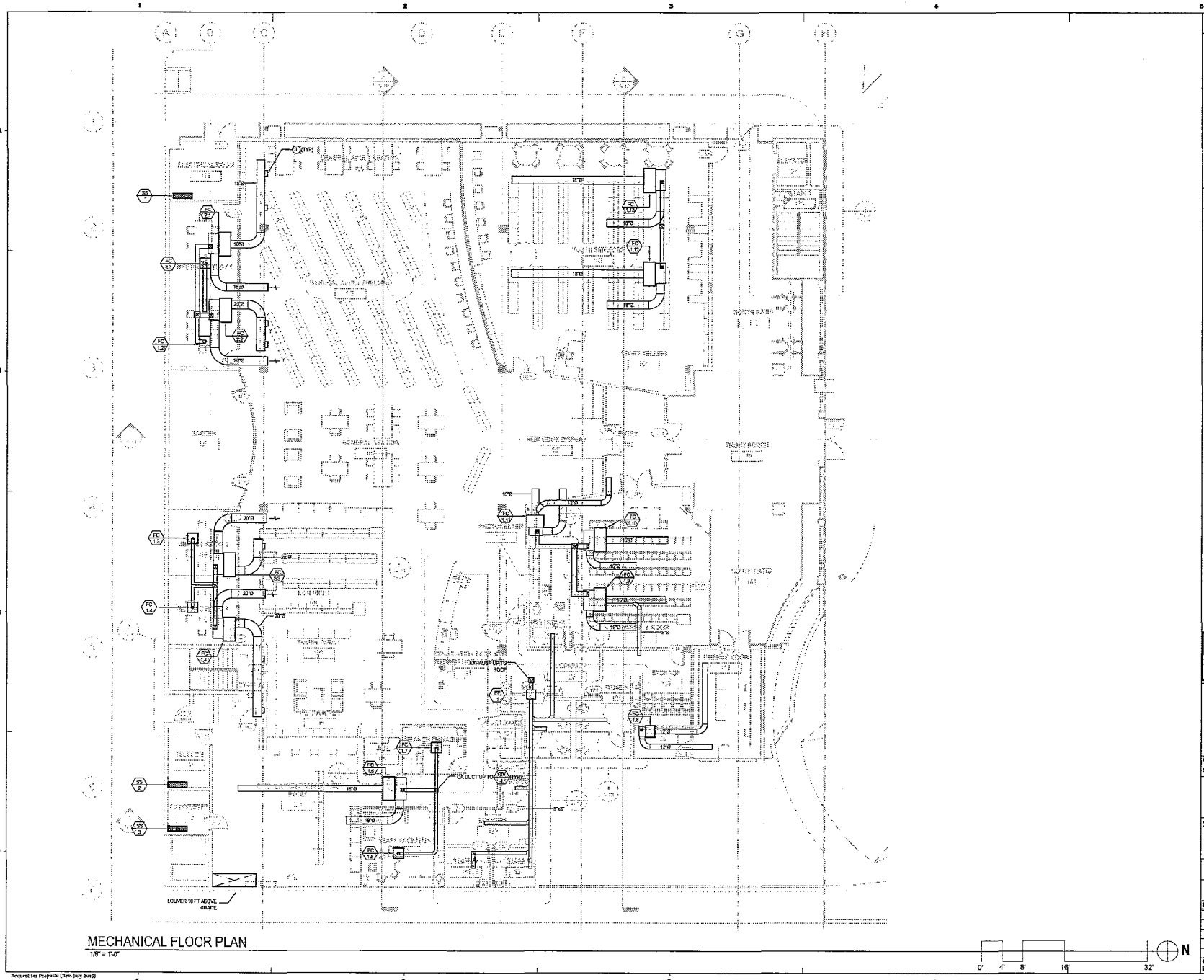
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET OF SHEET

DATE	BY	APPROVED	DATE	FLUJED	SECTION HEAD

CONTRACTOR: 39037-D
DATE STARTED: DATE COMPLETED: CONTROL ORIGINATOR: PROJECT NUMBER: SHEET NO.:

MECHANICAL BASEMENT LEVEL 1 PLAN
1/8" = 1'-0"

Revised for Proposed (Rev. July 2015)
Appendix P - Bridging Document (10% Final) - Mission Hills / Hillcrest Library Design - Build Contract




GENERAL NOTES

1. THESE DRAWINGS ARE INTENDED TO SERVE AS BRIDGING DOCUMENTS ONLY AND ARE NOT FOR THE USE IN OBTAINING BUILDING PERMITS AND ARE NOT TO BE USED FOR CONSTRUCTION.
2. THE FINAL DESIGNER OF RECORD IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES. THE FINAL DESIGNER OF RECORD SHALL PERFORM FINAL CALCULATIONS INCLUDING TILES/GOODRINGS.
3. COORDINATE WITH FINAL ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY AND PROVIDE FINAL EQUIPMENT SIZES AND LAYOUTS. EQUIPMENT AND LAYOUTS PROVIDED ARE BASED ON BEST AVAILABLE INFORMATION AT THE SUBMISSION AND ARE ONLY SHOWN TO GIVE A BASIS OF DESIGN.
4. THE FINAL DESIGN AND CONSTRUCTION TEAM SHALL COORDINATE ANY AND ALL MECHANICAL SYSTEMS THAT AFFECT ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DISCIPLINES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND ALL REQUIRED ACCESS CLEARANCES, BOTH MANUFACTURER RECOMMENDATION AND CODE REQUIREMENTS.

KEY NOTES

- ⊙ PROVIDE HIGH THROW SIDEWALL DIFFUSERS

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**


ARCHITECTS MOSHIER DREW
 4205 WEST POINT LOMA BOULEVARD
 SUITE 200
 SAN DIEGO, CALIFORNIA 92110
 TELEPHONE (619) 225-2400
 FAX NO. (619) 225-2517

CITY CONTRACT Project Number: 04012.00
SPECIAL SPECIFICATIONS NO. C.L.P. NO.

MISSION HILLS / HILLCREST LIBRARY
SAN DIEGO PUBLIC LIBRARY

SHEET TITLE MECHANICAL FLOOR PLAN
SHEET NO: M2.2
 CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
 SHEET OF SHEET

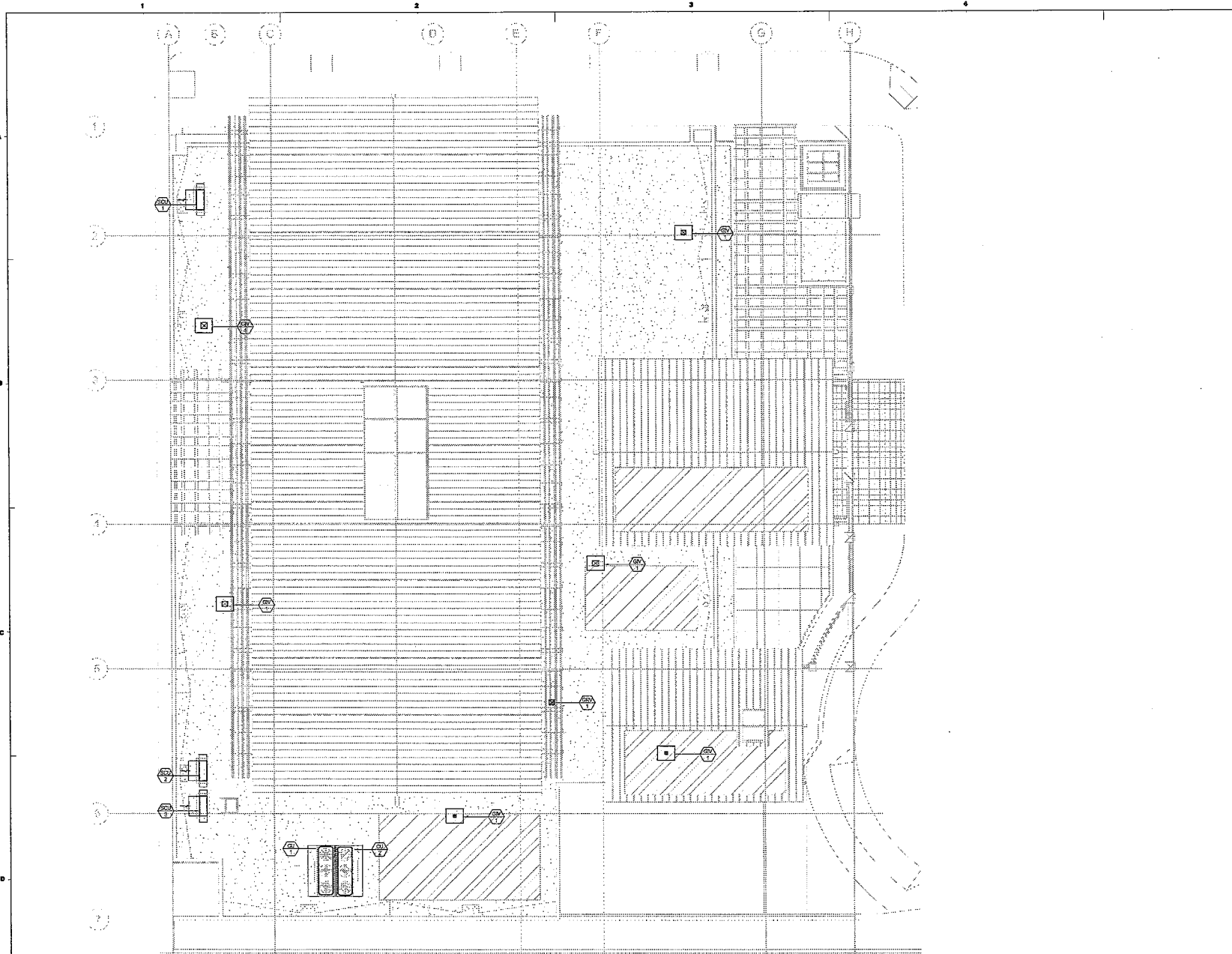
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DESIGNED BY	APPROVED BY	PROJECT NUMBER
		CONTRACT OR ORDER NO.

CONTRACTOR 39037-D
INSPECTOR

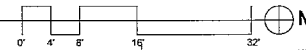
DATE STARTED
DATE COMPLETED

MECHANICAL FLOOR PLAN
1/8" = 1'-0"

Request for Proposal (Rev. July 2015)
 Appendix P - Bridging Documents (30% Plan) - Mission Hills / Hillcrest Library Design - 2014 Contract



MECHANICAL ROOF PLAN
1/8" = 1'-0"



- GENERAL NOTES**
1. THESE DRAWINGS ARE INTENDED TO BE USED AS BRIDGING DOCUMENTS ONLY AND ARE NOT FOR THE USE IN OBTAINING BUILDING PERMITS AND ARE NOT TO BE USED FOR CONSTRUCTION.
 2. THE FINAL DESIGNER OF RECORD IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES. THE FINAL DESIGNER OF RECORD SHALL PERFORM FINAL CALCULATIONS INCLUDING TITLE 24 COMPLIANCE.
 3. COORDINATE WITH FINAL ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY AND PROVIDE FINAL EQUIPMENT SIZES AND LOCATIONS. EQUIPMENT AND LOCATIONS PROVIDED ARE BASED ON BEST AVAILABLE INFORMATION AT THE SUBMISSION AND ARE ONLY SHOWN TO GIVE A BASIS OF DESIGN.
 4. THE FINAL DESIGN AND CONSTRUCTION TEAM SHALL COORDINATE ANY AND ALL MECHANICAL PROVIDED THAT AFFECT ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DISCIPLINES.
 5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND ALL REQUIRED ACCESS CLEARANCES, BOTH MANUFACTURER RECOMMENDATION AND CODE REQUIREMENTS.

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

ARCHITECTS LOSHER DREW
4206 WEST POINT LOMA BOULEVARD
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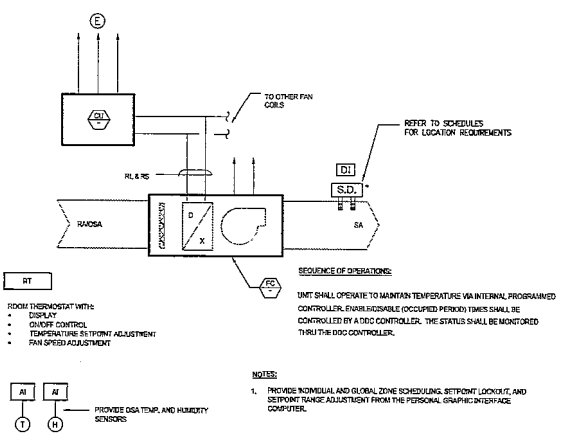
CITY CONTRACT SPECIAL SPECIFICATIONS NO. PROJECT NUMBER 04012.00 C.S.P. NO.

**MISSION HILLS / HILLCREST
LIBRARY
SAN DIEGO PUBLIC LIBRARY**

SHEET TITLE MECHANICAL ROOF PLAN SHEET NO: **M2.3**

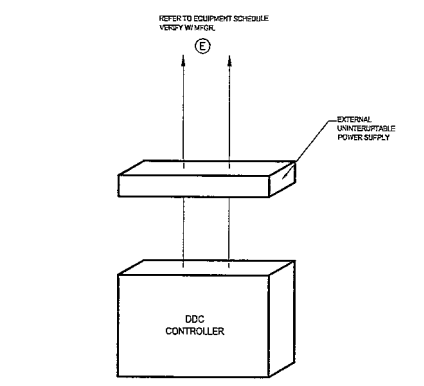
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ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET OF SHEET

FOR CITY BRIDGE		DATE		SPECIAL HEAD
DESCRIPTION	BY	APPROVED	DATE FILMED	
				PROJECT MANAGER
				CONTROL ORIGINATOR
CONTRACTOR		DATE SUBMITTED		39037-D
INSPECTOR		DATE COMPLETED		

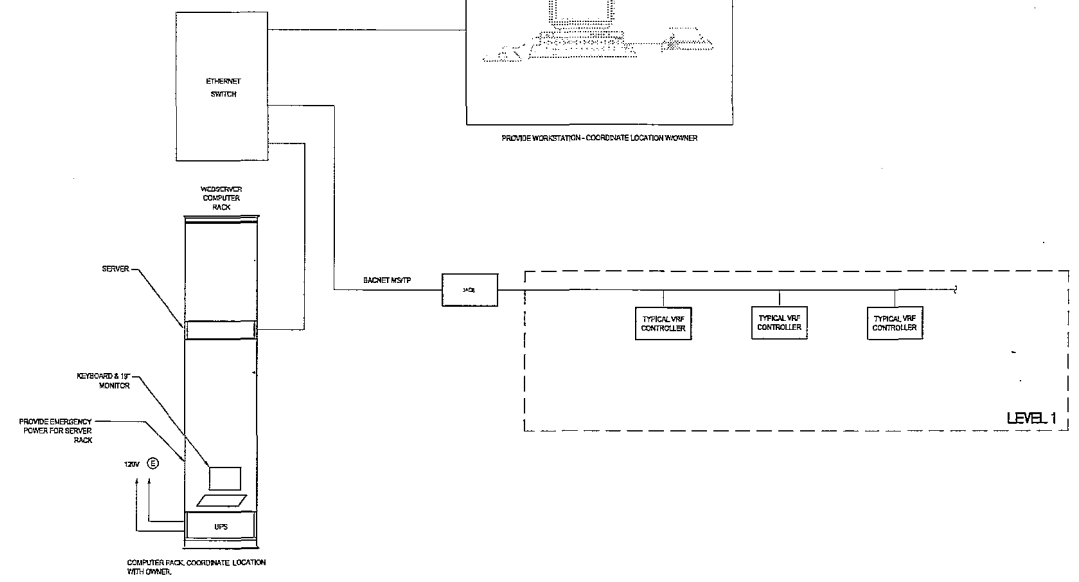


VRF SPLIT SYSTEM CONTROL DETAIL
 NOT TO SCALE

1
 M3.0



3
 M3.0



2
 M3.0

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

ARCHITECTS MOSHER CREW
 4208 WEST POINT LOMA BOULEVARD
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 TELEPHONE (619) 223-2400
 FAX NO. (619) 223-3017

CITY CONTRACT Project Number: 04012.00
SPECIAL SPECIFICATIONS NO. CLIP. NO.

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SHEET TITLE MECHANICAL CONTROLS
SHEET NO. M3.0

CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
 STREET OF STREET

FOR CITY REVIEW DATE
 CHECKED BY APPROVED DATE FILED

SECTION LEAD
PROJECT MANAGER
CONTROL ORIGINATOR
 39037-D

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

ARCHITECTS AND ENGINEERS
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WWW.SUNBELTARCH.COM

CITY CONTRACT SPECIAL INSURANCE INC.
Project Number: 04012.00
CITY, CA.

**MISSION HILLS / HILLCREST
LIBRARY**
SUNBELT PUBLIC LIBRARY

SHEET NO: **P.02**
PLUMBING SCHEDULES

PROJECT NO: 04012.00
SHEET NO: P.02

DATE: 01/08/16
BY: [Signature]
APPROVED: DATE: [Signature]

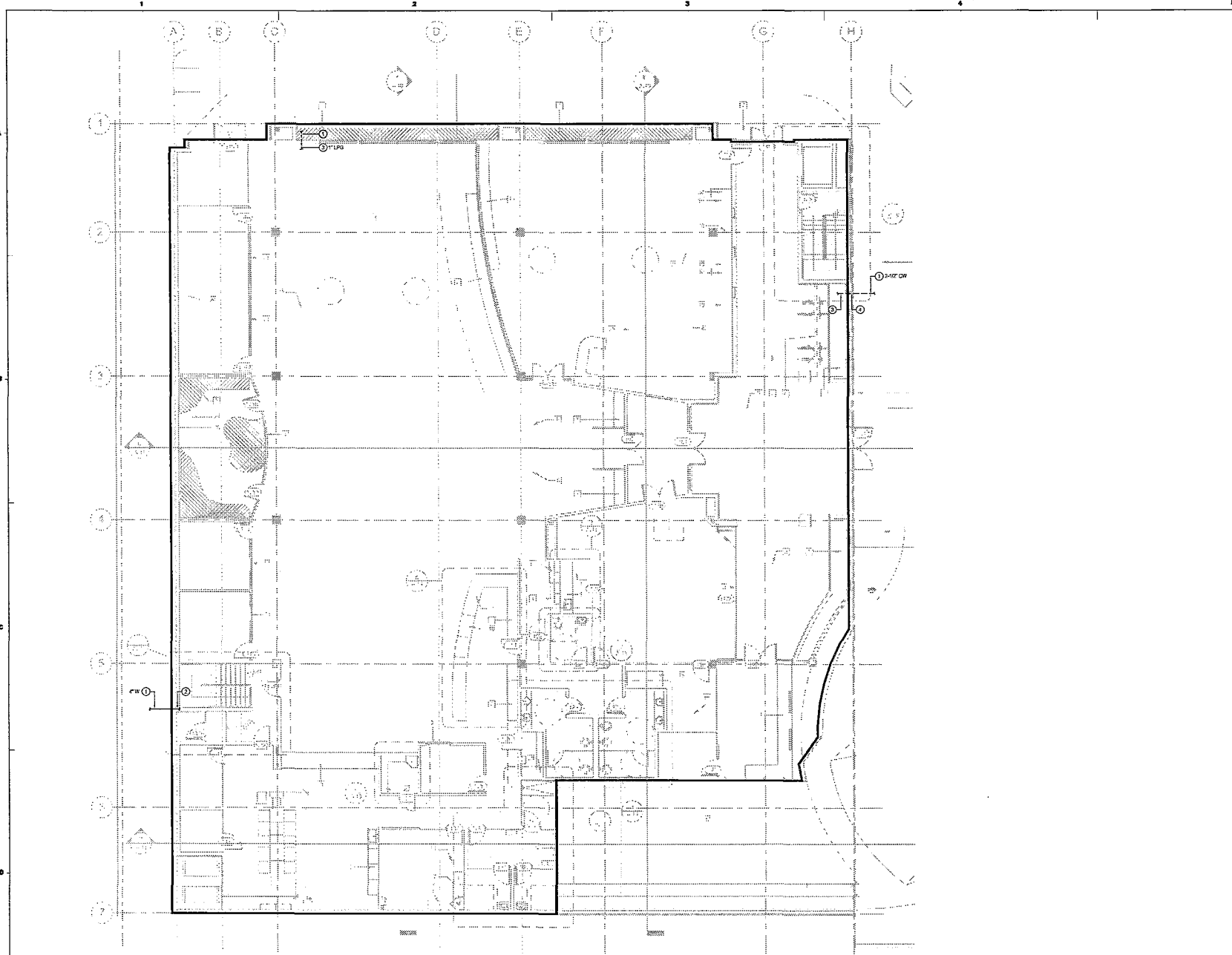
CONTRACTOR: DATE STARTED: 39037-D
DATE COMPLETED:

PLUMBING FIXTURE SCHEDULE NOTE: FINISHES SHOWN ARE FOR REFERENCE ONLY. FINAL DESIGN ENGINEER SHALL COORDINATE REQUIREMENTS WITH OWNER AND VERIFY MINIMUM FLOOR FINISHMENTS.

FIXTURE		ROOMS																
SYM.	TYPE	PH	CH	BYT	CP	DP	G	HA	HZ	SD	CA	N	TRSP	V	REMARKS			
WC	WASH CLOSET	NA	1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	4"	INT.	Z	WALL MOUNTED OVER FLUSH. 1/4" GFT TOP SPAC. FLUSH VALVE HAND OPERATED ELECTRONIC. 1/2" GFT TOP SPAC.		
WC	WASH CLOSET	NA	1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	4"	INT.	Z	WALL MOUNTED OVER FLUSH. 1/4" GFT TOP SPAC. FLUSH VALVE HAND OPERATED ELECTRONIC. 1/2" GFT TOP SPAC.		
LA	LAVATORY	1/2"	1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	2"	1/2"	Z	WALL MOUNTED OVER FLUSH. 1/4" GFT TOP SPAC. FLUSH VALVE HAND OPERATED ELECTRONIC. 1/2" GFT TOP SPAC.		
LA	LAVATORY	1/2"	1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	2"	1/2"	Z	WALL MOUNTED OVER FLUSH. 1/4" GFT TOP SPAC. FLUSH VALVE HAND OPERATED ELECTRONIC. 1/2" GFT TOP SPAC.		
DB	DRENEL	NA	1"	NA	NA	NA	NA	NA	NA	NA	NA	NA	2"	1/2"	Z	WALL MOUNTED OVER FLUSH. 1/4" GFT TOP SPAC. FLUSH VALVE HAND OPERATED ELECTRONIC. 1/2" GFT TOP SPAC.		
FL	FLOOR DRAIN	NA	1"	NA	NA	NA	NA	NA	NA	NA	NA	NA	2"	1/2"	Z	WALL MOUNTED OVER FLUSH. 1/4" GFT TOP SPAC. FLUSH VALVE HAND OPERATED ELECTRONIC. 1/2" GFT TOP SPAC.		
NS	WAP SINK	1/2"	1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	2"	1/2"	Z	WALL MOUNTED OVER FLUSH. 1/4" GFT TOP SPAC. FLUSH VALVE HAND OPERATED ELECTRONIC. 1/2" GFT TOP SPAC.		
NO	NOSE OVER	NA	3/4"	NA	NA	NA	NA	NA	NA	NA	NA	NA	2"	1/2"	Z	WALL MOUNTED OVER FLUSH. 1/4" GFT TOP SPAC. FLUSH VALVE HAND OPERATED ELECTRONIC. 1/2" GFT TOP SPAC.		
TR	TRAP REMOVER CONNECTION (ELECTRONIC)	NA	3/4"	NA	NA	NA	NA	NA	NA	NA	NA	NA	2"	1/2"	Z	WALL MOUNTED OVER FLUSH. 1/4" GFT TOP SPAC. FLUSH VALVE HAND OPERATED ELECTRONIC. 1/2" GFT TOP SPAC.		
AS	AIR DRAIN	NA	1/4"	NA	NA	NA	NA	NA	NA	NA	NA	NA	2"	1/2"	Z	WALL MOUNTED OVER FLUSH. 1/4" GFT TOP SPAC. FLUSH VALVE HAND OPERATED ELECTRONIC. 1/2" GFT TOP SPAC.		
SH	SHOWER	NA	1/4"	NA	NA	NA	NA	NA	NA	NA	NA	NA	2"	1/2"	Z	WALL MOUNTED OVER FLUSH. 1/4" GFT TOP SPAC. FLUSH VALVE HAND OPERATED ELECTRONIC. 1/2" GFT TOP SPAC.		

PLUMBING EQUIPMENT SCHEDULE NOTE: EQUIPMENT FORM AND FOR REFERENCE ONLY. FINAL DESIGN ENGINEER SHALL BE RESPONSIBLE FOR DESIGN CALCULATION AND EQUIPMENT SELECTION.

SYM.	TYPE	DESCRIPTION
HW	DOMESTIC HOT WATER HEATER	NATURAL GAS WATER HEATER TANK
SA	SAND/FILTR INTERCEPTOR	SAND AND OIL SEPARATOR
CP	SWIMMING POOL PUMP	DISPER TYPE



- GENERAL NOTES**
1. THESE DRAWINGS ARE INTENDED TO SERVE AS BRIDGING DOCUMENTS ONLY AND ARE NOT FOR THE USE IN OBTAINING BUILDING PERMITS AND ARE NOT TO BE USED FOR CONSTRUCTION.
 2. THE FINAL DESIGNER OF RECORD IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES. THE FINAL DESIGNER OF RECORD SHALL FURNISH FINAL CALCULATIONS INCLUDING TITLE 24 COMPLIANCE. FINAL DESIGN ENGINEER IS RESPONSIBLE FOR ALL PLUMBING FIXTURE SIZES.
 3. COORDINATE WITH FINAL ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY AND PROVIDE FINAL EQUIPMENT SIZES AND LAYOUTS. EQUIPMENT AND LAYOUTS PROVIDED ARE BASED ON BEST AVAILABLE INFORMATION AT THE SUBMISSION AND ARE ONLY SHOWN TO GIVE A BASIS OF DESIGN.
 4. THE FINAL DESIGN AND CONSTRUCTION TEAM SHALL COORDINATE ANY AND ALL PLUMBING SYSTEMS THAT AFFECT ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DISCIPLINES.
 5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND ALL REQUIRED ACCESS CLEARANCES, BOTH MANUFACTURER RECOMMENDATION AND CODE REQUIREMENTS.

- KEY NOTES**
- ① COORDINATE DOMESTIC WATER DOWNS BASED ON SITE PRESSURE FROM FINAL SITE FLOOD TEST. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
 - ② REFER TO P103 FOR CONTINUATION.
 - ③ REFER TO P120 FOR CONTINUATION.
 - ④ REFER TO CIVIL FOR BACKFLOW PREVENTOR REQUIREMENTS.

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

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MOSHER DREW
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FAX NO. 619-225-2017
www.mosherdrew.com

CITY CONTRACT SPECIAL SPECIFICATIONS NO. Project Number: 04012.00 CLIP, NO.

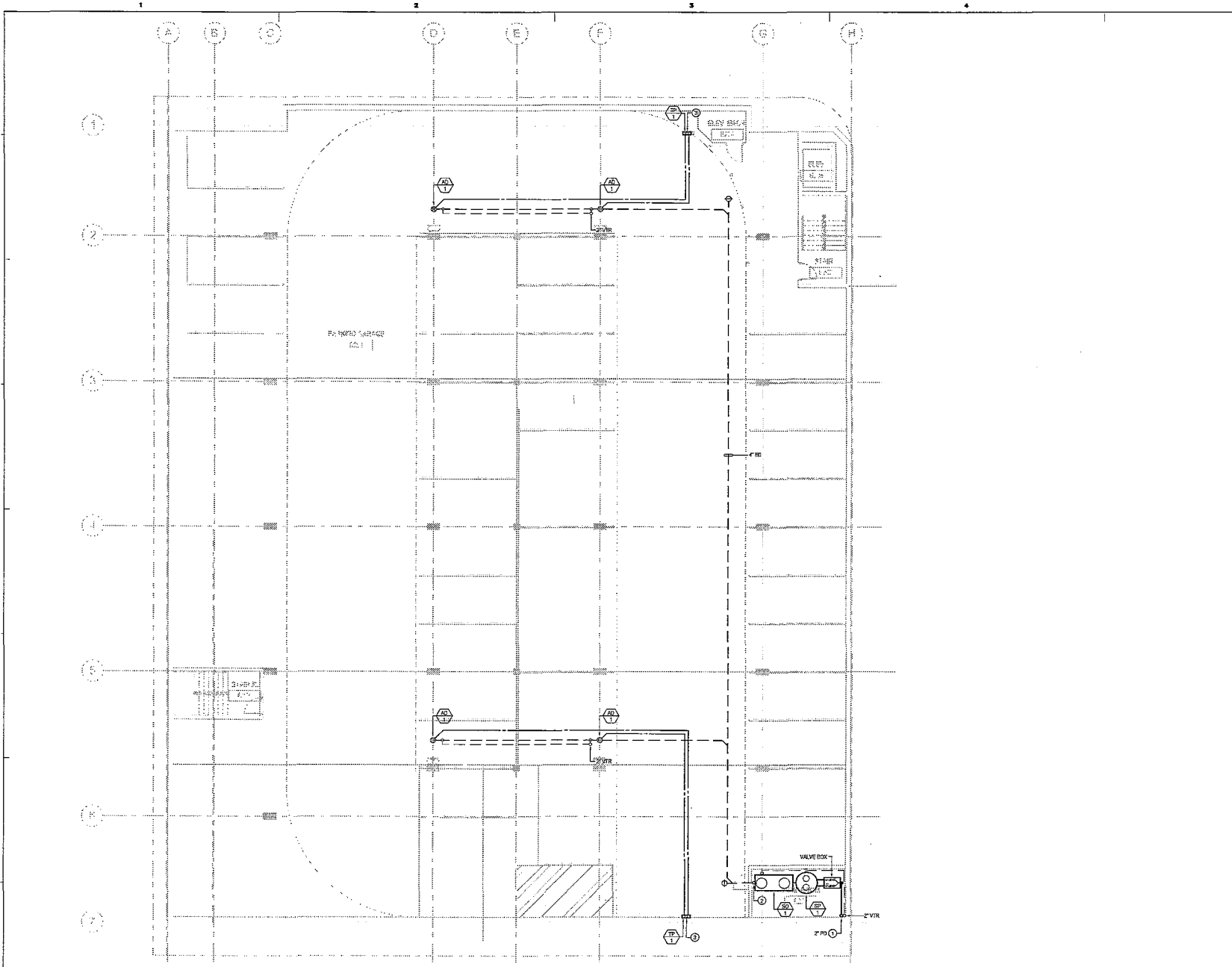
**MISSION HILLS / HILLCREST
LIBRARY
SAN DIEGO PUBLIC LIBRARY**

SHEET TITLE: PLUMBING SITE PLAN SHEET NO.: P1.0

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET OF SHEET

FOR CITY PROJECT	DATE	SECTION HEAD
DESCRIPTION	BY APPROVED DATE FILMED	PROJECT MANAGER

CONTRACTOR: DATE STARTED: 39037-D
INSPECTOR: DATE COMPLETED:



- GENERAL NOTES**
1. THESE DRAWINGS ARE INTENDED TO BE USED AS WORKING DOCUMENTS ONLY AND ARE NOT FOR THE USE IN OBTAINING BUILDING PERMITS AND ARE NOT TO BE USED FOR CONSTRUCTION.
 2. THE FINAL DESIGNER OF RECORD IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES. THE FINAL DESIGNER OF RECORD SHALL REFORM FINAL CALCULATIONS INCLUDING TITLE 24 COMPLIANCE. FINAL DESIGN ENGINEER IS RESPONSIBLE FOR ALL PLUMBING FIXTURE SIZES.
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 5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND ALL REQUIRED ACCESS CLEARANCES. BOTH MANUFACTURER RECOMMENDATION AND CODE REQUIREMENTS.

- KEY NOTES**
- ① PUMP DISCHARGED UP TO LEVEL 1. REFER TO P1.2 FOR CONTINUATION.
 - ② EMERGENCY DRIPAN DRESS UP TO LEVEL 1. REFER TO P1.2 FOR CONTINUATION.
 - ③ CW REFER UP TO LEVEL 1. REFER TO P1.2 FOR CONTINUATION.

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

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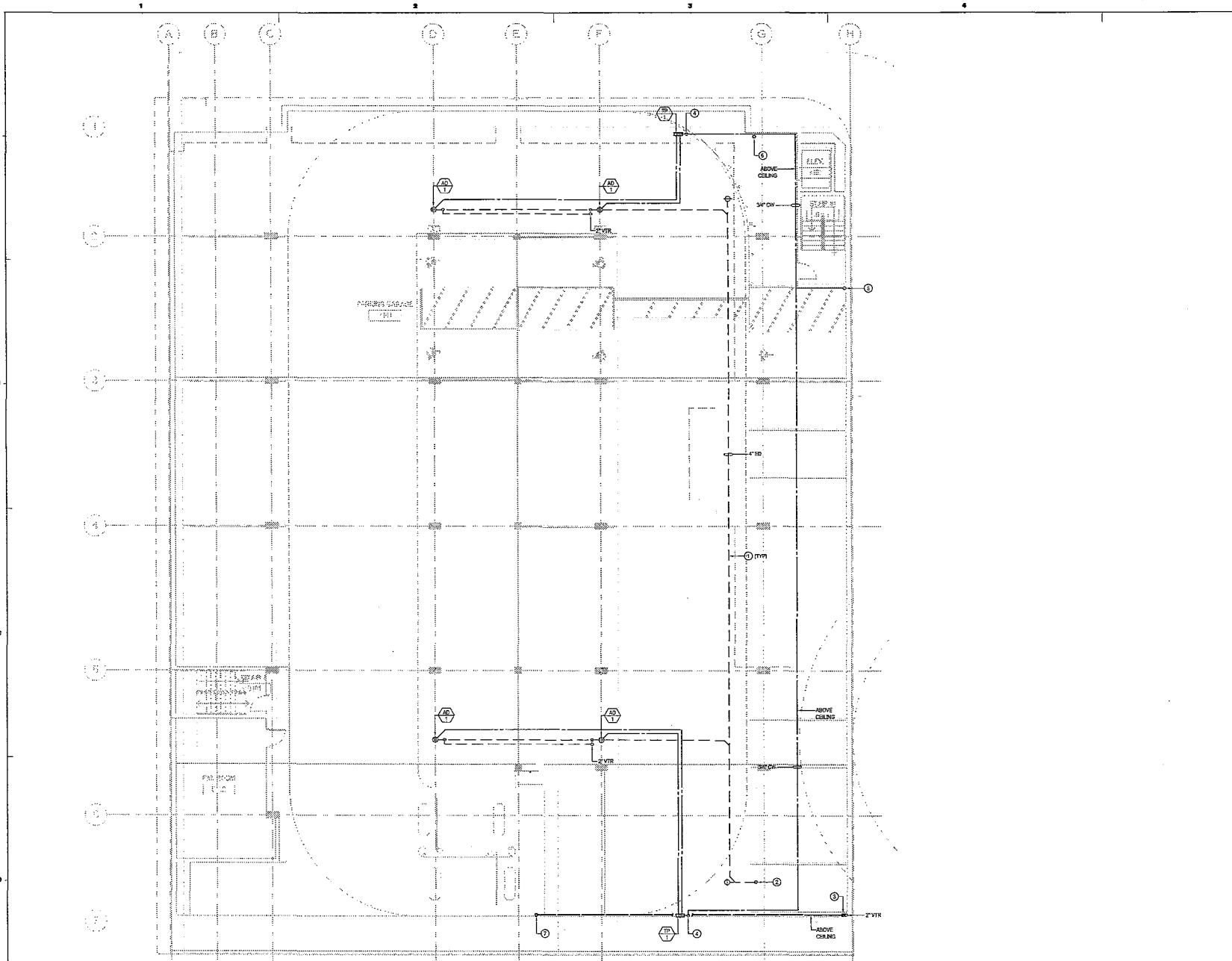
CITY CONTRACT SPECIAL SPECIFICATIONS NO. Project Number 04012.00
CAP. NO.

**MISSION HILLS / HILLCREST
LIBRARY
SAN DIEGO PUBLIC LIBRARY**

SHEET TITLE PLUMBING BASEMENT LEVEL 2 PLAN SHEET NO. P1.1
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET OF SHEET

FOR CITY ENGINEER	DATE	BY	APPROVED	DATE	FILED	WORKER LEAD
DESIGNED						
						PROJECT MANAGER
						CONTROL ORIENTATION

CONTRACTOR DATE STARTED 39037-D
INSPECTOR DATE COMPLETED



- GENERAL NOTES**
1. THESE DRAWINGS ARE INTENDED TO SERVE AS BIDDING DOCUMENTS ONLY AND ARE NOT FOR THE USE IN OBTAINING BUILDING PERMITS AND ARE NOT TO BE USED FOR CONSTRUCTION.
 2. THE FINAL DESIGNER OF RECORD IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES. THE FINAL DESIGNER OF RECORD SHALL PERFORM FINAL CALCULATIONS INCLUDING TITLE 24 COMPLIANCE. FINAL DESIGN ENGINEER IS RESPONSIBLE FOR ALL PLUMBING PIPING SIZES.
 3. COORDINATE WITH FINAL ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY AND PROVIDE FINAL EQUIPMENT SIZES AND LAYOUTS. EQUIPMENT AND LAYOUTS PROVIDED ARE BASED ON BEST AVAILABLE INFORMATION AT THE SUBMISSION AND ARE ONLY SHOWN TO GIVE A BASIS OF DESIGN.
 4. THE FINAL DESIGN AND CONSTRUCTION TEAM SHALL COORDINATE ANY AND ALL PLUMBING SYSTEMS THAT AFFECT ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DISCIPLINES.
 5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND ALL REQUIRED ACCESS CLEARANCES, BOTH MANUFACTURER RECOMMENDATION AND CODE REQUIREMENTS.

- KEY NOTES**
- ① EMERGENCY DRAIN LINE BELOW SLAB.
 - ② EMERGENCY DRAIN DOWN TO PUMP ROOM. REFER TO P1.1 FOR CONTINUATION.
 - ③ PUMP DRAIN DISCHARGE UP FROM BASEMENT LEVEL 1. REFER TO P1.1 FOR CONTINUATION.
 - ④ DRAIN DOWN TO BASEMENT LEVEL 1. REFER TO P1.1 FOR CONTINUATION.
 - ⑤ DOWN SIZES UP TO FLOOR LEVEL. REFER TO P1.2 FOR CONTINUATION.
 - ⑥ DISCHARGE UP TO BUILDING DRAIN SYSTEM.
 - ⑦ PUMP DRAIN UP TO FLOOR LEVEL. REFER TO P1.3 FOR CONTINUATION.

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

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TELEPHONE: (619) 223-2400
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CITY CONTRACT: Project Number 04012.00
SPECIAL SUPERVISIONS NO. CLIP. NO.

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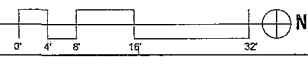
SHEET TITLE: PLUMBING BASEMENT LEVEL 1 PLAN
SHEET NO.: P1.2

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

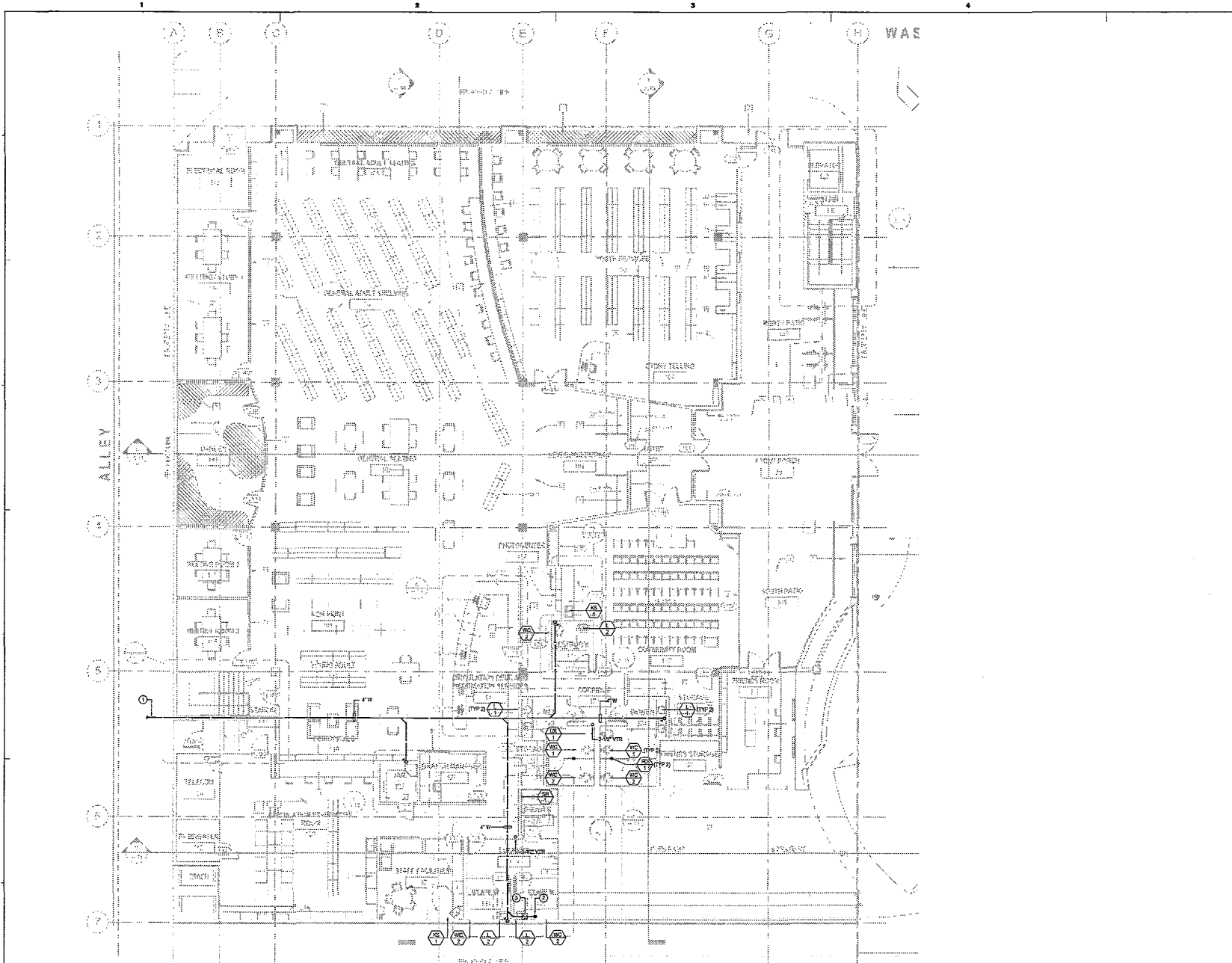
FOR CITY ENGINEER	DATE	SECTION HEAD
DESIGNED BY	APPROVED DATE	PROJECT MANAGER
		CONTROLLING ORGANIZATION

CONTRACTOR: DATE STARTED: 39037-D
INSPECTOR: DATE COMPLETED:

PLUMBING BASEMENT LEVEL 1 PLAN
1/8" = 1'-0"



Reprints for Proposal (Rev. July 2004)
Appendix P - Bridging Document (30% Plans) - Mission Hills / Hillcrest Library Design - Build Contract



- GENERAL NOTES**
1. THESE DRAWINGS ARE INTENDED TO SERVE AS BRIDGING DOCUMENTS ONLY AND ARE NOT FOR THE USE IN OBTAINING BIDDING PERMITS AND ARE NOT TO BE USED FOR CONSTRUCTION.
 2. THE FINAL DESIGNER OF RECORD IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES. THE FINAL DESIGNER OF RECORD SHALL PERFORM FINAL CALCULATIONS INCLUDING TITLE 24 COMPLIANCE. FINAL DESIGN ENGINEER IS RESPONSIBLE FOR ALL PLUMBING PERMITS.
 3. COORDINATE WITH FINAL ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY AND PROVIDE FINAL EQUIPMENT SIZES AND LAYOUTS. EQUIPMENT AND LAYOUTS PROVIDED ARE BASED ON BEST AVAILABLE INFORMATION AT THE SUBMISSION AND ARE ONLY SHOWN TO GIVE A BASIS OF DESIGN.
 4. THE FINAL DESIGN AND CONSTRUCTION TEAM SHALL COORDINATE ANY AND ALL PLUMBING SYSTEMS THAT AFFECT ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL DISCIPLINES.
 5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND ALL REQUIRED ACCESS CLEARANCES, BOTH MANUFACTURER RECOMMENDATION AND CODE REQUIREMENTS.

- KEY NOTES**
- ① REFER TO CIVIL DRAWINGS FOR CONTINUATION.
 - ② PUMP DRAIN FROM BASEMENT LEVEL, 1 BELOW. REFER TO P1.2 FOR CONTINUATION.
 - ③ SODIUM VALVE.

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

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428 WEST POINT LOMA BOULEVARD
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TELEPHONE: (619) 225-2010
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CITY CONTRACT SPECIAL SPECIFICATIONS NO. CAP. 953 Project Number 04012.00

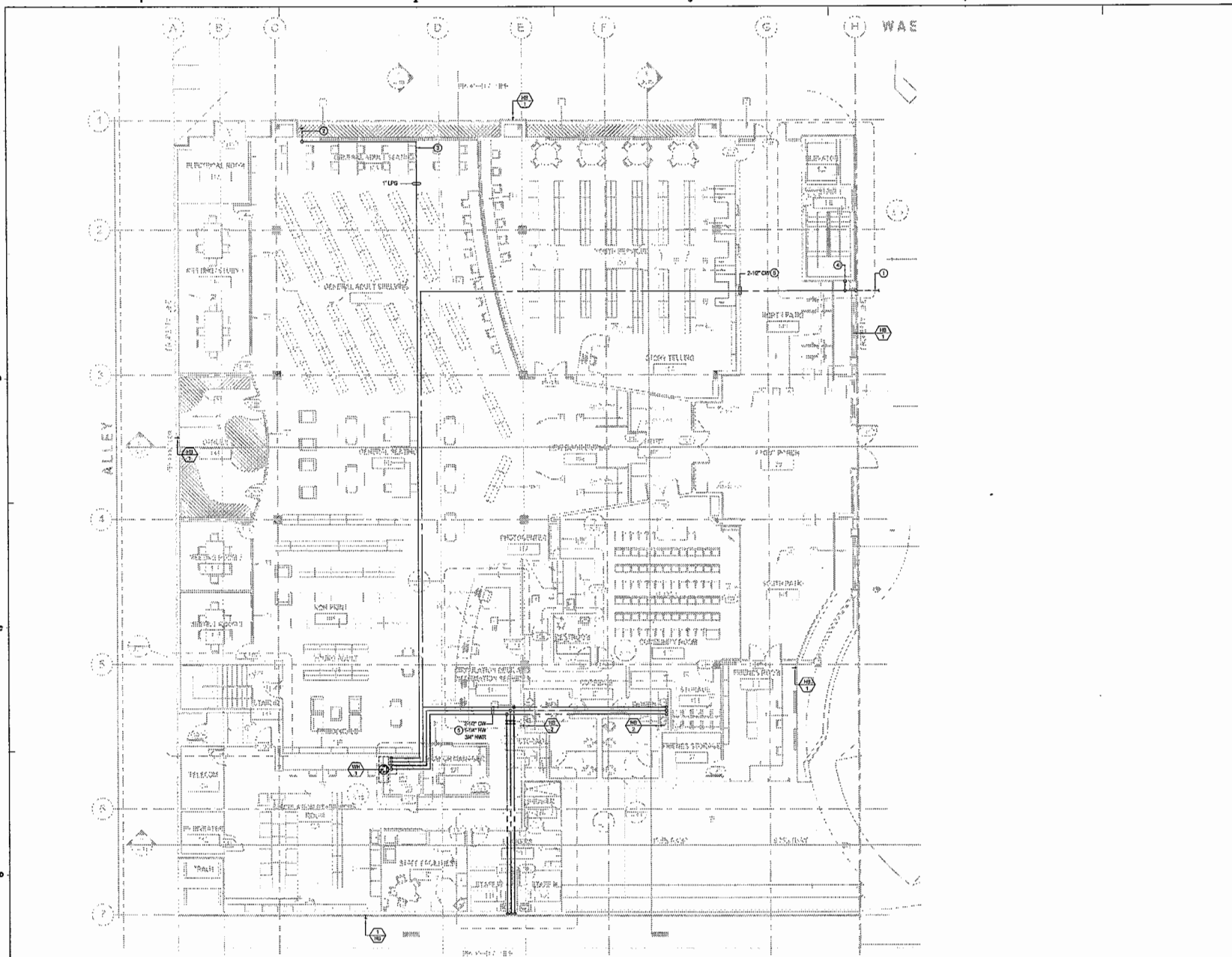
**MISSION HILLS / HILLCREST
LIBRARY
SAN DIEGO PUBLIC LIBRARY**

SHEET TITLE: PLUMBING WASTE & VENT FLOOR PLAN
SHEET NO.: P1.3

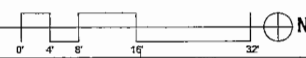
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

FOR CITY REVIEW	DATE	BY	APPROVED	DATE	FILED	VERSION

CONTRACTOR: 39037-D
DATE STARTED:
DATE COMPLETED:



PLUMBING GAS & DOMESTIC WATER FLOOR PLAN
1/8" = 1'-0"



- GENERAL NOTES**
1. THESE DRAWINGS ARE INTENDED TO SERVE AS PRELIMINARY DOCUMENTS ONLY AND ARE NOT FOR THE USE IN OBTAINING BUILDING PERMITS AND ARE NOT TO BE USED FOR CONSTRUCTION.
 2. THE FINAL DESIGNER OF RECORD IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES. THE FINAL DESIGNER OF RECORD SHALL PERFORM FINAL CALCULATIONS INCLUDING TITLE-OF-COMPLIANCE. FINAL DESIGN ENGINEER IS RESPONSIBLE FOR ALL PLUMBING FIXTURE SIZES.
 3. COORDINATE WITH FINAL ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY AND PROVIDE FINAL EQUIPMENT SIZES AND LAYOUTS. EQUIPMENT AND LAYOUTS PROVIDED ARE BASED ON BEST AVAILABLE INFORMATION AT THE SUBMISSION AND ARE ONLY SHOWN TO GIVE A BASIS OF DESIGN.
 4. THE FINAL DESIGN AND CONSTRUCTION TEAM SHALL COORDINATE ANY AND ALL PLUMBING SYSTEMS THAT AFFECT ARCHITECTURAL, STRUCTURAL AND ELECTRICAL CONDITIONS.
 5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND ALL REQUIRED ACCESS CLEARANCES. BOTH MANUFACTURER RECOMMENDATION AND CODE REQUIREMENTS.

- KEY NOTES**
- ① DOMESTIC COLD WATER FROM SITE. REFER TO P.01 FOR CONTINUATION.
 - ② NATURAL GAS LINE FROM SITE. REFER TO P.01 FOR CONTINUATION.
 - ③ SIZE BASED ON 1/2" O.D. 125 FEET DEVELOPED LENGTH AT 2 PSIG OR LESS AND PRESSURE DROP OF 0.5 PSI W.G.
 - ④ DOWN TO BASEMENT LEVEL 1. REFER TO P.13 FOR CONTINUATION.
 - ⑤ DOMESTIC WATER BEING BASED ON SITE PRESSURE FROM FINAL SIF-FLOW TEST.

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

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FAX NO.: 619 223-2017

CITY CONTRACT Project Number: 04012.00
SPECIAL SPECIFICATIONS NO. C.J.P. NO.

MISSION HILLS / HILLCREST LIBRARY
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SHEET TITLE
PLUMBING GAS & DOMESTIC WATER FLOOR PLAN

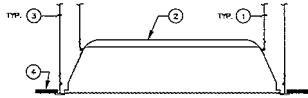
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P1.4

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET OF SHEET

SCALE:
N.D.

FOR CITY ENGINEER		DATE		BY	DATE	FILMED	BY	REVISION HEAD
DESCRIPTION	BY	APPROVED	DATE					
								PROJECT MANAGER
								CONTROL OPERATOR
								39037-D

Request for Proposal (RFP), July 2015
Appendix P - Bridging Documents (30% Plans) - Mission Hills / Hillcrest Library Design - Initial Contract

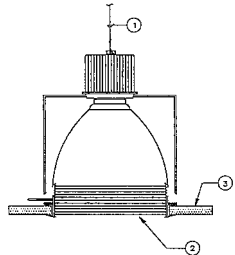


KEY NOTES:

- 1 DENOTES FIXTURE SUPPORT WIRE (MINIMUM #10) ON FOUR CORNERS ATTACHED TO BUILDING STRUCTURE. 2 SLACK AND 2 TIGHT.
- 2 DENOTES LUMINAIRE, 2'X4', 2'X2' OR 1'X4', WITH MINIMUM OF (4) RESTRAINT CLIPS, ATTACHING FIXTURE TO CEILING GRID.
- 3 DENOTES T-BAR CEILING SYSTEM SAFETY WIRE BY OTHERS.
- 4 DENOTES CEILING MATERIAL.

4 RECESSED LUMINAIRE SEISMIC RESTRAINT

NO SCALE 16300-02

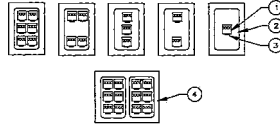


KEY NOTES:

- 1 DENOTES FIXTURE SUPPORT WIRE (MINIMUM #10) FROM LUMINAIRE ATTACHED TO BUILDING STRUCTURE ABOVE.
- 2 DENOTES RECESSED LED DOWNLIGHT.
- 3 DENOTES T-BAR CEILING SYSTEM BY OTHERS.

5 RECESSED DOWNLIGHT RESTRAINT

NO SCALE 16300-03



KEY NOTES:

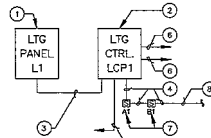
- 1 SWITCH BUTTON LABEL ON SWITCH THE AREA CONTROLLED AS SHOWN ON LIGHTING CONTROL SCHEDULES. PER SWITCH, VERIFY WITH ARCHITECT PRIOR TO ENGRAVING. (TYPICAL)
- 2 1 GANG PLATE/BACKBOX. (TYPICAL ON 1, 2, 3, 4, 8 BUTTON SWITCHES)
- 3 PILOT LIGHT. (TYPICAL)
- 4 2 GANG PLATE/BACKBOX. (TYPICAL ON 7, 8, 9, 10, 12 BUTTON SWITCHES)

GENERAL NOTES:

- 1. VERIFY OVERRIDE SWITCH LOCATIONS WITH ARCHITECT. VERIFY QUANTITY, LAYOUT, AND ORIENTATION WITH CONSTRUCTION DOCUMENTS. SWITCHES SHALL BE COMPATIBLE WITH LIGHTING CONTROL SYSTEM.

2 LIGHTING CONTROL SWITCH DETAILS AND CALLOUTS

NO SCALE



KEY NOTES:

- 1 DENOTES LIGHTING PANELS PER PLANS. SEE SINGLE LINE DIAGRAM FOR MORE INFORMATION.
- 2 NEW (32) INPUT LIGHTING CONTROL PANEL, LCP1, MANUFACTURER: LIGHTING CONTROL AND DESIGN MODEL # GR2432/32-DTC MASTER-MOD-HL-SM
- 3 DENOTES LIGHTING CIRCUITS INTERCEPTED BY LIGHTING CONTROL PANEL PER PLANS.
- 4 DENOTES CAT 5, 4 TWISTED PAIR WIRE PER MANUFACTURERS SPECIFICATIONS.
- 5 DENOTES REQUIRED 277V 20A INPUT POWER CIRCUIT TO LIGHTING CONTROL PANEL.
- 6 DENOTES LIGHTING BRANCH CIRCUITS ROUTED TO LIGHTING FIXTURES. REFER TO CONSTRUCTION DOCUMENTS FOR ADDITIONAL INFORMATION.
- 7 DENOTES LOW VOLTAGE OVERRIDE SWITCH WITH ZONE NOTED, WITH MAXIMUM OVERRIDE CAPACITY OF NO MORE THAN (2) HOURS. # CH1-H-000-000, NUMBER OF SWITCHES PER STATION, SEE DRAWINGS.
- 8 WIRE SWITCHES TOGETHER IN SERIES, FOR NUMBER OF SWITCHES SEE DRAWINGS.

GENERAL NOTES:

- 1. ALL DEVICES SHALL BE WIRED IN SERIES.
- 2. THE CONTRACTOR SHALL VERIFY THE EMS PROTOCOL AND INTERCONNECT THE LIGHTING CONTROL PANEL WITH THE BUS AS REQUIRED. CONTRACTOR SHALL PROVIDE ALL CABLES, ADAPTERS, AND PROGRAMMING FOR COMPLETE INTEGRATION WITH THE EMS.

3 SCHEMATIC LIGHTING CONTROL DIAGRAM

NO SCALE 16300-04

LIGHTING FIXTURE SCHEDULE										
TYPE	VOLTAGE	INPUT WATTAGE	MOUNTING	FIXTURE DESCRIPTION	MANUFACTURE	CATALOG #	#	CODE	NOTES	
L01	277	672	PENDANT	DECORATIVE COMPACT FLUORESCENT PENDANT FIXTURE WITH FOUR GLASS BOWLS. FIXTURE NOMINAL DIMENSIONS 17" HEIGHT X 84". PROVIDE WITH INTEGRAL ELECTRONIC DIMMING BALLAST.	MANNING	CF-833 SERIES OR EQUAL	16	42W COMPACT FLUORESCENT TRIPLE TUBE		
L02	277	47	RECESSED CEILING	2'X2' CEILING MOUNTED LED DIRECT/INDIRECT FIXTURE WITH 3500 LUMEN OUTPUT AND INTEGRAL ELECTRONIC DIMMING DRIVER.	FOCAL POINT	FLUL22 SERIES OR EQUAL	-	INTEGRAL LED		
L03	277	51	RECESSED CEILING	ALUMINUM 4" APERTURE RECESSED SLOT LED, FIXTURE LENGTH 4" NOMINAL, WITH 4000 LUMEN OUTPUT. PROVIDE WITH INTEGRAL ELECTRONIC DIMMING DRIVER.	FOCAL POINT	FSM4L SERIES OR EQUAL	-	INTEGRAL LED		
L04	277	71	PENDANT	DECORATIVE LED PENDANT FIXTURE WITH INTEGRAL DIMMING DRIVER AND 4000 LUMEN OUTPUT, NOMINAL 2" DIAMETER HOUSINGS.	FOCAL POINT	FSDL22 SERIES OR EQUAL	-	INTEGRAL LED		
L05	277	98	PENDANT	DECORATIVE LED PENDANT FIXTURE WITH INTEGRAL DIMMING DRIVER AND 3300 LUMEN OUTPUT, NOMINAL 4" LENGTH X 3" HEIGHT X 6.5" WIDTH.	FOCAL POINT	FTHPL SERIES OR EQUAL	-	INTEGRAL LED		
L06	277	57	RECESSED CEILING	RECESSED LED DOWNLIGHT WITH 6" DIAMETER APERTURE, WIDE FLOOD DISTRIBUTION REFLECTOR, 50 DEGREE CUTOFF TO SOURCE AND SOURCE IMAGE AND INTEGRAL DIMMING DRIVER. 4000 LUMEN FIXTURE OUTPUT.	FOCAL POINT	FL6HRO SERIES OR EQUAL	-	INTEGRAL LED		
L07	277	151	PENDANT	ALUMINUM 4" WIDTH DECORATIVE DIRECT/INDIRECT SLOT LED PENDANT FIXTURE IN BRIGHT COLOR FINISHES. FIXTURE LENGTH 12" NOMINAL, WITH 2200 LUMEN OUTPUT. PROVIDE WITH INTEGRAL ELECTRONIC DIMMING DRIVER.	SELUX	LTD1 SERIES OR EQUAL	-	INTEGRAL LED		
L08	277	50	CEILING SURFACE	CEILING SURFACE MOUNT 2" LONG VERTICAL RESISTANT HOUSING STAR LIGHTING FIXTURE WITH 4500 LUMEN OUTPUT. PROVIDE WITH INTEGRAL ELECTRONIC DIMMING DRIVER.	KENALL	MLH48 SERIES OR EQUAL	-	INTEGRAL LED		
L09	277	45	RECESSED CEILING	1'X4' CEILING MOUNTED LED LENSED TROFFER FIXTURE WITH 3000 LUMEN OUTPUT AND INTEGRAL ELECTRONIC DIMMING DRIVER.	COLUMBIA	LLT14 SERIES OR EQUAL	-	INTEGRAL LED		
L10	277	26	SURFACE	2" LONG ABOVE VANITY DIRECT/INDIRECT LED FIXTURE WITH 1500 LUMEN OUTPUT AND INTEGRAL DIMMING DRIVER.	H.E. WILLIAMS	VM4JD SERIES OR EQUAL	-	INTEGRAL LED		
L11	277	55	CEILING SURFACE	4" LONG LENSED LED STRIP LIGHT FIXTURE WITH 6100 LUMEN OUTPUT AND INTEGRAL DIMMING DRIVER.	COLUMBIA	LCL SERIES OR EQUAL	-	INTEGRAL LED		
L12	277	8	SURFACE	SMALL PROFILE ADJUSTABLE LED ACCENT LIGHT WITH INTEGRAL DIMMING DRIVER AND TRANSFORMER. WET LOCATION LISTED.	BK LIGHTING	AR-LED-TR SERIES OR EQUAL	-	INTEGRAL LED		
L13	277	8	IN-GRADE	4" DIAMETER FLUSH MOUNT LED UPLIGHT WITH INTEGRAL DIMMING DRIVER AND TRANSFORMER. WET LOCATION LISTED.	BK LIGHTING	UL-F-AR-LED SERIES OR EQUAL	-	INTEGRAL LED		
L14	277	47	WALL SURFACE	PEDESTRIAN SCALE DECORATIVE WALL MOUNT LED FIXTURES ABOVE HIGH WINDOW AREA. 4500 LUMEN FIXTURE OUTPUT. WET LOCATION LISTED.	AAL	UCM SERIES OR EQUAL	-	INTEGRAL LED		
L16	277	163	CEILING SURFACE	LED ROUGH SERVICE CEILING MOUNT GARAGE LIGHT WITH 20% UPLIGHT COMPONENT AND INTEGRAL OCCUPANCY SENSOR. WET LOCATION LISTED.	RAB LIGHTING	PRT SERIES OR EQUAL	-	INTEGRAL LED		
X01	277	4	CEILING SURFACE	EDGE-LIT, GREEN LED UNIVERSAL MOUNT EXIT SIGN WITH UNIVERSAL ARROWS, POLISHED CLEAR ACRYLIC PANEL WITH EVENLY ILLUMINATED LETTERS.	DUAL LITE	LE SERIES OR EQUAL	-	INTEGRAL LED		

GENERAL NOTE:

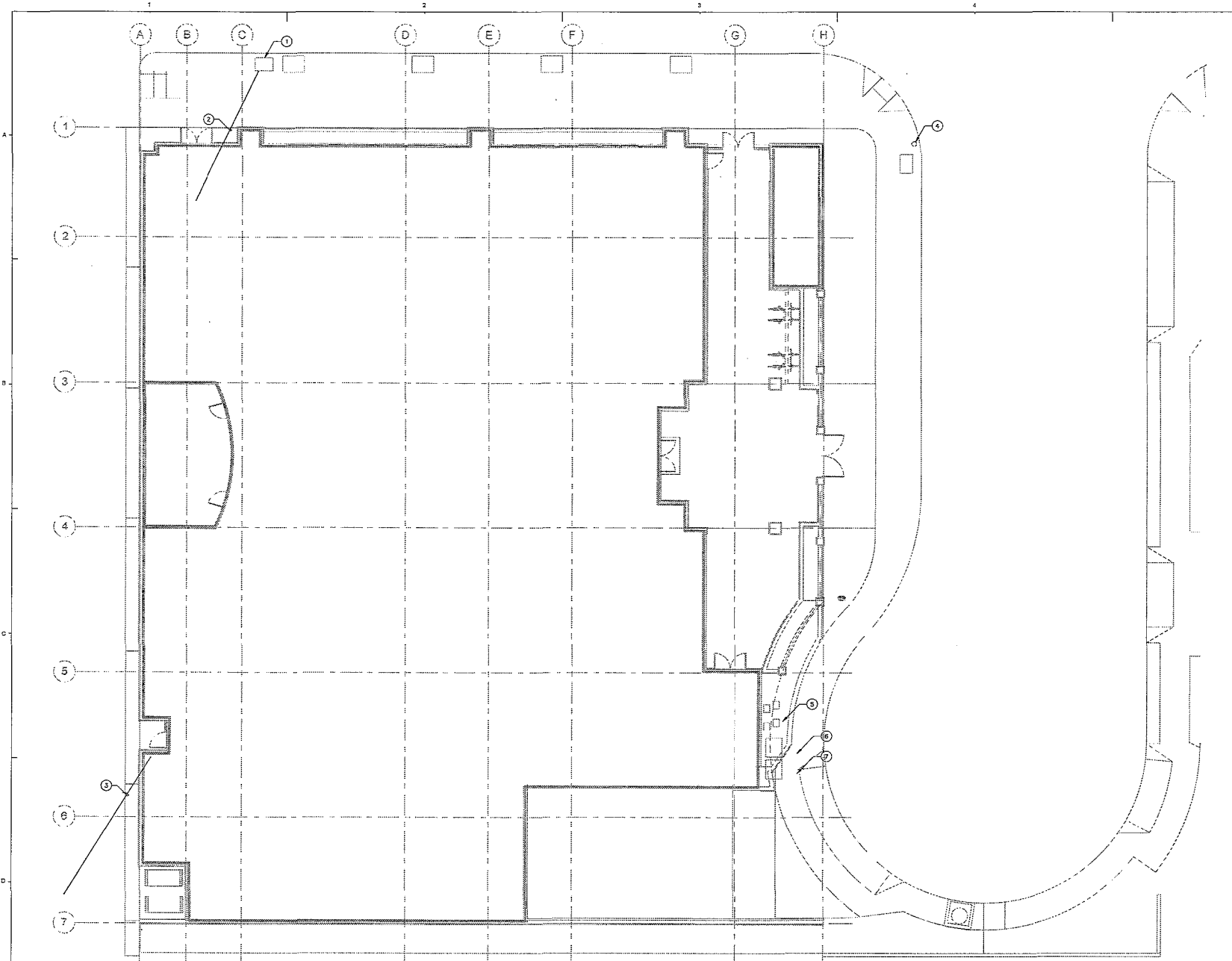
- 1. ALL FIXTURES SHALL BE CAPABLE OF BEING SUPPLIED WITH EMERGENCY BATTERY PACKS SHALL BE FURNISHED WITH 90-MIN. MINIMUM BACK-UP CAPABILITY AND PROVIDING NO LESS THAN 1/3 OF THE FULL LUMEN OUTPUT OF THE FIXTURE. TEST SWITCHES TO BE INTEGRAL TO FIXTURE, NOT REMOTE MOUNTED.
- 2. ALL FIXTURE FINISHES AND COLORS TO BE COORDINATED WITH ARCHITECT.

1 LUMINAIRE SCHEDULE

NO SCALE

30% BRIDGING DOCUMENTS
JANUARY 8, 2016


		ARCHITECTS MOSHER DREW 4200 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92110 TELEPHONE: (619) 223-2400 FAX NO.: (619) 223-0377	
CITY CONTRACT SPECIFICATIONS NO.		Project Number: 04012.00 C.L.P. NO.	
MISSION HILLS / HILLCREST LIBRARY SAN DIEGO PUBLIC LIBRARY			
SHEET TITLE LUMINAIRE SCHEDULE		SHEET NO: E0.2	
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET OF		W.D. NO.	
DESIGNER: _____ DATE: _____ SECTION HEAD: _____		PROJECT MANAGER: _____	
CHECKED BY: _____ DATE: _____ CONTROL CERTIFICATION: _____		CONTRACTOR: _____ DATE STARTED: _____ 39037-D	
INSPECTOR: _____ DATE COMPLETED: _____			



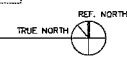
- KEY NOTES:**
- ① EXISTING SDC&E UTILITY VAULT.
 - ② PROVIDE SECONDARY UTILITY CONDUITS FROM SDC&E VAULT TO MAIN ELECTRICAL SWITCHBOARD AND METERING LOCATION IN BUILDING MAIN ELECTRICAL ROOM PER UTILITY STANDARDS.
 - ③ PROVIDE LOW VOLTAGE SYSTEM SERVICE CONDUITS FROM PROVIDER OVERSIDE SERVICE LOCATION TO BUILDING WIRE ROOM PER PROVIDER STANDARDS.
 - ④ EXISTING STREET LIGHT AND TRAFFIC SIGNAL POLE AND POWER SUPPLY CABINET TO REMAIN, PROTECT IN PLACE DURING CONSTRUCTION.
 - ⑤ EXISTING SDC&E TRANSFORMERS AND AT&T CONNECTION BOXES TO REMAIN, PROTECT IN PLACE DURING CONSTRUCTION.
 - ⑥ PROVIDE POWER CONNECTION TO ELECTRONIC OPEN/CLOSED SIGN SET, PROVIDE 2" CONDUIT TO SERVER ROOM FOR CONTROLS.
 - ⑦ PROVIDE POWER CONNECTION TO CARD READER FOR STAFF USE, PROVIDE 2" CONDUIT TO SERVER ROOM FOR CONTROLS.

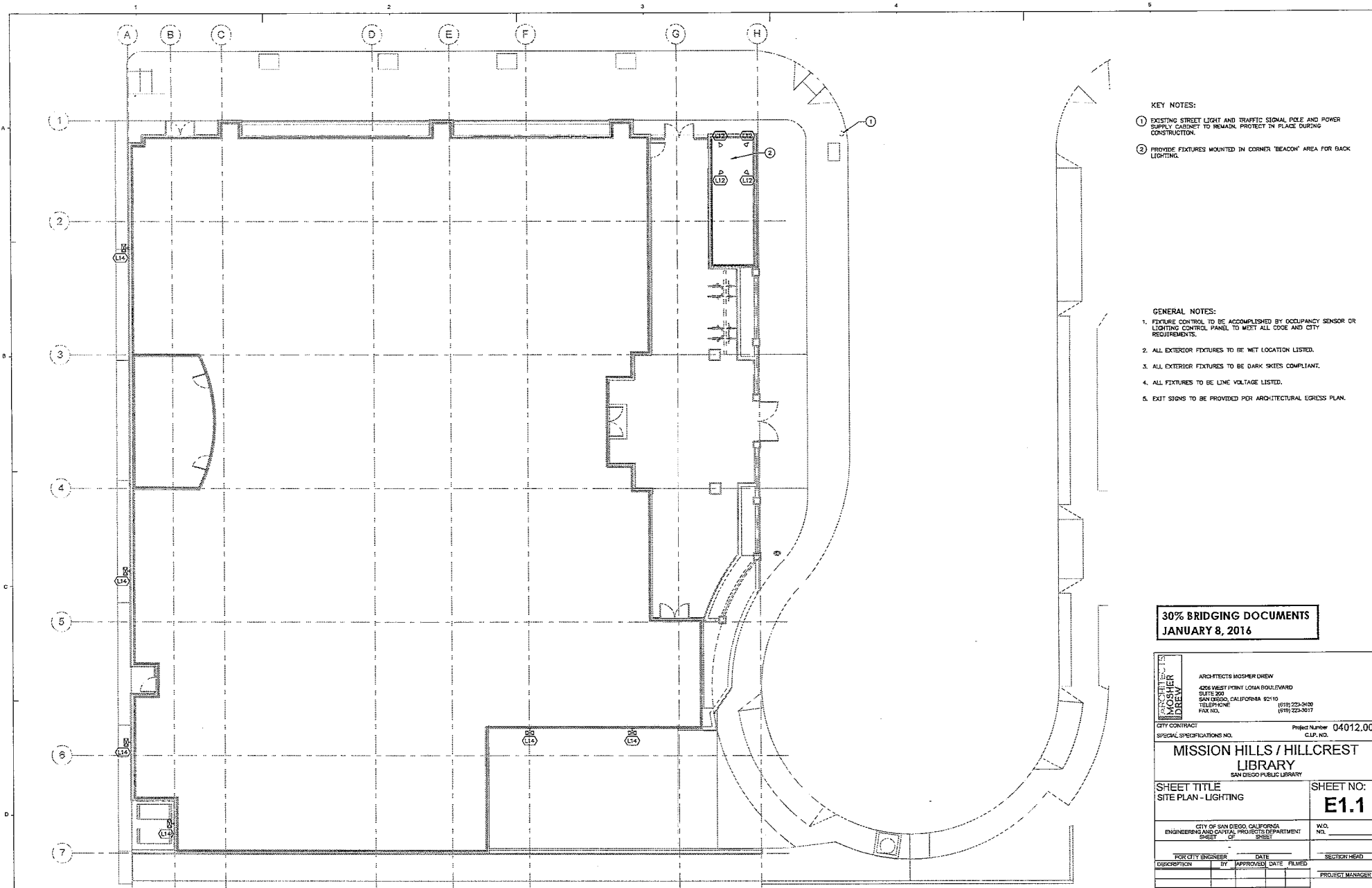
- GENERAL NOTES:**
1. ALL WORK SHALL BE IN ACCORDANCE WITH CITY CODES, NATIONAL ELECTRICAL CODE, STATE OF CALIFORNIA ENERGY CONSERVATION STANDARDS AND ALL OTHER APPLICABLE CODES.
 2. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TRANSPORTATION & SERVICES NECESSARY FOR COMPLETION OF THE WORK. ALL MATERIALS & WORK SHALL BE IN COMPLIANCE WITH ALL APPLICABLE CODES AND GOVERNING REGULATIONS & SHALL MEET WITH THE APPROVAL OF THE CITY AND STATE FIRE MARSHAL.
 3. PROVIDE WEATHERPROOF SANCTION BOXES, CONDUIT, FITTINGS AND ENCLOSURES AT ALL EXTERIOR LOCATIONS AND ALL WET OR DAMP INTERIOR LOCATIONS.
 4. VERIFY UTILITY COMPANY REQUIREMENTS FOR ALL WORK INCLUDING MODIFIED OR NEW SERVICE ENTRANCES. ALL UTILITY SERVICES SHALL BE INSTALLED PER THE UTILITY COMPANY REQUIREMENTS. VERIFY FINAL CONSTRUCTION REQUIREMENTS WITH UTILITY COMPANY SERVICE PLANNERS.
 5. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY REPRESENTATIVE TO ESTABLISH PRE-CONSTRUCTION COORDINATION, OBTAIN ALL NECESSARY METERS AND/OR APPROVALS, AND SCHEDULE UTILITY WORK TO COORDINATE WITH THE CONSTRUCTION SCHEDULE.
 6. CONTRACTOR SHALL ENSURE THAT ALL CONDUIT, FITTINGS, FITTINGS, AND DEVICES LOCATED IN PUBLIC AREAS ARE TAMPERPROOF AND PROTECTED FROM PHYSICAL DAMAGE.

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

	ARCHITECTS MOSHER DREW 4000 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92110 TELEPHONE (619) 223-2400 FAX NO. (619) 223-3017	
	CITY CONTRACT SPECIAL SPECIFICATIONS NO.	Project Number 04012.00 C.I.P. NO.
MISSION HILLS / HILLCREST LIBRARY SAN DIEGO PUBLIC LIBRARY		
SHEET TITLE SITE PLAN - UTILITIES		SHEET NO: E1.0
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET OF SHEET		
FOR CITY ENGINEER DESCRIPTION	DATE BY [APPROVED] DATE FILMED	SECTION HEAD PROJECT MANAGER
CONTRACTOR INSPECTOR		DATE STARTED DATE COMPLETED
		39037-D

① SITE PLAN - UTILITIES
1/8" = 1'-0"





- KEY NOTES:**
- ① EXISTING STREET LIGHT AND TRAFFIC SIGNAL POLE AND POWER SUPPLY CABINET TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
 - ② PROVIDE FIXTURES MOUNTED IN CORNER "BEACON" AREA FOR BACK LIGHTING.

- GENERAL NOTES:**
- 1. FIXTURE CONTROL TO BE ACCOMPLISHED BY OCCUPANCY SENSOR OR LIGHTING CONTROL PANEL TO MEET ALL CODE AND CITY REQUIREMENTS.
 - 2. ALL EXTERIOR FIXTURES TO BE WET LOCATION LISTED.
 - 3. ALL EXTERIOR FIXTURES TO BE DARK SKIES COMPLIANT.
 - 4. ALL FIXTURES TO BE LOW VOLTAGE LISTED.
 - 5. EXIT SIGNS TO BE PROVIDED PER ARCHITECTURAL EGRESS PLAN.

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

ARCHITECTS MODHER DREW
406 WEST POINT LOMA BOULEVARD
SUITE 200
SAN DIEGO, CALIFORNIA 92110
TELEPHONE (619) 223-2400
FAX NO. (619) 223-2077

CITY CONTRACT: Project Number 04012.00
SPECIAL SPECIFICATIONS NO. CLIP NO.

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SHEET TITLE
SITE PLAN - LIGHTING

SHEET NO.:
E1.1

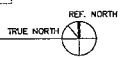
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CONSTRUCTION DEPARTMENT
SHEET NO. PROJECT DEPARTMENT SHEET

W.D. NO. _____

DATE	SECTION HEAD
BY	PROJECT MANAGER
APPROVED	CONTROL CERTIFICATION
DATE FILMED	39037-D

CONTRACTOR: _____ DATE STARTED: _____
INSPECTOR: _____ DATE COMPLETED: _____

1 SITE PLAN - LIGHTING
1/8" = 1'-0"





- KEY NOTES:**
- 1 PROVIDE ELEVATOR LANDING LED FIXTURES TO MEET CODE.
 - 2 PROVIDE POWER CONNECTION TO BOOKSHELF MOUNT LIGHT FIXTURES.

- GENERAL NOTES:**
1. FIXTURE CONTROL TO BE ACCOMPLISHED BY OCCUPANCY SENSOR OR LIGHTING CONTROL PANEL TO MEET ALL CODE AND CITY REQUIREMENTS.
 2. ALL EXTERIOR FIXTURES TO BE WET LOCATION LISTED.
 3. ALL EXTERIOR FIXTURES TO BE DARK SKIES COMPLIANT.
 4. ALL FIXTURES TO BE LINE VOLTAGE LISTED.
 5. EXIT SIGNS TO BE PROVIDED PER ARCHITECTURAL EGRESS PLAN.

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

ARCHITECTS MOSHER DREW
 4325 WEST POINT LOMA BOULEVARD
 SUITE 200
 SAN DIEGO, CALIFORNIA 92118
 TELEPHONE (619) 223-2400
 FAX NO. (619) 223-3017

CITY CONTRACT SPECIAL SPECIFICATIONS NO. PROJECT NUMBER 04012.00
 C.L.P. NO.

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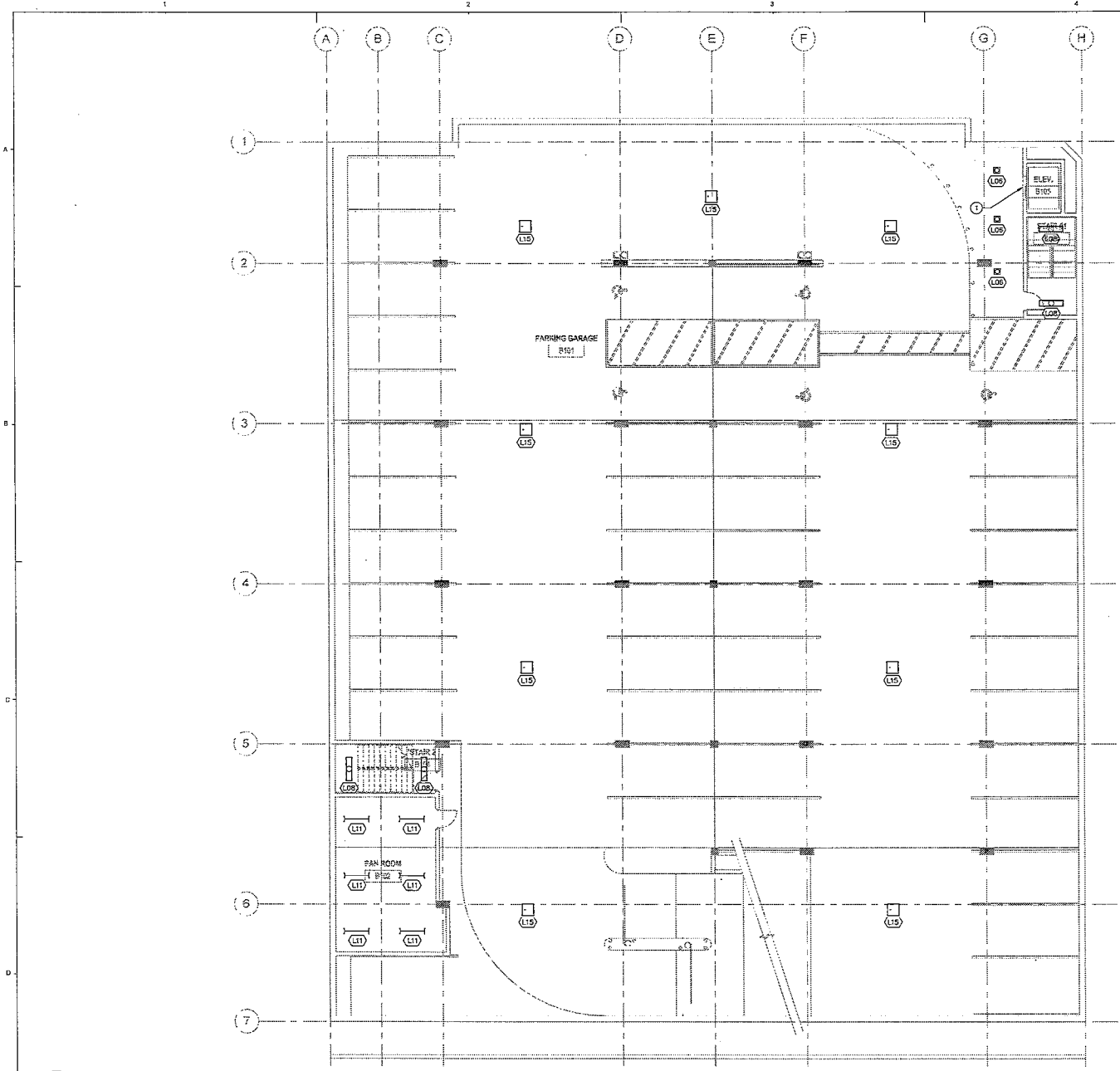
SHEET TITLE: LEVEL 1 - LIGHTING PLAN
 SHEET NO.: E2.0

CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
 SHEET

FOR CITY ENGINEER: DATE: SECTION HEAD:
 DESCRIPTION: BY: APPROVED: DATE: FILMED: PROJECT MANAGER:

CONTRACTOR: DATE STARTED: CONTROL CERTIFICATION:
 INSPECTOR: DATE COMPLETED: 39037-D

1 LEVEL 1 - LIGHTING PLAN
 1/8" = 1'-0"



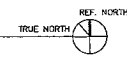
KEY NOTES:
 ① PROVIDE ELEVATOR LANDING LED FIXTURES TO MEET CODE.

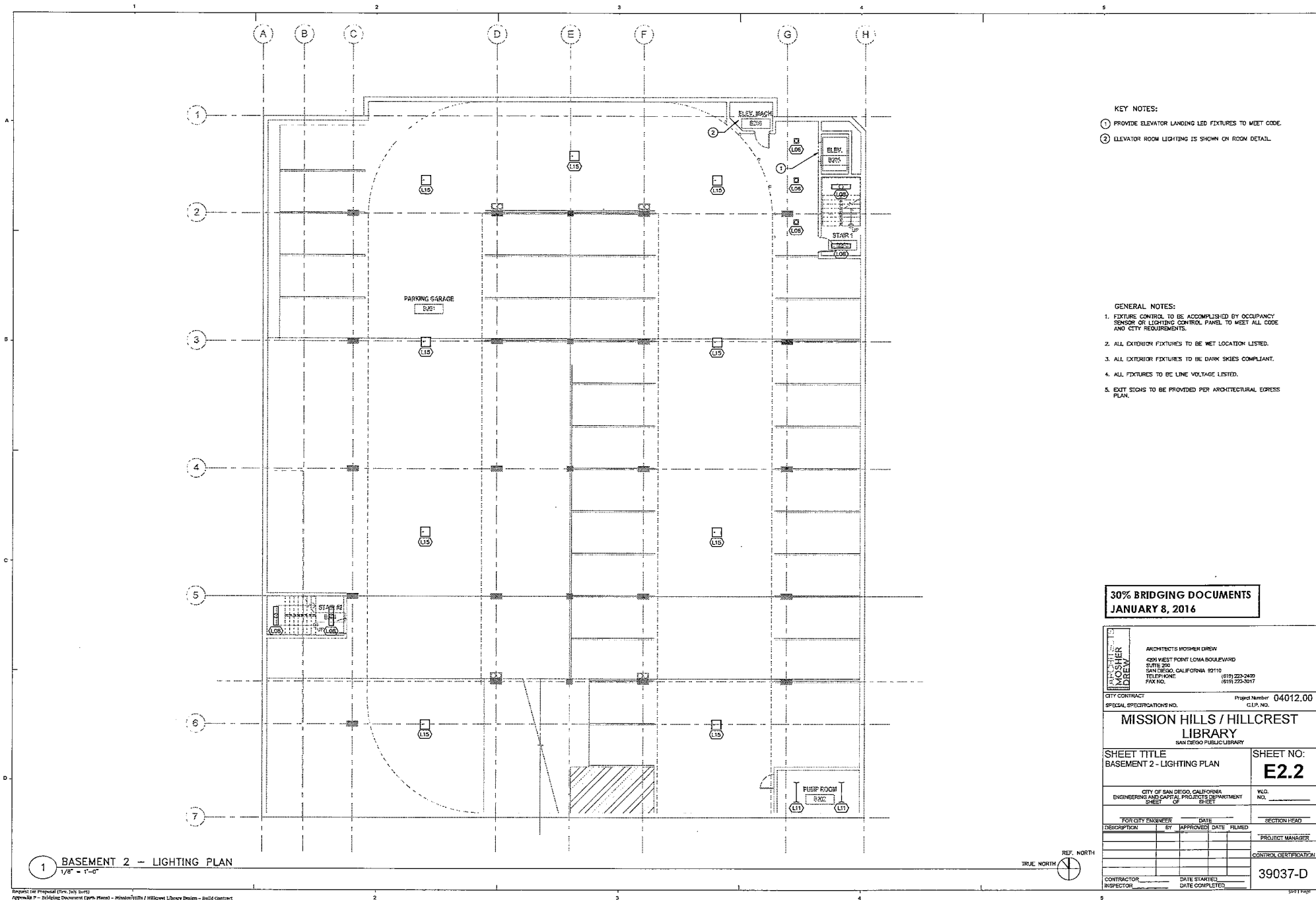
GENERAL NOTES:
 1. FIXTURE CONTROL TO BE ACCOMPLISHED BY OCCUPANCY SENSOR OR LIGHTING CONTROL PANEL TO MEET ALL CODE AND CITY REQUIREMENTS.
 2. ALL EXTERIOR FIXTURES TO BE WET LOCATION LISTED.
 3. ALL EXTERIOR FIXTURES TO BE DARK SKIES COMPLIANT.
 4. ALL FIXTURES TO BE LINE VOLTAGE LISTED.
 5. EXIT SIGNS TO BE PROVIDED PER ARCHITECTURAL EGRESS PLAN.

**30% BRIDGING DOCUMENTS
 JANUARY 8, 2016**

	ARCHITECTS MOSENER DREW 4208 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92110 TELEPHONE: (619) 223-2000 FAX NO.: (619) 223-3017	Project Number: 04012.00 C.E.P. NO.
	CITY CONTRACT SPECIAL SPECIFICATIONS NO.	Project Number: 04012.00 C.E.P. NO.
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SHEET TITLE BASEMENT 1 - LIGHTING PLAN		SHEET NO.: E2.1
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT <small>OF SHEET</small>		W.D. NO.
FOR CITY ENGINEER: _____ DATE: _____		SECTION HEAD: _____
DESCRIPTION: _____ BY: _____ APPROVED: _____ DATE: _____ FILED: _____		PROJECT MANAGER: _____
CONTRACTOR: _____ DATE STARTED: _____ INSPECTOR: _____ DATE COMPLETED: _____		CONTROL CERTIFICATION: _____ 39037-D

1 BASEMENT 1 - LIGHTING PLAN
 1/8" = 1'-0"





- KEY NOTES:**
- ① PROVIDE ELEVATOR LANDING LIGHT FIXTURES TO MEET CODE.
 - ② ELEVATOR ROOM LIGHTING IS SHOWN ON ROOM DETAIL.

- GENERAL NOTES:**
- 1. FIXTURE CONTROL TO BE ACCOMPLISHED BY OCCUPANCY SENSOR OR LIGHTING CONTROL PANEL TO MEET ALL CODE AND CITY REQUIREMENTS.
 - 2. ALL EXTERIOR FIXTURES TO BE WET LOCATION LISTED.
 - 3. ALL EXTERIOR FIXTURES TO BE DARK SKIES COMPLIANT.
 - 4. ALL FIXTURES TO BE LINE VOLTAGE LISTED.
 - 5. EXIT SIGNS TO BE PROVIDED PER ARCHITECTURAL EXPRESS PLAN.

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

ARCHITECT'S MASTER DRAW
4205 WEST POINT LOMA BOULEVARD
SUITE 200
SAN DIEGO, CALIFORNIA 92110
TELEPHONE: (619) 223-2422
FAX NO.: (619) 223-3017

CITY CONTRACT: _____ Project Number: 04012.00
SPECIAL SPECIFICATIONS NO. _____ C.L.P. NO. _____

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SHEET TITLE: BASEMENT 2 - LIGHTING PLAN
SHEET NO.: **E2.2**

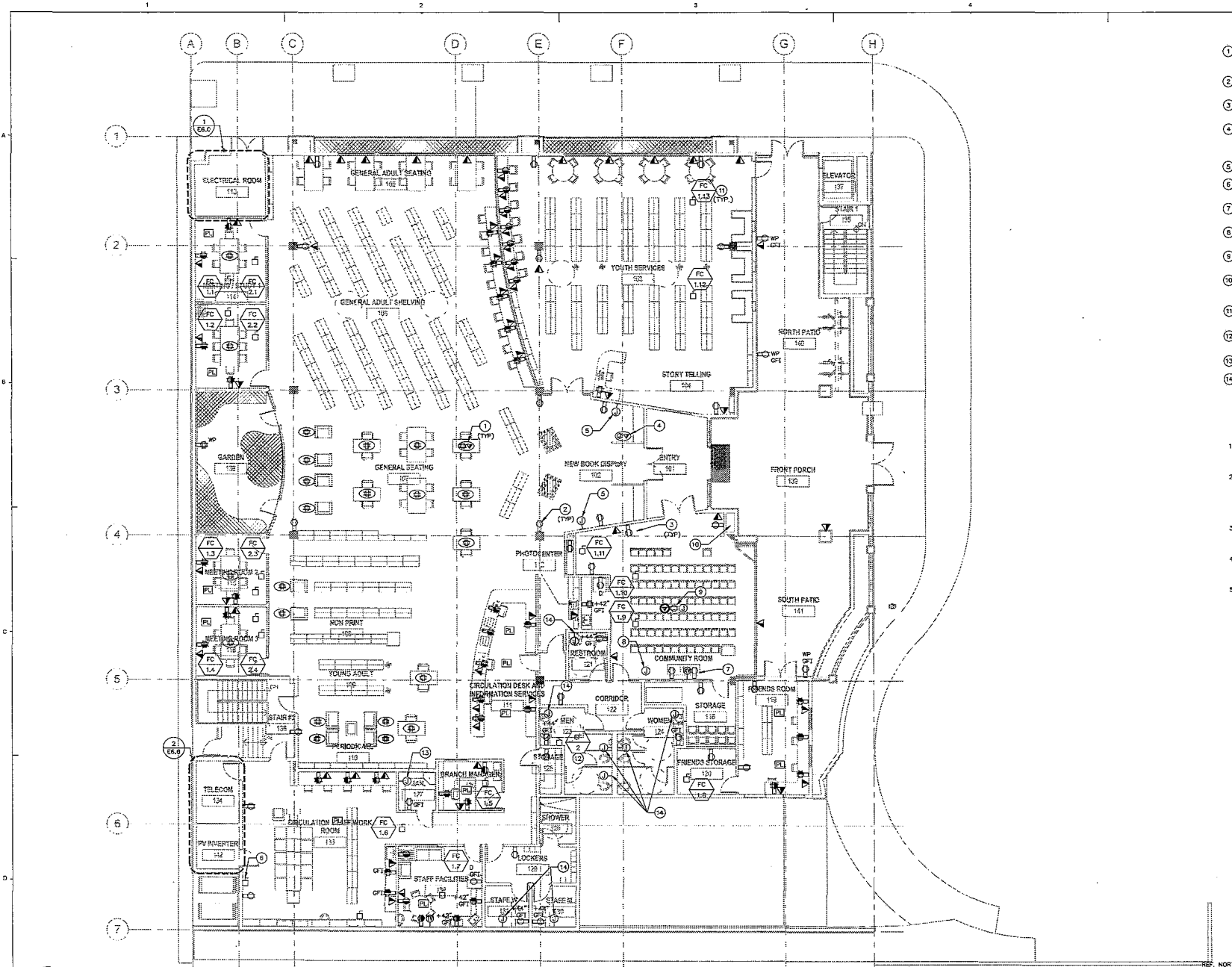
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET OF _____
Y.C. NO. _____

FOR CITY ENGINEER: _____ DATE: _____ SECTION HEAD: _____
DESCRIPTION: _____ BY: _____ APPROVED: _____ DATE FILMED: _____ PROJECT MANAGER: _____

CONTROL CERTIFICATION: _____
CONTRACTOR: _____ DATE STARTED: _____
INSPECTOR: _____ DATE COMPLETED: _____

39037-D

1 BASEMENT 2 - LIGHTING PLAN
1/8" = 1'-0"



- KEY NOTES:**
1. PROVIDE FIRE-RATED POKE-THROUGH BOXES AT THESE LOCATIONS WITH RECESSED JACKS AND SCRUB-WATER RESISTANT COVERS, W/REMOLED EVOLUTION BAT SERIES OR EQUAL.
 2. VERIFY MOUNTING HEIGHTS AND LOCATIONS OF ALL DEVICES PER CONSTRUCTION DRAWINGS.
 3. COORDINATE LOCATIONS OF DEVICES MOUNTED ADJACENT TO OTHER DEVICES WITH CONSTRUCTION DRAWINGS.
 4. PROVIDE FIRE-RATED POKE-THROUGH BOX AT THIS LOCATION FOR SMOKE DETECTOR GATE USE, WITH RECESSED JACKS AND SCRUB-WATER RESISTANT COVER, W/REMOLED EVOLUTION BAT SERIES OR EQUAL.
 5. PROVIDE POWER TO DIGITAL DISPLAY AT THIS LOCATION.
 6. PROVIDE NEMA 1 30A 3P FUSED DISCONNECT AND POWER CONNECTION TO BOOK SORTER.
 7. PROVIDE POWER AND AV SYSTEM CONNECTION FOR LARGE FLAT SCREEN TV.
 8. PROVIDED POWER FOR CONCEALED CEILING MOUNTED ROLL DOWN SCREEN SYSTEM.
 9. PROVIDE OUTLET, DATA CONNECTION, AND AV SYSTEM CONNECTION FOR CEILING MOUNTED PROJECTOR.
 10. PROVIDE TWO DEDICATED QUAD RECEPTACLE OUTLETS, FOUR DATA CONNECTIONS, AND AV SYSTEM PATHWAYS FOR AV EQUIPMENT CLOSET IN THIS LOCATION.
 11. PROVIDE NEMA 1 30A 2P FUSED DISCONNECT AND POWER CONNECTION TO MECHANICAL 'FC' UNIT.
 12. PROVIDE NEMA 1 60A 3P FUSED DISCONNECT AND POWER CONNECTION TO MECHANICAL 'EF' UNIT.
 13. PROVIDE 120V CONNECTION TO WATER HEATER CONTROLS.
 14. PROVIDE 120V CONNECTION TO PLUMBING 'L', 'UR' AND 'WC' UNITS.

- GENERAL NOTES:**
1. ALL WORK SHALL BE IN ACCORDANCE WITH CITY CODES, NATIONAL ELECTRICAL CODE, STATE OF CALIFORNIA ENERGY CONSERVATION STANDARDS AND ALL OTHER APPLICABLE CODES.
 2. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TRANSPORTATION & SERVICES NECESSARY FOR COMPLETION OF THE WORK. ALL MATERIALS & WORK SHALL BE IN COMPLIANCE WITH ALL APPLICABLE CODES AND GOVERNING REGULATIONS & SHALL MEET WITH THE APPROVAL OF THE CITY AND STATE FIRE MARSHAL.
 3. PROVIDE WEATHERPROOF JUNCTION BOXES, CONDUIT, FITTINGS AND ENCLOSURES AT ALL EXTERIOR LOCATIONS AND ALL WET OR DAMP INTERIOR LOCATIONS.
 4. RECEPTACLE CONTROL IN OFFICE AND SUPPORT AREAS TO BE ACCOMPLISHED BY OCCUPANT SENSOR OR LOAD CONTROLLER TO MEET ALL CODE REQUIREMENTS.
 5. CONTRACTOR SHALL ENSURE THAT ALL CONDUIT, FITTINGS, FITTINGS, AND DEVICES LOCATED IN PUBLIC AREAS ARE TAMPERPROOF AND PROTECTED FROM PHYSICAL DAMAGE. CONDUIT FOR CIRCUITS TO ISLAND LOCATIONS SUCH AS SHELVING AND FLOOR POKE-THRU DEVICES SHALL BE ROUTED UNDER SLAB.

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

ARCHITECTS MOSHER OSW
4205 WEST POINT LOMA BOULEVARD
SUITE 200
SAN DIEGO, CALIFORNIA 92110
TELEPHONE (619) 224-2600
FAX NO. (619) 225-2617

CITY CONTRACT SPECIAL SPECIFICATIONS NO. Project Number 04012.00 C.S.P. NO.

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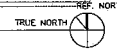
SHEET TITLE LEVEL 1 - POWER PLAN **SHEET NO:** E3.0

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET OF

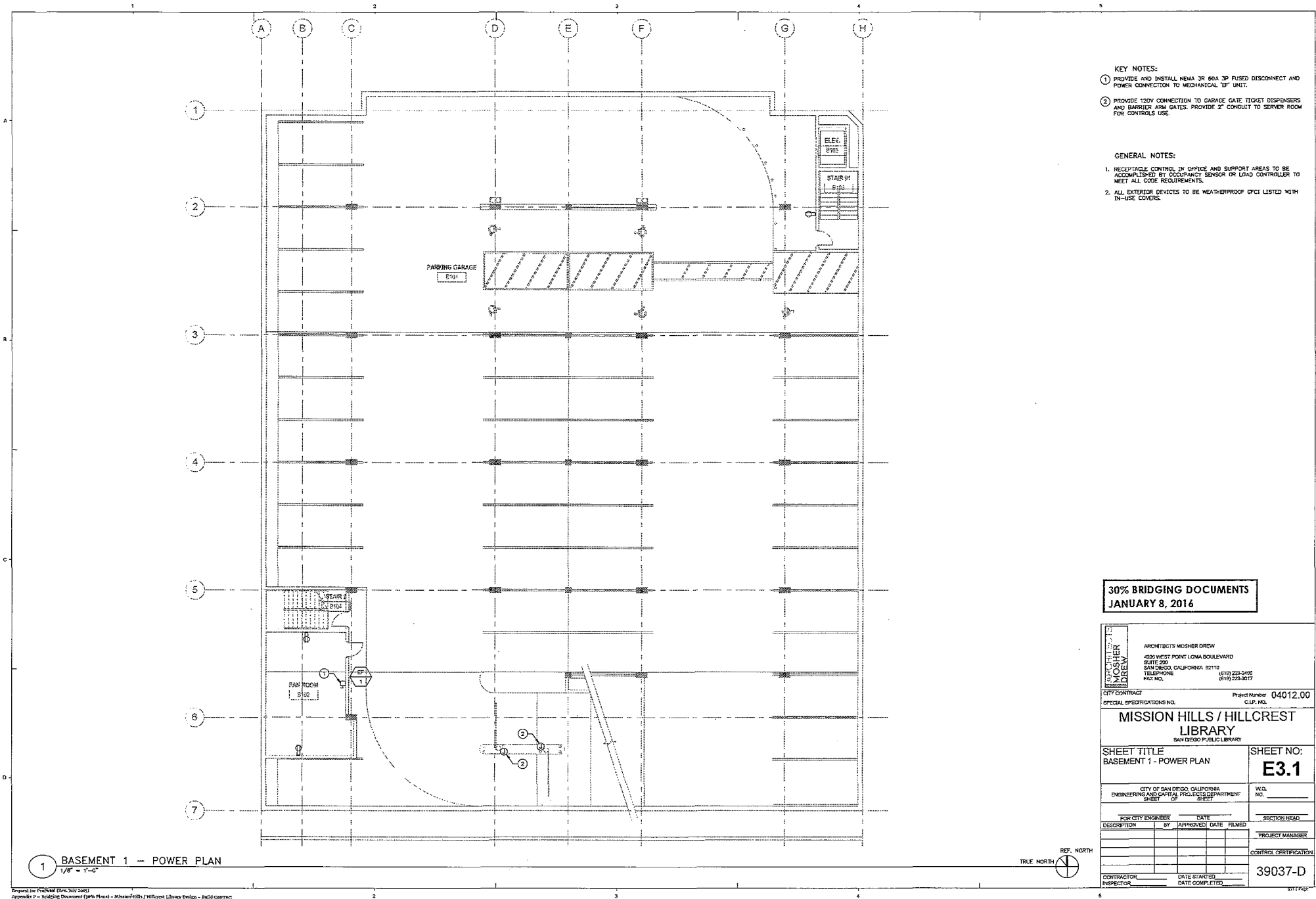
DATE	BY	SECTION HEAD

CONTRACTOR **DATE STARTED** **39037-D**
INSPECTOR **DATE COMPLETED**

1 LEVEL 1 - POWER PLAN
1/8" = 1'-0"



Revised for Proposed (Rev. July 2015)
Appendix P - Bridging Document (30% Phase) - Mission Hills / Hillcrest Library design - NMS Contract



- KEY NOTES:**
1. PROVIDE AND INSTALL NEMA 3R 60A 3P FUSED DISCONNECT AND POWER CONNECTION TO MECHANICAL "EP" UNIT.
 2. PROVIDE 120V CONNECTION TO GARAGE GATE TICKET DISPENSERS AND BARRIER ARM GATES. PROVIDE 2" CONDUIT TO SERVER ROOM FOR CONTROLS USE.

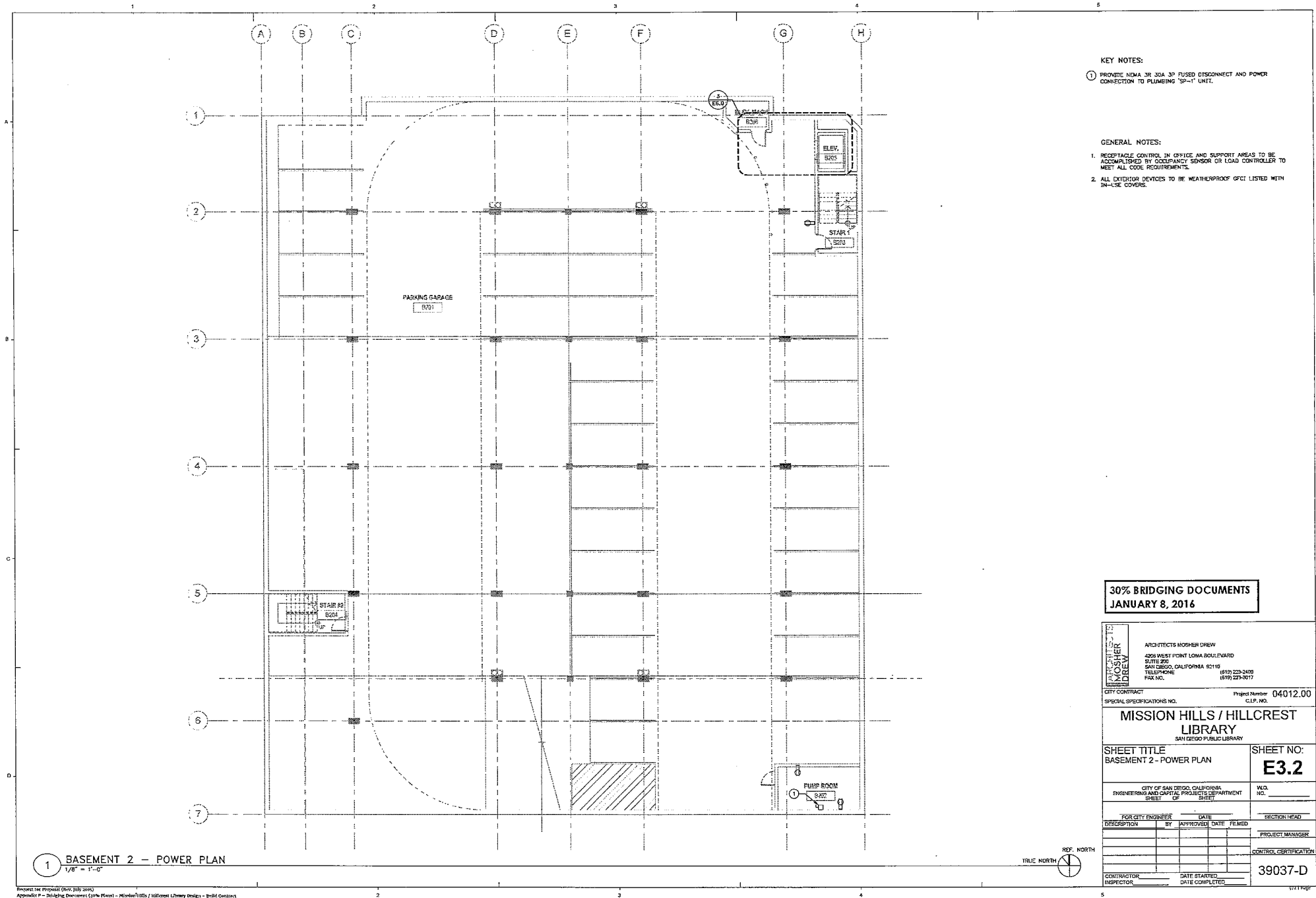
- GENERAL NOTES:**
1. RECEPTACLE CONTROL IN OFFICE AND SUPPORT AREAS TO BE ACCOMPLISHED BY OCCUPANCY SENSOR OR LOAD CONTROLLER TO MEET ALL CODE REQUIREMENTS.
 2. ALL EXTERIOR DEVICES TO BE WEATHERPROOF GFCI LISTED WITH IN-USE COVERS.

1 BASEMENT 1 -- POWER PLAN
1/8" = 1'-0"

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

	ARCHITECTS MOSHER DREW 4200 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92110 TELEPHONE (619) 224-2400 FAX NO. (619) 224-2677	Project Number 04012.00 C.I.P. NO.
	MISSION HILLS / HILLCREST LIBRARY SAN DIEGO PUBLIC LIBRARY	
SHEET TITLE BASEMENT 1 - POWER PLAN		SHEET NO.: E3.1
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET NO.		W.C. NO.
FOR CITY ENGINEER: _____ DATE _____ SECTION HEAD _____	BY: _____ APPROVED: _____ DATE _____ FILMED _____ PROJECT MANAGER _____	CONTROL CERTIFICATION _____
CONTRACTOR _____ DATE STARTED _____ INSPECTOR _____ DATE COMPLETED _____	39037-D	

Engineered by: [unreadable] (E.P.C.) 10/15/2015
 Appendix P -- Bridging Document (30% Plans) - Mission Hills / Hillcrest Library Design - Build Contract



KEY NOTES:

① PROVIDE NEMA 3R 30A 3P FUSED DISCONNECT AND POWER CONNECTION TO PLUMBING "SP-1" UNIT.

GENERAL NOTES:

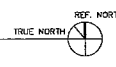
1. RECEPTACLE CONTROL IN OFFICE AND SUPPORT AREAS TO BE ACCOMPLISHED BY OCCUPANCY SENSOR OR LOAD CONTROLLER TO MEET ALL CODE REQUIREMENTS.

2. ALL EXTERIOR DEVICES TO BE WEATHERPROOF GFCI LISTED WITH IN-USE COVERS.

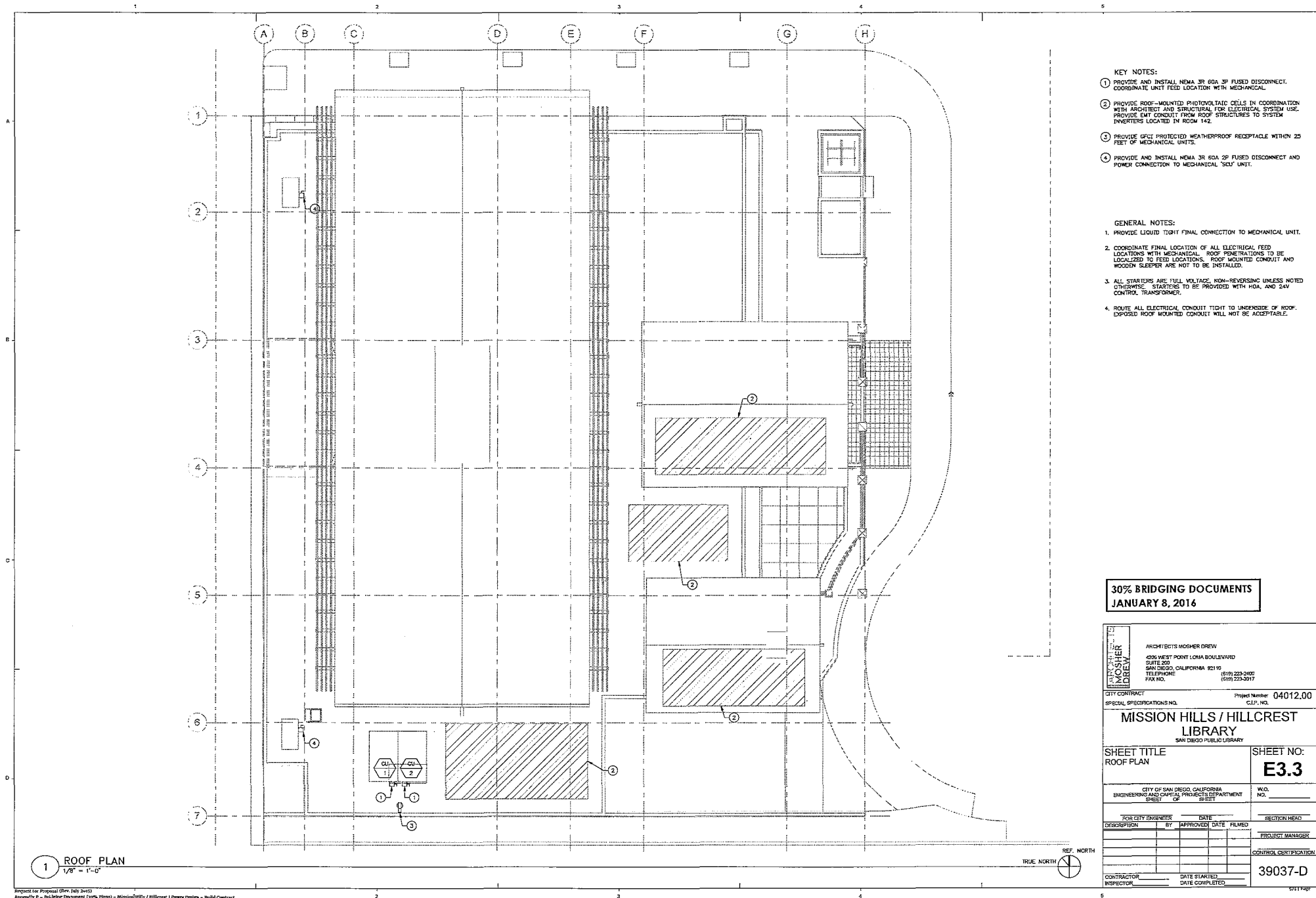
30% BRIDGING DOCUMENTS
JANUARY 8, 2016

	ARCHITECTS: MOSHER DREW 4209 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92116 TELEPHONE: (619) 223-2400 FAX NO.: (619) 223-2017	Project Number: 04012.00 C.L.P. NO.
	MISSION HILLS / HILLCREST LIBRARY SAN DIEGO PUBLIC LIBRARY	
SHEET TITLE BASEMENT 2 - POWER PLAN		SHEET NO.: E3.2
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET OF		W.D. NO.
FOR CITY ENGINEER: _____ DATE: _____ SECTION HEAD: _____		PROJECT MANAGER: _____
DESCRIPTION: _____ BY: _____ APPROVED: _____ DATE FILMED: _____		CONTROL CERTIFICATION: _____
CONTRACTOR: _____ INSPECTOR: _____ DATE STARTED: _____ DATE COMPLETED: _____		39037-D

① **BASEMENT 2 - POWER PLAN**
 1/8" = 1'-0"



Revised: 1st Proposal (Rev. July 2015)
 Appendix P - Bridging Document (30% Plan) - Mission Hills / Hillcrest Library Design - Build Contract



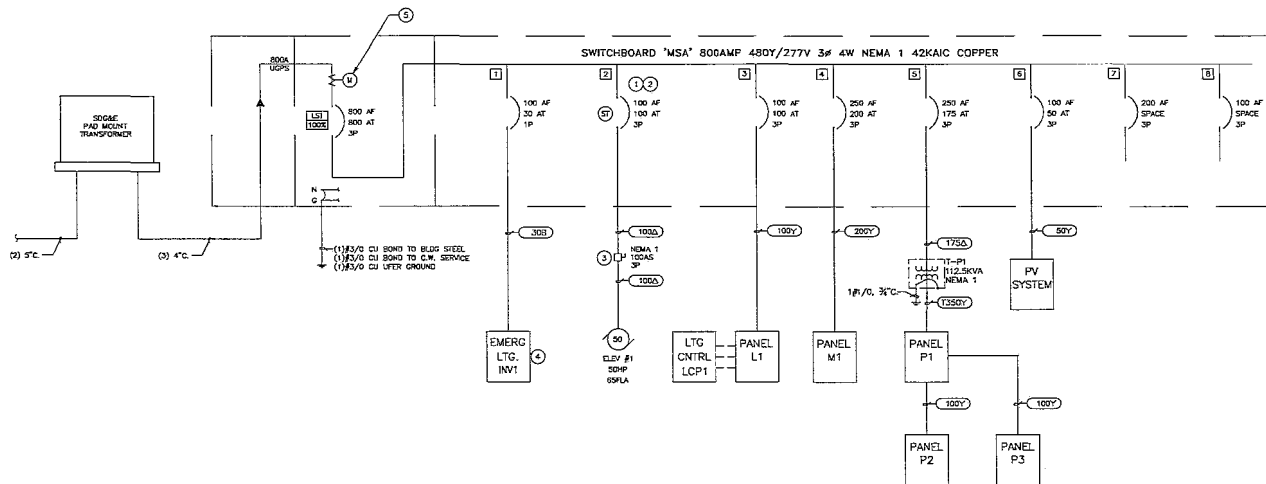
- KEY NOTES:**
1. PROVIDE AND INSTALL NEMA 3R 60A 2P FUSED DISCONNECT. COORDINATE UNIT FEED LOCATION WITH MECHANICAL.
 2. PROVIDE ROOF-MOUNTED PHOTOVOLTAIC CELLS IN COORDINATION WITH ARCHITECT AND STRUCTURAL FOR ELECTRICAL SYSTEM USE. PROVIDE EMT CONDUIT FROM ROOF STRUCTURES TO SYSTEM INVERTERS LOCATED IN ROOM 142.
 3. PROVIDE GFCI PROTECTED WEATHERPROOF RECEPTACLE WITHIN 25 FEET OF MECHANICAL UNITS.
 4. PROVIDE AND INSTALL NEMA 3R 60A 2P FUSED DISCONNECT AND POWER CONNECTION TO MECHANICAL 'SCU' UNIT.

- GENERAL NOTES:**
1. PROVIDE LIQUID TIGHT FINAL CONNECTION TO MECHANICAL UNIT.
 2. COORDINATE FINAL LOCATION OF ALL ELECTRICAL FEED LOCATIONS WITH MECHANICAL. ROOF PENETRATIONS TO BE LOCALIZED TO FEED LOCATIONS. ROOF MOUNTED CONDUIT AND WOODEN SLEEPER ARE NOT TO BE INSTALLED.
 3. ALL STARTERS ARE FULL VOLTAGE, NON-REVERSING UNLESS NOTED OTHERWISE. STARTERS TO BE PROVIDED WITH HOA AND 24V CONTROL TRANSFORMER.
 4. ROUTE ALL ELECTRICAL CONDUIT TIGHT TO UNDERSIDE OF ROOF. EXPOSED ROOF MOUNTED CONDUIT WILL NOT BE ACCEPTABLE.

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

	ARCHITECTS MOSHER DREW 4206 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92110 TELEPHONE (619) 233-2402 FAX NO. (619) 233-2017	PROJECT NUMBER: 04012.00 C.I.P. NO.
	MISSION HILLS / HILLCREST LIBRARY SAN DIEGO PUBLIC LIBRARY	
SHEET TITLE ROOF PLAN		SHEET NO. E3.3
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET NO.		W.O. NO.
YOUR CITY ENGINEER DESCRIPTION BY APPROVED DATE FILMED		ELECTRICAL HEAD PROJECT MANAGER
CONTRACTOR INSPECTOR		CONTROL CERTIFICATION 39037-D
DATE STARTED DATE COMPLETED		10/11/16

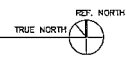
1 ROOF PLAN
1/8" = 1'-0"



- KEY NOTES:**
- ① PROVIDE AND INSTALL SHUNT TRIP CIRCUIT BREAKER FOR ELEVATOR FEED. PROVIDE 120V COIL AND DEDICATED CIRCUIT FOR CONTROL.
 - ② VERIFY SHUNT TRIP AND LOCK-OUT CONTROL WITH ELEVATOR CONTRACTOR, AND FIRE ALARM CONTRACTOR.
 - ③ FUSIBLE DISCONNECT WITH LOCKING DEVICE. PROVIDE FUSE PER ELEVATOR MANUFACTURER'S RECOMMENDATIONS.
 - ④ EMERGENCY LIGHTING INVERTER SEE SHEET ED.2 FOR MORE INFORMATION.
 - ⑤ SDG&E UTILITY METER.

- GENERAL NOTES:**
- 1. EACH TRANSFORMER SHALL USE THE NEAREST ELECTRODE AS THE SECONDARY GROUNDING SYSTEM. (I.E. BUILDING STEEL, COLD WATER PIPE).
 - 2. ALL EQUIPMENT IS NEW UNLESS NOTED OTHERWISE.
 - 3. ALL FUSES SHALL BE CURRENT LIMITING CLASS RK1, TYPE LPS-RK-SP (FAST ACTION 600V), OR CLASS RW1, TYPE LPH-RK-SP (FAST ACTION 250V).
 - 4. ALL CONDUCTORS RATED 600V OR 250V SHALL HAVE "TRW, TRHW" OR "TRHW" INSULATION WITH EMT CONDUIT, UNLESS NOTED OTHERWISE.
 - 5. ALL SWITCHGEAR AND EQUIPMENT SHALL BE FULLY RATED FOR THE AVAILABLE FAULT CURRENT.
 - 6. ALL EQUIPMENT INSTALLATIONS SHALL BE IN ACCORDANCE WITH UTILITY REQUIREMENTS.

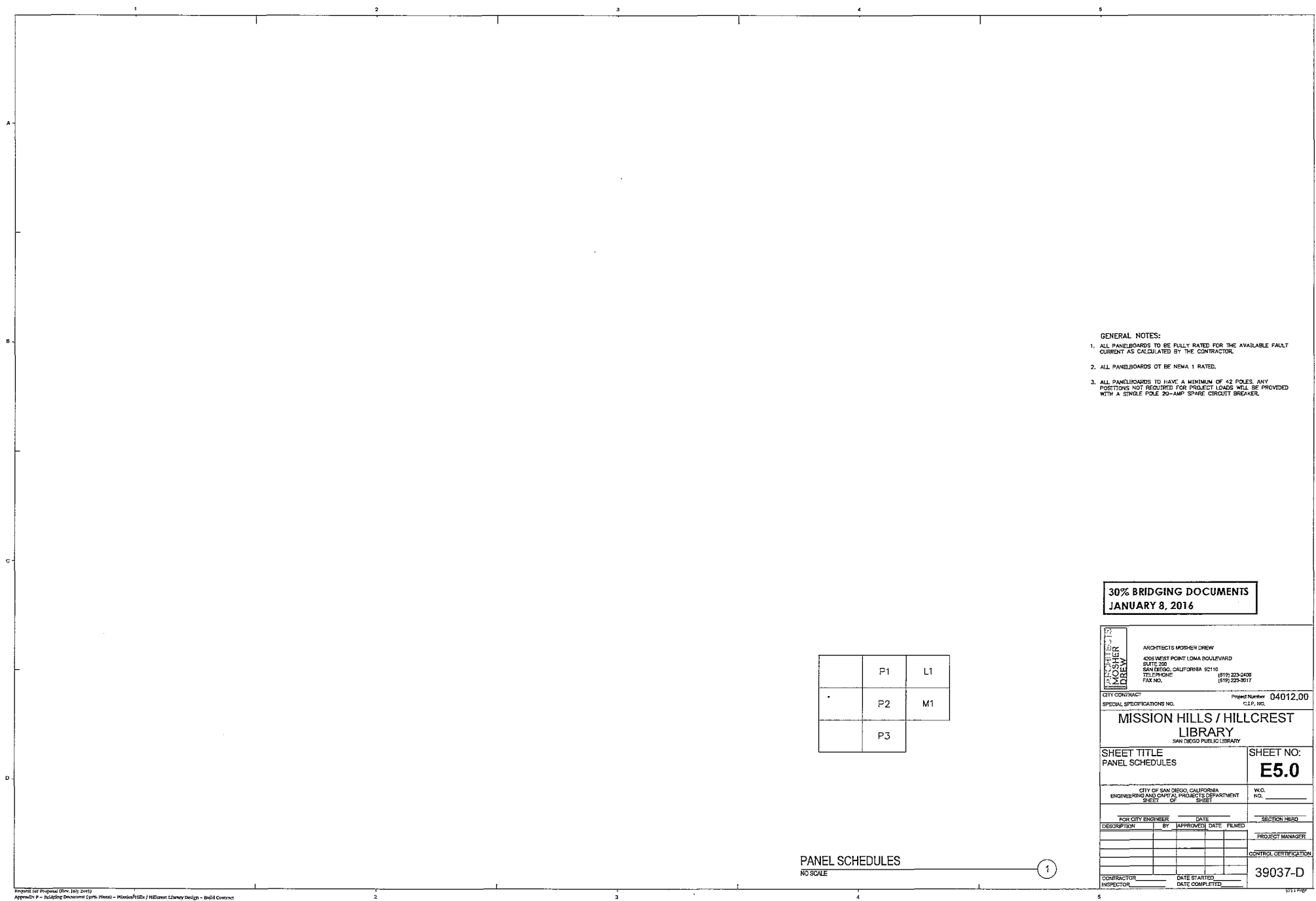
1 SINGLELINE DIAGRAM
NOT TO SCALE



30% BRIDGING DOCUMENTS
JANUARY 8, 2016

		ARCHITECT'S MASTER DREW 4305 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92110 TELEPHONE: (619) 223-2420 FAX NO.: (619) 223-3017	
CITY CONTRACT:		Project Number: 04012.00	
SPECIAL SPECIFICATIONS NO.:		C.I.P. NO.:	
MISSION HILLS / HILLCREST LIBRARY SAN DIEGO PUBLIC LIBRARY			
SHEET TITLE:		SHEET NO.:	
SINGLELINE DIAGRAM		E4.0	
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CIVIL AS PROJECTS DEPARTMENT SHEET OF SHEET			
FOR CITY ENGINEER:		DATE:	
DESCRIPTION:	BY:	APPROVED:	DATE FILMED:
			SECTION HEAD:
			PROJECT MANAGER:
			CONTROL CERTIFICATION:
CONTRACTOR:		DATE STARTED:	
INSPECTOR:		DATE COMPLETED:	
			39037-D

Request for Proposal (Rev. July 2015)
Approved For Bridging Document (30% Phase) - Mission Hills / Hillcrest Library Design - Build Contract



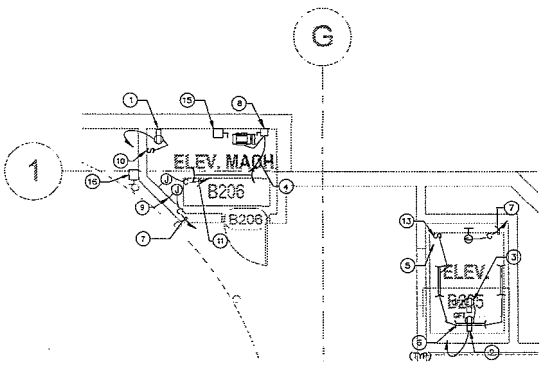
- GENERAL NOTES:**
1. ALL PANELBOARDS TO BE FULLY RATED FOR THE AVAILABLE FAULT CURRENT AS CALCULATED BY THE CONTRACTOR.
 2. ALL PANELBOARDS OT BE NEMA 1 RATED.
 3. ALL PANELBOARDS TO HAVE A MINIMUM OF 42 POLES. ANY POSITIONS NOT REQUIRED FOR PROJECT LOADS WILL BE PROVIDED WITH A SINGLE POLE 20-AMP SPARE CIRCUIT BREAKER.

**30% BRIDGING DOCUMENTS
JANUARY 8, 2016**

	P1	L1
	P2	M1
	P3	

PANEL SCHEDULES
NO SCALE 1

	ARCHITECTS MORSHER CREW 4006 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92116 TELEPHONE (619) 223-2400 FAX NO. (619) 223-3017	
	CITY CONTRACT	Project Number 04012.00
SPECIAL SPECIFICATIONS NO.	C.S.P. NO.	
MISSION HILLS / HILLCREST LIBRARY SAN DIEGO PUBLIC LIBRARY		
SHEET TITLE PANEL SCHEDULES	SHEET NO: E5.0	
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET OF SHEET		W.C. NO.
FOR CITY ENGINEER	DATE	SECTION HEAD
DESCRIPTION	BY (APPROVED) DATE FILMED	PROJECT MANAGER
		CONTROL CERTIFICATION
CONTRACTOR	DATE STARTED	39037-D
INSPECTOR	DATE COMPLETED	



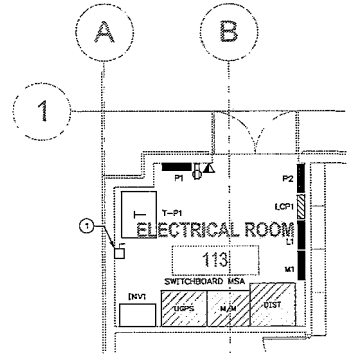
KEY NOTES:

- ① DUPLEX GFI OUTLET IN ELEVATOR MACHINE ROOM. LOCATE PER MANUFACTURER AND CODE REQUIREMENTS.
- ② DUPLEX GFI OUTLET AT BASE OF ELEVATOR SHAFT FOR MAINTENANCE POWER. LOCATE PER MANUFACTURER AND CODE REQUIREMENTS.
- ③ DUPLEX GFI OUTLET MOUNTED HALFWAY UP ELEVATOR SHAFT WHERE REQUIRED BY MANUFACTURER AND CODE.
- ④ ELEVATOR POWER FEEDER. SEE SINGLELINE DIAGRAM.
- ⑤ MANUFACTURER APPROVED SWITCH IN ELEVATOR PIT FOR LIGHT FIXTURE(S).
- ⑥ 4-FOOT, 2-LAMP, FLUORESCENT STRIP FIXTURE WITH CASE GUARD MOUNTED IN ELEVATOR PIT PER MANUFACTURER AND CODE REQUIREMENTS. DISCONNECT THROUGH GFI OUTLET AT BASE OF ELEVATOR PIT.
- ⑦ ROUTE 3/4" C.O. TO TELEPHONE BACKBOARD.
- ⑧ COORDINATE LOCATION OF DISCONNECT SWITCH FOR MOTOR CONNECTION WITH MANUFACTURER AND CODE REQUIREMENTS. VERIFY FUSE SIZE AND RATING PRIOR TO INSTALLATION. MINIMUM DISCONNECT SWITCH RATING 100A 2P. PROVIDE AUXILIARY CONTACTS (NO/PHO) AND INTERCONNECT TO ELEVATOR DC BATTERY LOWERING SYSTEM.
- ⑨ PROVIDE AND INSTALL JUNCTION BOX FOR ELEVATOR GAS TELEPHONE CONNECTION. COORDINATE TOUGH WITH MANUFACTURER.
- ⑩ PROVIDE AND INSTALL WALL SWITCH WITH LOCKING DEVICE FOR ELEVATOR GAS POWER AND LIGHTING REQUIREMENTS. VERIFY REQUIREMENTS WITH MANUFACTURER.
- ⑪ PROVIDE 3/4" C.O. TO MAIN FIRE ALARM CONTROL PANEL.
- ⑫ 4-FOOT, 2-LAMP, FLUORESCENT STRIP FIXTURE WITH CASE GUARD MOUNTED AT TOP OF ELEVATOR SHAFT.
- ⑬ MANUFACTURER APPROVED SWITCH AT TOP OF ELEVATOR SHAFT FOR LIGHT FIXTURE.
- ⑭ DUPLEX GFI OUTLET AT TOP OF ELEVATOR SHAFT WHERE REQUIRED BY MANUFACTURER AND CODE.
- ⑮ PROVIDE AND INSTALL NEMA 1 30A 2P FUSED DISCONNECT AND POWER CONNECTION TO MECHANICAL 'SS' UNIT.
- ⑯ PROVIDE AND INSTALL NEMA 3R 30A 2P FUSED DISCONNECT AND POWER CONNECTION TO MECHANICAL 'SS' UNIT.

GENERAL NOTES:

1. PROVIDE EMERGENCY POWER CIRCUITS AND FEEDERS FOR HIGH RISE LIFE SAFETY APPLICATIONS.
2. VERIFY ALL ELEVATOR POWER, CONTROL AND COMMUNICATION REQUIREMENTS WITH ELEVATOR SHOP DRAWINGS PRIOR TO INSTALLATION.

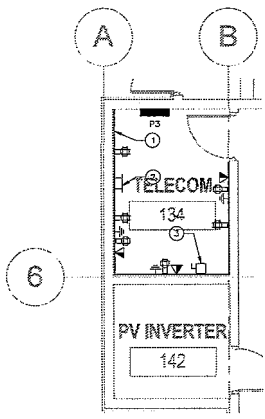
3 ELEVATOR AND MACHINE ROOM
1/4" = 1'-0"



KEY NOTES:

- ① PROVIDE AND INSTALL NEMA 1 30A 2P FUSED DISCONNECT AND POWER CONNECTION TO MECHANICAL 'SS' UNIT.

1 ELECTRICAL ROOM
1/4" = 1'-0"



KEY NOTES:

- ① FIRE-RATED PLYWOOD TELEPHONE BACKBOARD.
- ② GROUND BUS BAR.
- ③ PROVIDE AND INSTALL NEMA 1 30A 2P FUSED DISCONNECT AND POWER CONNECTION TO MECHANICAL 'SS' UNIT.

2 TELECOM ROOM
1/4" = 1'-0"



30% BRIDGING DOCUMENTS
JANUARY 8, 2016

ARCHITECTS MOSHER DREW
4006 WEST POINT LOHA BOULEVARD
SUITE 200
SAN DIEGO, CALIFORNIA 92110
TELEPHONE (619) 223-2400
FAX NO. (619) 223-3017

CITY CONTRACT SPECIAL SPECIFICATIONS NO. PROJECT NUMBER 04012.00
CLIP NO.

MISSION HILLS / HILLCREST LIBRARY
SAN DIEGO PUBLIC LIBRARY

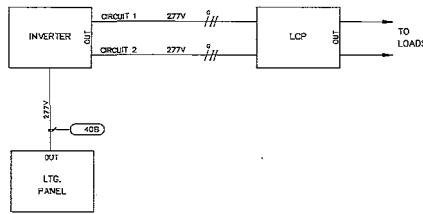
SHEET TITLE: DETAIL SHEET
SHEET NO.: E6.0

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET OF SHEET

FOR CITY ENGINEER DATE SECTION HEAD
DESCRIPTION BY (APPROVED) DATE FILMED

PROJECT MANAGER
CONTROL CERTIFICATION

CONTRACTOR DATE STARTED 39037-D
INSPECTOR DATE COMPLETED

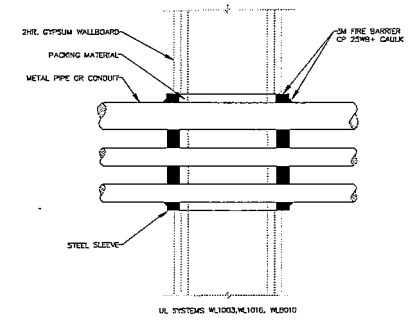


GENERAL NOTES:

1. UNIT #1 SHALL BE SMALL DC DUAL-LIFE (3277-333120/277-02003) 8.5KVA CAPACITY WITH "NO LOAD CONDUCTION" CAPABILITY.

CIRCUIT	DESCRIPTION	VOLTS	WATTS
1	BUILDING EMERGENCY EGRESS	277V	1,110W
2	PARKING GARAGE EMERGENCY	277V	2,280W
TOTAL WATTS			3,390W

2 EMERGENCY INVERTER LIGHTING SYSTEM FOR EXIT DISCHARGE
NO SCALE 1010-10



1 METAL PIPE IN GYPSUM DETAIL
NO SCALE 1010-10

30% BRIDGING DOCUMENTS
JANUARY 8, 2016

	ARCHITECTS MOSHER DEWE 4206 WEST POINT LOMA BOULEVARD SUITE 200 SAN DIEGO, CALIFORNIA 92116 TELEPHONE (619) 223-2400 FAX NO. (619) 223-3017	CITY CONTRACT _____ Project Number 04012.00 SPECIAL SPECIFICATIONS NO. _____ C.L.P. NO. _____
	MISSION HILLS / HILLCREST LIBRARY SAN DIEGO PUBLIC LIBRARY	SHEET TITLE DETAIL SHEET
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET _____ OF _____	W.O. NO. _____	FOR CITY ENGINEER _____ DATE _____ SECTION HEAD _____ DESCRIPTION BY (APPROVED) DATE FILMED _____ PROJECT MANAGER _____
CONTRACTOR _____ DATE STARTED _____ INSPECTOR _____ DATE COMPLETED _____	CONTROL CERTIFICATION 39037-D	1011140P

ATTACHMENT F
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ATTACHMENT G
EVALUATION AND SELECTION

EVALUATION AND SELECTION

Proposals submitted in response to this RFP shall be in the following order and shall include:

1. Addenda to this RFP (PASS/FAIL)

- 1.1. The Design-Builder shall confirm the receipt of all addenda issued to this RFP. Failure to acknowledge all addenda issued, will result in the Proposal being considered **non-responsive** and ineligible for further consideration.
- 1.2. The Design-Builders are not required to include copies of the actual addenda in its Proposal.

2. Exceptions to this RFP (PASS/FAIL)

- 2.1. If the Design-Builder takes exception(s) to any portion of the RFP and its exhibits, the specific portion of the RFP or exhibits to which exception is taken shall be identified and explained to the City in writing a minimum of 10 days prior to the date established for submittal of the Technical Proposal.
- 2.2. Exceptions taken after the stipulated period to this RFP may be cause for rejection of the Proposal as being **non-responsive**. The City reserves the right to waive exception(s) as it deems in the best interests of the City.

3. Project Team (15 Points Max)

- 3.1. Describe the proposed management plan for this Project. Describe the strength of key proposed construction and technical personnel, Subcontractors, and Sub consultants, including, but not limited to the following disciplines:
 - 3.1.1. Civil
 - 3.1.2. Architectural
 - 3.1.3. Structural
 - 3.1.4. Mechanical and Plumbing
 - 3.1.5. Electrical
 - 3.1.6. LEED
 - 3.1.7. Geotechnical
 - 3.1.8. Landscape Architect

4. Technical Approach and Design Concept (20 Points Max)

- 4.1. Describe your approach towards design development phase and methods of operation considering the integrity of the bridging documents. Include a brief description of your design build approach or any other information deemed necessary to allow the City to make an informed evaluation of the Design-Builder's technical approach. The creative and technical merit of the design concept will be evaluated.
- 4.2. The following elements shall be included in this Technical Proposal:
 - 4.2.1. Aesthetics; Functionality and Durability are the key elements of consideration in City's facilities. Include sample projects where these elements played a key role in the design build concept.
 - 4.2.2. The City wants to encourage design and construction creativity within the limits of the project budget, schedule, and context. The D-B shall provide the optimal design, functionality, energy efficiency and aesthetics in accordance with the RFP, Bridging Documents, design guidelines and performance requirements.
 - 4.2.3. The City desires a strong design build team that works and communicates well with all the team members including sub consultants, City staff, client (Library department), the artist and the selected community members. Coordination between all the team members, informing the City staff of all aspects of the project and maintaining respect for and between the entire team are the key elements for success in every project. Describe your approach towards team building while prioritizing other key elements such as quality control, budget and schedule in balance.
 - 4.2.4. Evaluation of the Project Schedule/Sequence and Budget

5. Construction Plan (15 Points Max)

- 5.1. Describe the proposed construction plan for this Project, including the following, at a minimum:
 - 5.1.1. Construction approach and methods
 - 5.1.2. Plan for phasing of construction activities
 - 5.1.3. Proposed construction schedule
 - 5.1.4. Traffic Control Management
 - 5.1.5. Community Impact

6. Equal Employment and Contracting Opportunity (25 Points Max)

- 6.1. Failure to submit the required EOCP information will result in Proposal being determined as **non-responsive**.

6.2. Subcontractor Documentation

- 6.2.1. The Design-Builder shall, at a minimum, provide with its Price Proposal a listing of at least 3 of the largest Subcontractors (constructors only) for the Project and all other Subcontractors (design professionals, etc.) that are known at the time it submits its Proposal using form AA05 and AA25. **Note:** Subcontractors include design professionals, as well.
- 6.2.2. Work which requires Subcontractors that are not listed by Design-Builder at time of Award shall be let by Design-Builder in accordance with a competitive bidding process performed solely at Design-Builder's expense. Design-Builder shall provide public notice of the availability of the Work to be subcontracted, obtain competitive bids, and provide a fixed date and time on which the subcontracted Work will be awarded. Subcontractors bidding on subcontracts pursuant to this provision shall be afforded the protection of all applicable laws, including Public Contract Code sections 4100 through 4114, inclusive.
- 6.2.3. The Design-Builder may select Subcontractors and Suppliers in one of 3 competitive ways i.e., lowest responsible bidder, best value for price and qualifications, or highest qualifications. Prior to construction NTP, the Design-Builder shall do the following:
 - 6.2.3.1. Submit the selection method used to the City in accordance with 2-5.3, "Submittals."
 - 6.2.3.2. Pre-qualify Subcontractors and Suppliers, in a manner at least as stringent as the City's pre-qualification standards.
 - 6.2.3.3. Review the Subcontractors and Suppliers ultimately chosen to verify that that they have not been debarred and are in good standing as a licensed contractor in California.
- 6.2.4. Open all Subcontract bids and provide to the City one copy without reservation or redaction. All records relevant to the award and performance of Subcontractors and Suppliers shall be public and provided to the City upon request and without redaction. The City may administer bidding itself for Subcontractors and Suppliers, or to direct the bidding procedures to be used by the Design Builder.
- 6.2.5. The Design-Builder may use its corporate-generated subcontractor agreement to retain Subcontractors or Suppliers, provided the subcontractor agreement contains the terms required to be included in Subcontracts by this Contract.
- 6.2.6. The points will be awarded according to the chart below, based upon actual subcontract award amounts, as set forth in the price proposals.

OUTCOME		MAXIMUM POSSIBLE POINTS
1	5% - 9% participation SLBE, ELBE, DVBE, or DBE	5
2	10%-14% participation SLBE, ELBE, DVBE or DBE	10
3	15%-19% participation SLBE, ELBE, DVBE or DBE	15
4	20%-24% participation SLBE, ELBE, DVBE or DBE	20
5	25% participation SLBE, ELBE, DVBE or DBE	25
In no case the points shall exceed 25.		

7. Project budget and schedule (25 Points Max)

7.1. Design Build teams are required to provided itemized line items with budget and scheule based on the Bridging documents and all the other attachment to the RFP.

Total Points = 100

8. Review of Technical Proposal

8.1. Following the receipt of the Technical Proposal, the City anticipates allotting 2 weeks for review of the Technical Proposals.

9. Final Selection Based On Adjusted Low Proposal

9.1. The ranking of each Design-Builder during the Technical Proposal review and the interviews will serve as the divisor of the Price Proposal and determine the weighted price.

9.2. Following review of the Technical Proposals, the resulting qualitative evaluation scores will be totaled, averaged and converted to a decimal. The Proposal price will then be divided by the scores from the Technical Proposals. This becomes the Adjusted Low Proposal. The lowest adjusted proposal will be recommended for contract award. The adjustment to the Price Proposal is for selection purposes only. The Price Proposal as submitted is the actual Contract Price.

9.3. The following example illustrates the process:

Design-Builder	Qualitative Score (100 Maximum)	Price Proposal	Adjusted Price *
A	0.85	\$1,000,000.00	\$1,176,471
B	0.95	\$1,300,000.00	\$1,368,421
C	0.65	\$900,000.00	\$1,384,615
* The adjustment to the Proposal is for selection only. Firm "A" has Adjusted Lowest Proposal. The Price Proposal is the actual Contract amount.			

ATTACHMENT H

PRICE FORMS

PROPOSAL

Design-Builder's General Information

To the City of San Diego:

Pursuant to the "Request for Proposal", specifications, and requirements on file with the City Clerk, and subject to all provisions of the Charter and Ordinances of the City of San Diego and applicable laws and regulations of the United States and the State of California, the undersigned hereby proposes to furnish to the City of San Diego, complete at the prices stated herein, the items or services hereinafter mentioned. The undersigned further warrants that this proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the proposal is genuine and not collusive or sham; that the proposer has not directly or indirectly induced or solicited any other proposer to put in a false or sham proposal, and has not directly or indirectly colluded, conspired, connived, or agreed with any proposer or anyone else to put in a sham proposal, or that anyone shall refrain from proposing; that the proposer has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the proposal price of the proposer or any other proposer, or to fix any overhead, profit, or cost element of the proposal price, or of that of any other proposer, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the proposal are true; and, further, that the proposer has not, directly or indirectly, submitted his or her proposal price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, proposal depository, or to any member or agent thereof to effectuate a collusive or sham proposal. The undersigned proposer(s) further warrants that proposer(s) has thoroughly examined and understands the entire Contract Documents (plans and specifications) and the Proposal Documents therefore, and that by submitting said Proposal Documents as its proposal, proposer(s) acknowledges and is bound by the entire Contract Documents, including any addenda issued thereto, as such Contract Documents incorporated by reference in the Proposal Documents.

IF A SOLE OWNER OR SOLE CONTRACTOR SIGN HERE:

- (1) Name under which business is conducted _____
- (2) Signature (Given and surname) of proprietor _____
- (3) Place of Business (Street & Number) _____
- (4) City and State _____ Zip Code _____
- (5) Telephone No. _____ Facsimile No. _____
- (6) Email Address _____

IF A PARTNERSHIP, SIGN HERE:

(1) Name under which business is conducted _____

(2) Name of each member of partnership, indicate character of each partner, general or special (limited):

(3) Signature (Note: Signature must be made by a general partner)

Full Name and Character of partner

(4) Place of Business (Street & Number) _____

(5) City and State _____ Zip Code _____

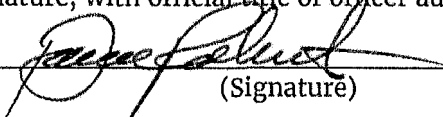
(6) Telephone No. _____ Facsimile No. _____

(7) Email Address _____

IF A CORPORATION, SIGN HERE:

(1) Name under which business is conducted C. W. Driver, LLC.

(2) Signature, with official title of officer authorized to sign for the corporation:



(Signature)

Dana Roberts

(Printed Name)

Chief Executive Officer (CEO)

(Title of Officer)

(Impress Corporate Seal Here)

(3) Incorporated under the laws of the State of California

(4) Place of Business (Street & Number) 468 N. Rosemead Blvd.

(5) City and State Pasadena, California Zip Code 91107

(6) Telephone No. (626) 351-8800 Facsimile No. (626) 351-7779

(7) Email Address droberts@cwdriver.com

THE FOLLOWING SECTIONS MUST BE FILLED IN BY ALL PROPOSERS:

In accordance with the "Request for Proposal", the proposer holds a California State Contractor's license for the following classification(s) to perform the work described in these specifications:

LICENSE CLASSIFICATION B

LICENSE NO. 1009002 EXPIRES November 30, 2017

DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION NUMBER: _____

1000032767

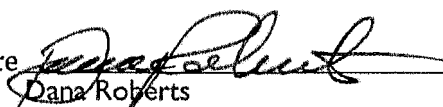
This license classification must also be shown on the front of the proposal envelope. Failure to show license classification on the proposal envelope may cause return of the proposal unopened.

TAX IDENTIFICATION NUMBER (TIN): [REDACTED]

E-Mail Address: droberts@cwdriver.com

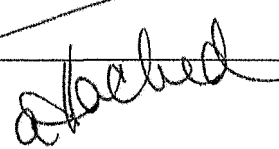
THIS PROPOSAL MUST BE NOTARIZED BELOW:

I certify, under penalty of perjury, that the representations made herein regarding my State Contractor's license number, classification and expiration date are true and correct.

Signature  Title Chief Executive Officer (CEO)
Dana Roberts

SUBSCRIBED AND SWORN TO BEFORE ME, THIS _____ DAY OF _____

Notary Public in and for the County of _____, State of _____

(NOTARIAL SEAL) 

CALIFORNIA JURAT WITH AFFIANT STATEMENT

GOVERNMENT CODE § 8202

- See Attached Document (Notary to cross out lines 1-6 below)
- See Statement Below (Lines 1-6 to be completed only by document signer[s], not Notary)

Signature of Document Signer No. 1

Signature of Document Signer No. 2 (if any)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
 County of Los Angeles

Subscribed and sworn to (or affirmed) before me
 on this 3rd day of June, 2016,
 by Date Month Year
 (1) Dana Roberts

(and (2) _____),
Name(s) of Signer(s)

proved to me on the basis of satisfactory evidence
 to be the person(s) who appeared before me.

Signature *Kelley Murphy*
Signature of Notary Public



Seal
 Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

Number of Pages: _____ Signer(s) Other Than Named Above: _____



State Of California
CONTRACTORS STATE LICENSE BOARD
ACTIVE LICENSE



License Number

1009002

Entity LLC

Business Name

C W DRIVER LLC

Expiration Date

B

Expiration Date

11/30/2017


www.cslb.ca.gov



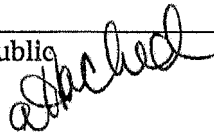
NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY PROPOSER AND SUBMITTED WITH PROPOSAL UNDER 23 UNITED STATES CODE 112 AND PUBLIC CONTRACT CODE 7106

State of California)
)
County of Pasadena) ss.

Dana Roberts, being first duly sworn, deposes and says that he or she is Chief Executive Officer (CEO) of the party making the foregoing proposal that the proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the proposal is genuine and not collusive or sham; that the proposer has not directly or indirectly induced or solicited any other proposer to put in a false or sham proposal, and has not directly or indirectly colluded, conspired, connived, or agreed with any proposer or anyone else to put in a sham proposal, or that anyone shall refrain from proposing; that the proposer has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the proposal price of the proposer or any other proposer, or to fix any overhead, profit, or cost element of the proposal price, or of that of any other proposer, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the proposal are true; and further, that the proposer has not, directly or indirectly, submitted his or her proposal price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, proposal depository, or to any member or agent thereof to effectuate a collusive or sham proposal.

Signed: 
Dana Roberts
Title: Chief Executive Officer (CEO)

Subscribed and sworn to before me this _____ day of _____, 20__

Notary Public

(SEAL)

CONTRACTORS CERTIFICATION OF PENDING ACTIONS

As part of its bid or proposal (Non-Price Proposal in the case of Design-Build contracts), the Bidder shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending against the Bidder in a legal or administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.

CHECK ONE BOX ONLY.

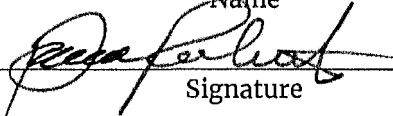
- The undersigned certifies that within the past 10 years the Bidder has NOT been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers.

- The undersigned certifies that within the past 10 years the Bidder has been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers. A description of the status or resolution of that complaint, including any remedial action taken and the applicable dates is as follows:

DATE OF CLAIM	LOCATION	DESCRIPTION OF CLAIM	LITIGATION (Y/N)	STATUS	RESOLUTION/REMEDIAL ACTION TAKEN
N/A	N/A	N/A	N/A	N/A	N/A

Contractor Name: C. W. Driver LLC.

Certified By Dana Roberts Title Chief Executive Officer (CEO)

Name

 Signature

Date 6/8/2016

USE ADDITIONAL FORMS AS NECESSARY

**EQUAL BENEFITS ORDINANCE
CERTIFICATION OF
COMPLIANCE**



For additional information, contact:
CITY OF SAN DIEGO
EQUAL BENEFITS PROGRAM
202 C Street, MS 9A, San Diego, CA 92101
Phone (619) 533-3948 Fax (619) 533-3220

COMPANY INFORMATION	
Company Name: C. W. Driver LLC.	Contact Name: Dana Roberts
Company Address: 468 N. Rosemead Blvd. Pasadena, CA 91107	Contact Phone: (626) 351-8800
	Contact Email: (626) 351-7779

CONTRACT INFORMATION	
Contract Title: Mission Hills / Hillcrest Library Design Build Contract	Start Date: Aug 2016
Contract Number (if no number, state location): K-16-1233-DB2-3-A	End Date: April 2018

SUMMARY OF EQUAL BENEFITS ORDINANCE REQUIREMENTS

The Equal Benefits Ordinance [EBO] requires the City to enter into contracts only with contractors who certify they will provide and maintain equal benefits as defined in SDMC §22.4302 for the duration of the contract. To comply:

- Contractor shall offer equal benefits to employees with spouses and employees with domestic partners.
 - Benefits include health, dental, vision insurance; pension/401(k) plans; bereavement, family, parental leave; discounts, child care; travel/relocation expenses; employee assistance programs; credit union membership; or any other benefit.
 - Any benefit not offer an employee with a spouse, is not required to be offered to an employee with a domestic partner.
- Contractor shall post notice of firm's equal benefits policy in the workplace and notify employees at time of hire and during open enrollment periods.
- Contractor shall allow City access to records, when requested, to confirm compliance with EBO requirements.
- Contractor shall submit *EBO Certification of Compliance*, signed under penalty of perjury, prior to award of contract.

NOTE: This summary is provided for convenience. Full text of the EBO and Rules Implementing the EBO are available at www.sandiego.gov/administration.

CONTRACTOR EQUAL BENEFITS ORDINANCE CERTIFICATION

Please indicate your firm's compliance status with the EBO. The City may request supporting documentation.

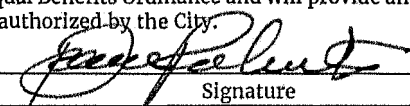
I affirm compliance with the EBO because my firm (*contractor must select one reason*):

- Provides equal benefits to spouses and domestic partners.
- Provides no benefits to spouses or domestic partners.
- Has no employees.
- Has collective bargaining agreement(s) in place prior to January 1, 2011, that has not been renewed or expired.

I request the City's approval to pay affected employees a cash equivalent in lieu of equal benefits and verify my firm made a reasonable effort but is not able to provide equal benefits upon contract award. I agree to notify employees of the availability of a cash equivalent for benefits available to spouses but not domestic partners and to continue to make every reasonable effort to extend all available benefits to domestic partners.

It is unlawful for any contractor to knowingly submit any false information to the City regarding equal benefits or cash equivalent associated with the execution, award, amendment, or administration of any contract. [San Diego Municipal Code §22.4307(a)]

Under penalty of perjury under laws of the State of California, I certify the above information is true and correct. I further certify that my firm understands the requirements of the Equal Benefits Ordinance and will provide and maintain equal benefits for the duration of the contract or pay a cash equivalent if authorized by the City.

Dana Roberts, Chief Executive Officer (CEO)  6/8/16

Name/Title of Signatory _____ Signature _____ Date _____

FOR OFFICIAL CITY USE ONLY		
Receipt Date:	EBO Analyst:	<input type="checkbox"/> Approved <input type="checkbox"/> Not Approved – Reason:

(Rev 02/15/2011)

Design-Build Proposal

1. The undersigned The Design-Builder proposes and agrees, if this Proposal is accepted, to enter into an agreement with the City in the form included in the Contract Documents to perform the Work as specified or indicated in said Contract Documents entitled **Mission Hills / Hillcrest Library Design - Build Contract**
2. The Design-Builder accepts all of the terms and conditions of the Contract Documents, including without limitation those in the RFP.
3. This Proposal will remain open for the period stated in the RFP unless otherwise required by law. The Design-Builder will enter into an agreement within the time and in the manner required in the RFP and will furnish the insurance certificates, Payment Bond, and Performance Bond required by the Contract Documents.
4. The Design-Builder has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules, and regulations), and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as The Design-Builder deems necessary.

To all the foregoing, and including all Proposal schedule(s) and information required of the Design-Builder contained in this Proposal Form, said The Design-Builder further agrees to complete the Work and Services required under the Contract Documents within the Contract Time stipulated in said Contract Documents, and to accept in full payment therefore the Contract Price based on the Total Proposal Price(s) named in the aforementioned Proposal schedule(s).

Dated: June 8, 2016

The Design-Builder: C. W. Driver, LLC.

By: 
Dana Roberts (Signature)

Title: Chief Executive Officer (CEO)

C. W. DRIVER
ESTIMATE SUMMARY
June 8, 2016

* Addenda	No.	Code	Seq	Description	Notes	Total	Percent	Cost per Sqft
#	000000		1	Project Data		0	0.000%	\$0.00
#	010000		2	General Requirements		51,100	0.287%	\$3.77
#	010100		3	Artwork Infrastructure		10,000	0.056%	\$0.74
#	019100		4	Testing and Inspection		101,634	0.571%	\$7.49
#	010530		5	Survey & Layout		32,550	0.183%	\$2.40
#	017100		6	Final Cleaning		18,168	0.102%	\$1.34
#	024100		7	Demolition		145,152	0.816%	\$10.70
#	025000		8	Abatement		37,100	0.208%	\$2.73
#	032000		9	Concrete Reinforcing		328,730	1.847%	\$24.22
#	033000		10	Cast-In-Place Concrete		2,194,620	12.333%	\$161.71
#	042000		11	Concrete Masonry Units		380,933	2.141%	\$28.07
#	044300		12	Stone Masonry Veneer	in CMU	0	0.000%	\$0.00
#	051000		13	Structural Steel Framing		621,344	3.492%	\$45.78
#	055000		14	Metal Fabrications/ Stairs/ Fencing	in Struct. Steel	0	0.000%	\$0.00
#	061000		15	Rough Carpentry		757,052	4.254%	\$55.78
#	061800		16	Glued-Laminated Beams	in Rough Carp.	0	0.000%	\$0.00
#	062000		17	Finish Carpentry & Millwork		191,380	1.076%	\$14.10
#	071000		18	Waterproofing		152,014	0.854%	\$11.20
#	072200		19	Insulation		49,628	0.279%	\$3.66
#	075000		20	Membrane Roofing		62,861	0.353%	\$4.63
#	076000		21	Flashing & Sheet Metal		265,895	1.494%	\$19.59
#	076100		22	Sheet Metal Roofing	in Sheet Metal	0	0.000%	\$0.00
#	077200		23	Roof Accessories, Curbs, Vents, etc.	in Sheet Metal	0	0.000%	\$0.00
#	078100		24	Applied Fireproofing	Not Req'd	0	0.000%	\$0.00
#	078123		25	Intumescent Mastic Fireproofing	Not Req'd	0	0.000%	\$0.00
#	079000		26	Joint Sealants & Caulking		10,000	0.056%	\$0.74
#	081100		27	Doors & Frames, Hardware		75,943	0.427%	\$5.60
#	083300		28	Coiling Doors & Grilles		20,600	0.116%	\$1.52
#	084229		29	Automatic Entrances	in Ent. & Storefronts	0	0.000%	\$0.00
#	084300		30	Entrances & Storefronts		380,590	2.139%	\$28.04
#	086300		31	Skylights	in Sheet Metal	0	0.000%	\$0.00
#	088300		32	Mirrors		1,600	0.009%	\$0.12
#	089000		33	Louvers & Vents	in Sheet Metal	0	0.000%	\$0.00
#	092000		34	Gypsum Board		195,000	1.096%	\$14.37
#	092400		35	Cement/Stucco Plastering		175,000	0.983%	\$12.90
#	093013		36	Ceramic Tiling		89,900	0.505%	\$6.62
#	095100		37	Acoustical Ceilings		78,223	0.440%	\$5.76
#	096500		38	Flooring & Base		75,352	0.423%	\$5.55
#	099000		39	Painting & Coating		122,365	0.688%	\$9.02
#	101100		40	Chalk, Marker, Tack & Display Boards		6,000	0.034%	\$0.44
#	101400		41	Exterior Signage		5,000	0.028%	\$0.37
#	101500		42	Interior Signage		25,221	0.142%	\$1.86
#	102113		43	Toilet Compartments		5,218	0.029%	\$0.38
#	102226		44	Operable Partitions		10,819	0.061%	\$0.80
#	102813		45	Toilet Accessories		9,630	0.054%	\$0.71
#	104416		46	Fire Extinguisher & Cabinets		1,200	0.007%	\$0.09
#	113100		47	Appliances		2,500	0.014%	\$0.18
#	105100		48	Lockers & Benches		10,076	0.057%	\$0.74
#	111400		49	Parking Control Equipment		87,083	0.489%	\$6.42
#	115100		50	Library Book Detection System		22,600	0.127%	\$1.67
#	115200		51	Ceiling Mounted Projector		5,000	0.028%	\$0.37
#	115213		52	Projection Screens & Bid Screen TV		7,630	0.043%	\$0.56
#	122100		53	Window Blinds		13,268	0.075%	\$0.98
#	125000		54	Booksorter/Book Drop		156,800	0.881%	\$11.55

PRICE PROPOSAL FORMS

The Design-Builder agrees to the design and construction of Mission Hills / Hillcrest Library Design - Build Contract, for the City of San Diego, in accordance with these contract documents for the lump sum price listed below. The Design-Builder guarantees the proposed prices for a period of 120 Days (90 Days for federally funded contracts and contracts valued at \$500,000 or less) from the date Proposals are due until the award of the Contract. The duration of the price guarantee shall be extended by the number of Days required for the City to obtain all items necessary to fulfill all conditions precedent e.g., bond and insurance.

Item No.	NAICS CODE	Pay Reference	Description	Quantity	D*	Unit	Unit Price	Extension
BASE PROPOSAL								
1	524126	2-4.1	Bonds (Payment and Performance)	1		LS	 	\$ 113,387
2	541330		Architectural, Engineering and Design Services	1	D	LS	 	\$ 1,512,013
3	236220		Demolition	1		LS	 	\$ 165,693
4	236220		Construction	1		LS	 	\$ 13,866,022
5	541330	701-13.9.5	Water Pollution Control Program Development (WPCP)	1		LS	 	\$ 10,844
6	237990	701-13.9.5	Water Pollution Control Program Implementation (WPCP)	1		LS	 	\$ 319,747
7		9-3.5	Field Orders / Contingency - Type II	1		AL	 	\$800,000
8	238990	703-20	Disposal of Class I Regulated Waste Material	1		TONS	\$	\$ 2,169
9	238910	702-9	Disposal of Class II Regulated Waste Material	1		TONS	\$	\$ 4,452
10	236220		FP&E Fees - Type I	1		AL	 	\$750,000
11	236220	7-5.3	Plan Checking, Permits & Utility Fees - Type I	1		AL	 	\$250,000
TOTAL DESIGN-BUILD FOR BASE PROPOSAL (ITEMS NO 1 THROUGH 11 INCLUSIVE):								\$17,794,326 ^{LR}

17,794,327
593 | Page

Request for Proposal (Rev. April 2016)
Attachment H - Price Proposal Forms
Mission Hills / Hillcrest Library Design - Build Contract

APPROVED BUDGET AMOUNT.

RYAN STICHLER *Ry ST*
DIRECTOR OF PROJECT DEVELOPMENT

PRICE PROPOSAL FORMS

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7		9-3.5	Field Orders / Contingency - Type II	1		AL	 	\$800,000
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TOTAL DESIGN-BUILD FOR BASE PROPOSAL (ITEMS NO 1 THROUGH 11 INCLUSIVE):								\$ 17,794,326

Item No.	NAICS CODE	Pay Reference	Description	Quantity	D*	Unit	Unit Price	Extension
ALTERNATE 1								
1	236220		Additive Alt. 1(Platinum)	1		LS	 	\$ 408,601
TOTAL ALTERNATE 1								\$ 408,601
ALTERNATE 2								
1	236220		Additive Alt. 2 (ZNE)	1		LS	 	\$ 983,322
TOTAL ALTERNATE 2								\$ 983,322

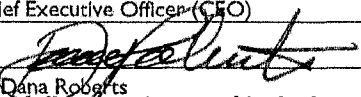
*** Design Element (For City Use)**

Total Price for Design-Build Proposal, (items 1 through 11), inclusive, and amount written in words:

Seventeen million, seven hundred ninety four thousand, three hundred twenty six dollars

Design-Builder: C. W. Driver, LLC.

Title: Chief Executive Officer (CEO)

Signature: 

Dana Roberts

The names of all persons interested in the foregoing proposal as principals are as follows:

Dana Roberts, Chief Executive Officer (CEO) John Janacek, Senior Vice President

Bessie Kouvara, Secretary / Treasurer

Karl Kreutziger, President

IMPORTANT NOTICE: If Design-Builder or other interested person is a corporation, state secretary, treasurer, and manager thereof; If a co-partnership, state true name of firm, also names of all individual co-partners composing firm; if Design-Builder or other interested person is an individual, state first and last names in full.

NOTES:

- A. The City shall determine the Contract Price to be used in the selection process as described in Section 11 of the RFP based on the Base Proposal alone.
- B. Prices and notations shall be in ink or typewritten. All corrections (which have been initiated by the Design-Builder using erasures, strike out, line out, or "white-out") shall be typed or written in with ink adjacent thereto, and shall be initialed in ink by the person signing the Proposal.
- C. Failure to initial all corrections made in the proposal documents may cause the Proposal to be rejected as **non-responsive** and ineligible for award.
- D. Blank spaces must be filled in. The Design-Builder's failure to submit a price may render the Proposal **non-responsive** and ineligible for award.
- E. Unit prices shall be entered for all unit price items. Unit prices shall not exceed two (2) decimal places. If the Unit prices entered exceed two (2) decimal places, the City will only use the first two digits after the decimal points without rounding up or down.
- F. All extensions of the unit prices bid will be subject to verification by the City. In the case of inconsistency or conflict between the product of the Quantity x Unit Price and the Extension, the product shall govern.
- G. In the case of inconsistency or conflict, between the sums of the Extensions with the estimated total Bid, the sum of the Extensions shall govern.
- H. Proposals shall not contain any recapitulation of the Work. Conditional Proposals will be rejected as being **non-responsive**. Alternative proposals will not be considered unless called for.
- I. Subcontractors' License Number must be filled in. Failure to provide the information specified may deem the bidder **non-responsive**.

DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

In accordance with the requirements of the "Subletting and Subcontracting Fair Practices Act", Section 4100, of the Public Contract Code (PCC), The Design-Builder is to list below the name and address of each Subcontractor who will perform work, labor, render services or specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Design-Builder's total Bid. The Design-Builder is to list below the portion of the work which will be done by each Subcontractor. The Design-Builder is to list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed by the Subcontractor is to be stated for all Subcontractors listed. Failure to comply with the listing of the Subcontractors as specified may result in the Bid being rejected as non-responsive and ineligible for award. The Design-Builder is to list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, WoSB, SDB, HUBZone, and SDVOSB Subcontractors that Design-Builder are seeking recognition towards achieving any subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <u>So Cal Soil Testing (SCST)</u> Address: <u>6280 Riverdale St.</u> City: <u>San Diego</u> State: <u>CA</u> Zip: <u>92120</u> Phone: <u>619.280.4321</u> Email: <u>Dmarino@scst.com</u>	Constructor	Engineering License # C54902	Testing & Inspection	\$101,639	SLBE SDVoSB	City US Dept of Vet Affairs	
Name: <u>Landmark Consulting</u> Address: <u>9555 Genesee Ave., Ste 200</u> City: <u>San Diego</u> State: <u>CA</u> Zip: <u>92121</u> Phone: <u>858.587.8750</u> Email: <u>Rona@lmco.net</u>	Contractor	Engineering License # L7226	Survey & Layout	\$31,550	SLBE SB	City CADoGS	

- As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

- As appropriate, Design-Builder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Design-Builder will not receive any subcontracting participation percentages if the Design Builder fails to submit the required proof of certification.

CWD Sub List
Page 1 of 13

DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

In accordance with the requirements of the "Subletting and Subcontracting Fair Practices Act", Section 4100, of the Public Contract Code (PCC), The Design-Builder is to list below the name and address of each Subcontractor who will perform work, labor, render services or specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Design-Builder's total Bid. The Design-Builder is to list below the portion of the work which will be done by each Subcontractor. The Design-Builder is to list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed by the Subcontractor is to be stated for all Subcontractors listed. Failure to comply with the listing of the Subcontractors as specified may result in the Bid being rejected as non-responsive and ineligible for award. The Design-Builder is to list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, WoSB, SDB, HUBZone, and SDVOSB Subcontractors that Design-Builder are seeking recognition towards achieving any subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <u>Clauss Construction</u> Address: <u>8956 Wintergardens Blvd.</u> City: <u>Lakeside</u> State: <u>CA</u> Zip: <u>92040</u> Phone: <u>619.390.4940</u> Email: <u>Estimator@clausconstruction.com</u>	Constructor	630564	Demolition & Abatement	\$172,805	DVBE SB	CADoGS	
Name: <u>Concrete Contractors Interstate (CCI)</u> Address: <u>12599 Stotler Court</u> City: <u>San Diego</u> State: <u>CA</u> Zip: <u>92064</u> Phone: <u>858.679.5550</u> Email: <u>Nick@seicci.com</u>	Constructors	530842	Cast-in-Place Concrete	\$2,174,620	SLBE	CITY	

- As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

- As appropriate, Design-Builder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

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CWD Sub List
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Name: <u>Williams & Sons Masonry</u> Address: <u>13780 Highway 8 Business</u> City: <u>El Cajon</u> State: <u>CA</u> Zip: <u>92021</u> Phone: <u>619.443.1751</u> Email: <u>Scott@sons.sdcoxmail.com</u>	Constructor	480899	Masonry	\$280,513			
Name: <u>San Diego Steel Solutions</u> Address: <u>579 Enterprise St.</u> City: <u>Escondido</u> State: <u>CA</u> Zip: <u>92029</u> Phone: <u>760.489.9990</u> Email: <u>Tony@sandiegosteelcolutions.com</u>	Constructor	932783	Structural Steel, Metal Fabrications Metal Gates	\$604,100	SLBE SB DBE WBE MBE	City CADoGS CUCP Caltrans Caltrans	

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Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
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California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
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Name: <u>Rocky Coast Builders, Inc.</u> Address: <u>135 S. Market Place</u> City: <u>Escondido</u> State: <u>CA</u> Zip: <u>92029</u> Phone: <u>760.489.7770</u> Email: <u>cmadsen@rcbcorp.com</u>	Constructor	745061	Rough Carpentry	\$757,052	SB	CADoGS	
Name: <u>Applied Restoration</u> Address: <u>3562 Grove Street</u> City: <u>Lemon Grove</u> State: <u>CA</u> Zip: <u>91906</u> Phone: <u>619.433.4701</u> Email: <u>bkennedy@appliedrestoration.com</u>	Constructor	759308	Water-proofing	\$135,613	SLBE	City	

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Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
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Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
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State of California's Department of General Services	CADoGS	City of Los Angeles	LA
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DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

In accordance with the requirements of the "Subletting and Subcontracting Fair Practices Act", Section 4100, of the Public Contract Code (PCC), The Design-BUILDER is to list below the name and address of each Subcontractor who will perform work, labor, render services or specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Design-BUILDER's total Bid. The Design-BUILDER is to list below the portion of the work which will be done by each Subcontractor. The Design-BUILDER is to list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed by the Subcontractor is to be stated for all Subcontractors listed. Failure to comply with the listing of the Subcontractors as specified may result in the Bid being rejected as non-responsive and ineligible for award. The Design-BUILDER is to list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, WoSB, SDB, HUBZone, and SDVOSB Subcontractors that Design-BUILDER are seeking recognition towards achieving any subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <u>Vorwaller & Brooks, Inc. (VBI)</u> Address: <u>72182 Corporate Way</u> City: <u>Thousand Palms</u> State: <u>CA</u> Zip: <u>92276</u> Phone: <u>760.262.6300</u> Email: <u>Sheldon@vbidoor.com</u>	Constructors	832987	Doors, Frames & Hardware	\$75,943	SB	CADoGS	
Name: <u>Centex</u> Address: <u>8260 Commercial St.</u> City: <u>La Mesa</u> State: <u>CA</u> Zip: <u>91942</u> Phone: <u>619.644.1981</u> Email: <u>jeffwischmeyer@cwntexglazing.com</u>	Contractor	806989	Glazing	\$364,890	SB	CADoGS	

- As appropriate, Design-BUILDER shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
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State of California's Department of General Services	CADoGS	City of Los Angeles	LA
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Name: <u>Standard Drywall</u> Address: <u>9902 Channel Rd.</u> City: <u>Lakeside</u> State: <u>CA</u> Zip: <u>92040</u> Phone: <u>619.443.7034</u> Email: <u>randym@standarddrywall.com</u>	Constructor	444328	Drywall Plaster	\$370,000			
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							

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Name: <u>Mitsubishi Electric US INC</u> Address: <u>5900 A Katella Ave.</u> City: <u>Cypress</u> State: <u>CA</u> Zip: <u>90630</u> Phone: <u>714.220.2885</u> Email: <u>erik.moeller@meus.me.com</u>	Contractor	791291	Elevators	\$123,000			
Name: <u>A-I Fire Protection</u> Address: <u>8655 Miramar Place</u> City: <u>San Diego</u> State: <u>CA</u> Zip: <u>92121</u> Phone: <u>858.623.2753</u> Email: <u>jill@aifpi.com</u>	Contractor	388358	Fire Suppression System	\$154,900	ELBE SB WBE	City CADoGS WBENC	

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Name: <u>Scott Michael</u> Address: <u>1565 Creek St. #102</u> City: <u>San Marcos</u> State: <u>CA</u> Zip: <u>92078</u> Phone: <u>760.744.2807</u> Email: <u>scottmichaelinc@sbcglobal.net</u>	Constructor	668809	Plumbing	\$340,740	ELBE	City	
Name: <u>Associate Mechanical Contractors, Inc. (AMC)</u> Address: <u>622 South Vinewood Street</u> City: <u>Escondido</u> State: <u>CA</u> Zip: <u>92029</u> Phone: <u>760.294.3517</u> Email: <u>christinap@amcmehinc.com</u>	Constructor	741000	HVAC	\$400,000	MBE MBE SBE Section 3	NMSDC CUCP Port of Long Beach SDHC	

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Name: <u>Rowan Inc., dba Rowan Electric</u> Address: <u>2778 Loker Ave. West</u> City: <u>Carlsbad</u> State: <u>CA</u> Zip: <u>92010</u> Phone: <u>760.692.0700</u> Email: <u>laura@rowanelectric.com</u>	Constructor	746837	Electrical	\$819,628	SB	CADoGS	
Name: <u>Sunterra Solar</u> Address: <u>35 Pamaron Way Suite A</u> City: <u>Novato</u> State: <u>CA</u> Zip: <u>94949</u> Phone: <u>415.883.6800</u> Email: <u>cbunas@sunterasolar.com</u>	Constructor	940158	Photo-Voltaic	\$106,911	DVBE, SB	CADoGS	

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Name: <u>F.J. Willert Contracting Co.</u> Address: <u>1869 Nirvana Ave</u> City: <u>Chula Vista</u> State: <u>CA</u> Zip: <u>91911</u> Phone: <u>619.421.1980</u> Email: <u>boba@fjwillert.com</u>	Constructor	402473	Earthwork	\$491,540			
Name: <u>Hayward Baker, Inc.</u> Address: <u>10303 Channel Rd.</u> City: <u>Lakeside</u> State: <u>CA</u> Zip: <u>92040</u> Phone: <u>619.956.0850</u> Email: <u>browan@haywardbaker.com</u>	Constructor	482246	Shoring	\$629,300			

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Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

ⓑ As appropriate, Design-Builder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Design-Builder will not receive any subcontracting participation percentages if the Design Builder fails to submit the required proof of certification.

CWD Sub List
Page 10 of 13

DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

In accordance with the requirements of the "Subletting and Subcontracting Fair Practices Act", Section 4100, of the Public Contract Code (PCC), The Design-Builder is to list below the name and address of each Subcontractor who will perform work, labor, render services or specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Design-Builder's total Bid. The Design-Builder is to list below the portion of the work which will be done by each Subcontractor. The Design-Builder is to list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed by the Subcontractor is to be stated for all Subcontractors listed. Failure to comply with the listing of the Subcontractors as specified may result in the Bid being rejected as non-responsive and ineligible for award. The Design-Builder is to list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, WoSB, SDB, HUBZone, and SDVOSB Subcontractors that Design-Builder are seeking recognition towards achieving any subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED ②	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <u>QSB Construction</u> Address: <u>365 W. Second Ave. Ste. 215</u> City: <u>Escondido</u> State: <u>CA</u> Zip: <u>92025</u> Phone: <u>760.432.0300</u> Email: <u>Katie.jones@qsbconstruction.com</u>	Constructor	956107	Site Concrete	\$131,769	ELBE SB W/MBE SDVoSB	City CADoGS CUCP Dept of Vet Affairs	
Name: <u>Merino Landscape Inc.</u> Address: <u>2556 Palm Avenue</u> City: <u>San Diego</u> State: <u>CA</u> Zip: _____ Phone: <u>619.426.4940</u> Email: <u>chrism@merinolandscape.com</u>	Constructor	797785	Landscape & Irrigation	\$231,506	DVBE, SB	CADoGS	

① As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

- | | | | |
|---|--------|--|---------|
| Certified Minority Business Enterprise | MBE | Certified Woman Business Enterprise | WBE |
| Certified Disadvantaged Business Enterprise | DBE | Certified Disabled Veteran Business Enterprise | DVBE |
| Other Business Enterprise | OBE | Certified Emerging Local Business Enterprise | ELBE |
| Certified Small Local Business Enterprise | SLBE | Small Disadvantaged Business | SDB |
| Woman-Owned Small Business | WoSB | HUBZone Business | HUBZone |
| Service-Disabled Veteran Owned Small Business | SDVOSB | | |

② As appropriate, Design-Builder shall indicate if Subcontractor is certified by:

- | | | | |
|--|--------|--|----------|
| City of San Diego | CITY | State of California Department of Transportation | CALTRANS |
| California Public Utilities Commission | CPUC | San Diego Regional Minority Supplier Diversity Council | SRMSDC |
| State of California's Department of General Services | CADoGS | City of Los Angeles | LA |
| State of California | CA | U.S. Small Business Administration | SBA |

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NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB [ⓐ]	WHERE CERTIFIED [ⓑ]	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <u>Manuel Oncina Architects Inc.</u> Address: <u>5711 La Jolla BLVD.</u> City: <u>La Jolla</u> State: <u>CA</u> Zip: <u>92037</u> Phone: <u>858.459.1221</u> Email: <u>moncina@oncinaarc.com</u>	Designer	N/A	Design Architect	\$1,174,955	ELBE M/WBE SB DBE	City Supplier Clearinghouse CADoGS Caltrans	
Name: <u>Rand Engineering</u> Address: <u>2959 Night Watch Way</u> City: <u>Alpine</u> State: <u>CA</u> Zip: <u>91901</u> Phone: <u>619.722.6767</u> Email: <u>Bill@randengineering.com</u>	Constructor	875024	Site Utilities	\$355,935			

ⓐ As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

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City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

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CWD Sub List
Page 12 of 13

DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

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NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSBO	WHERE CERTIFIED ②	CHECK IF JOINT VENTURE PARTNERSHIP
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							

① As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
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California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

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DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

ADDITIVE/DEDUCTIVE ALTERNATE

The Design-Builder is to list all Subcontractors described in the Design-Builder's Base Bid whose percentage of work will increase or decrease if alternates are selected for award. The Design-Builder is to also list additional Subcontractors not described in the Design-Builder's Base Bid who, as a result of the alternates, will perform work or labor, or render services, or specially fabricate and install a portion [type] of work or improvements in an amount in excess of 0.5%. Failure to comply with this requirement may result in the Bid being rejected as non-responsive and ineligible for award. The Design-Builder is to list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors that Design-Builder are seeking recognition towards achieving any mandatory, voluntary, or both subcontracting participation percentages.

Subcontractors' License Number must be filled in. Failure to provide the information specified may deem the bidder **non-responsive**.

ADDITIVE/DEDUCTIVE ALTERNATE	NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCT OR OR DESIGNER	SUBCONTRACT OR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB [ⓐ]	WHERE CERTIFIED [ⓑ]	CHECK IF JOINT VENTURE PARTNERSHIP
Add 1 & 2	Name: <u>Rowan Inc., dba Rowan Electric</u> Address: <u>2778 Loker Ave. West</u> City: <u>Carlsbad</u> State: <u>CA</u> Zip: <u>92010</u> Phone: <u>760.692.0700</u> Email: <u>laura@rowanelectric.com</u>	Constructor	746837	Electrical	Alt 1 \$2,000 Alt 2 \$3,375	SB	CADoGS	
Add 1 & 2	Name: <u>Sunterra Solar</u> Address: <u>35 Pamaron Way Suite A</u> City: <u>Novato</u> State: <u>CA</u> Zip: <u>94949</u> Phone: <u>415.883.6800</u> Email: <u>cbunas@sunterrasolar.com</u>	Constructor	940158	Photo-Voltaic	Alt 1 \$120,516 Alt 2 \$494,661	DVBE, SB	CADoGS	

ⓐ As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

- | | | | |
|---|--------|--|---------|
| Certified Minority Business Enterprise | MBE | Certified Woman Business Enterprise | WBE |
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| Woman-Owned Small Business | WoSB | HUBZone Business | HUBZone |
| Service-Disabled Veteran Owned Small Business | SDVOSB | | |

ⓑ As appropriate, Design-Builder shall indicate if Subcontractor is certified by:

- | | | | |
|--|--------|--|----------|
| City of San Diego | CITY | State of California Department of Transportation | CALTRANS |
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| State of California's Department of General Services | CADoGS | City of Los Angeles | LA |
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DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

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Add 1 & 2	Name: <u>Manuel Oncina Architects Inc.</u> Address: <u>5711 La Jolla BLVD.</u> City: <u>La Jolla</u> State: <u>CA</u> Zip: <u>92037</u> Phone: <u>858.459.1221</u> Email: <u>moncina@oncinaarc.com</u>	Designer	N/A	Design Architect	Alt 1 \$39,500 Alt 2 \$144,000	ELBE M/WBE SB DBE	City Supplier Clearinghouse CADoGS Caltrans	
	Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							

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	Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							
	Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							

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DESIGN-BUILD NAMED EQUIPMENT/MATERIAL SUPPLIER LIST TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

For credit calculations for City-funded contracts, see Chapter 11 in The WHITEBOOK. For non-City funded contracts, refer to the Funding Agency Provisions. If no indication of the supplier, manufacturer, or non-supplier is provided, listed firm will receive no credit for purpose of calculating the Subcontractor Participation Percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF VENDOR/SUPPLIER	MATERIALS OR SUPPLIES	DOLLAR VALUE OF MATERIAL OR SUPPLIES	SUPPLIER (Yes/No)	MANUFACTURER (Yes/No)	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED
Name: <u>Penn Air Control Inc.</u> Address: <u>5941 Lakeshore Drive</u> City: <u>Cypress</u> State: <u>CA</u> Zip: <u>90630</u> Phone: <u>714.220.9091</u> Email: <u>andrew@pennairgroup.com</u>	HVAC Equipment supplier to Associate Mechanical Contractors (AMC)	\$140,000	Yes	No	DVBE, SB	CADoGS
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____						

- As appropriate, Design-Builder shall identify Vendor/Supplier as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

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Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
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California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
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Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____						
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State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Design-Builder will not receive any subcontracting participation percentages if the Design-Builder fails to submit the required proof of certification.

ATTACHMENT I

DESIGN-BUILD AGREEMENT

DESIGN-BUILD AGREEMENT

This Design-Build agreement [Contract] is made and entered into this 5th day of October, 2016, by and between The City of San Diego [City], a municipal corporation, and C.W. Driver [Design-Builder], for the purpose of designing and constructing the Hills/Hillcrest Library Design - Build Contract (Project) in the amount of \$17,794,327.00. The City and Design-Builder are referred to herein as the "Parties".

RECITALS

- A. The City desires to construct the Project located in the City of San Diego, California.
- B. The City desires to contract with a single entity for design and construction of the Project, as set forth in this Agreement.
- C. The City has issued a Request for Proposals [RFP] for K-16-1233-DB2-3-A pursuant to which the City solicited Proposals from design-build teams to design, rehabilitate, and build the Project.
- D. In accordance with City's RFP, Design-Builder submitted a Proposal for the Project and is prepared to enter into this Agreement.
- E. The City has selected the Design-Builder to perform, either directly or pursuant to Subcontracts, hereinafter defined, the design, engineering, and construction services set forth in this Agreement and the Contract Documents, hereinafter defined.
- F. The Design-Builder is ready, willing, and able to perform the services required in accordance with the terms and conditions of this Agreement.
- G. Execution of this Agreement by the Design-Builder is a representation that the Design-Builder has visited the Site, become familiar with the local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

In consideration of the above recitals and the mutual covenants and conditions set forth herein, and for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby set forth their mutual covenants and understandings as follows.

AGREEMENT

- A. Recitals and Attachments. The above referenced recitals are true and correct and are incorporated into this Agreement by this reference. All attachments referenced in this Agreement section are incorporated into the Contract by this reference.
- B. Contract Performance. The Design-Builder shall design and construct the Project in a good and workmanlike manner to the satisfaction of the City, lien free and in compliance with the Contract Documents and within the time specified, in return for timely payment by the City in accordance with the Contract.
- C. Attachments. All attachments e.g., Reference Standards in the RFP, Supplementary Special Provisions (SSP), the attached Faithful Performance and Payment Bonds, Agreement and Supplemental Agreements, and the attached Proposal included in the

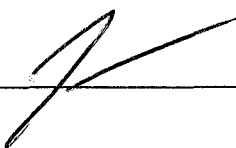
Proposal documents by the Contractor are incorporated into the Contract by this reference.

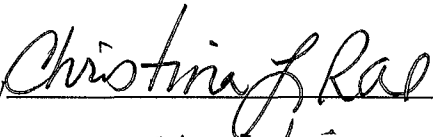
D. Contract Documents. This Contract incorporates the 2012 Edition of the Standard Specifications for Public Works Construction [The GREENBOOK], including amendments set forth in the 2012 edition of the San Diego Specifications for Public Works Construction [The WHITEBOOK]. The Contract Documents shall include the items mentioned in section 2-5.2 of The WHITEBOOK and shall follow that order of precedence.

IN WITNESS WHEREOF, this Agreement is signed by the City of San Diego, acting by and through its Mayor or designee, pursuant to Municipal Code §22.3102 authorizing such execution.


THE CITY OF SAN DIEGO

APPROVED AS TO FORM

By  _____
Print Name: James Nagelvoort
Director
Public Works Department
Date: 9/29/16

Jan I. Goldsmith, City Attorney
By  _____
Print Name: Christina L. Rae
Deputy City Attorney
Date: 10-5-16

CONTRACTOR

By  _____
Print Name: DANA ROBERTS
Title: CEO
Date: 7-28-16

City of San Diego License No.: B2006002038

State Contractor's License No.: B102

ATTACHMENT J

DESIGN-BUILD AGREEMENT FORMS

"Executed In Triplicate"

**CONTRACT FORMS ATTACHMENTS
PERFORMANCE BOND AND LABOR AND MATERIAL MEN'S BOND**

FAITHFUL PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND:

C.W. Driver, a corporation, as principal, and
Fidelity and Deposit Company of Maryland / Zurich American Insurance Company, a corporation authorized to do
business in the State of California, as Surety, hereby obligate themselves, their successors
and assigns, jointly and severally, to The City of San Diego a municipal corporation in the
sum of Seventeen Million Seven Hundred Ninety Four Thousand Three Hundred Twenty
Seven Dollars and Zero Cents (\$17,794,327.00) for the faithful performance of the
annexed contract, and in the sum of Seventeen Million Seven Hundred Ninety Four
Thousand Three Hundred Twenty Seven Dollars and Zero Cents (\$17,794,327.00) for the
benefit of laborers and materialmen designated below.

Conditions:

If the Principal shall faithfully perform the annexed contract **Mission Hills/Hillcrest Library Design - Build Contract, K-16-1233-DB2-3-A**, San Diego, California then the obligation herein with respect to a faithful performance shall be void; otherwise it shall remain in full force.

If the Principal shall promptly pay all persons, firms and corporations furnishing materials for or performing labor in the execution of this contract, and shall pay all amounts due under the California Unemployment Insurance Act then the obligation herein with respect to laborers and materialmen shall be void; otherwise it shall remain in full force.

The obligation herein with respect to laborers and materialmen shall inure to the benefit of all persons, firms and corporations entitled to file claims under the provisions of Article 2. Claimants, (iii) public works of improvement commencing with Civil Code Section 9100 of the Civil Code of the State of California.

Changes in the terms of the annexed contract or specifications accompanying same or referred to therein shall not affect the Surety's obligation on this bond, and the Surety hereby waives notice of same.

PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND (Cont.)

The Surety shall pay reasonable attorney's fees should suit be brought to enforce the provisions of this bond.

Dated July 27, 2016

Approved as to Form

C.W. Driver, Inc.

Principal

By 


Dana Roberts, CEO
Printed Name of Person Signing for
Principal

Jan I. Goldsmith, City Attorney

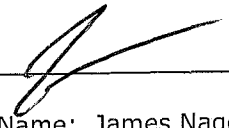
By 
Deputy City Attorney 10-5-16

Fidelity and Deposit Company of Maryland /
Zurich American Insurance Company

Surety

By 
Kim Luu, Attorney-in-fact

Approved:

By: 
Print Name: James Nagelvoort
Director, Department of Public Works

777 South Figueroa Street, Suite 3900
Local Address of Surety

Los Angeles, CA 90017
Local Address (City, State) of Surety

(213) 270-0715
Local Telephone No. of Surety

Premium \$ 110,625.00

Bond No. 9224868

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Los Angeles)

On 8/1/16 before me, Kelley Murphy, Notary Public,
Date Here insert Name and Title of the Officer

personally appeared Dana Roberts
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature [Handwritten Signature]
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: Performance Bond Document Date: 7/27/16
Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: Dana Roberts
 Corporate Officer — Title(s): CEO
 Partner — Limited General
 Individual Attorney in Fact
 Trustee Guardian or Conservator
 Other: _____
Signer Is Representing: _____

Signer's Name: _____
 Corporate Officer — Title(s): _____
 Partner — Limited General
 Individual Attorney in Fact
 Trustee Guardian or Conservator
 Other: _____
Signer Is Representing: _____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Orange)

On JUL 27 2016 before me, Jeri Apodaca, Notary Public
Date Here Insert Name and Title of the Officer
personally appeared Kim Luu
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~it~~ executed the same in ~~his~~/her/~~its~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~its~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature Jeri Apodaca
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

Corporate Officer — Title(s): _____

Partner — Limited General

Individual Attorney in Fact

Trustee Guardian or Conservator

Other: _____

Signer Is Representing: _____

Signer's Name: _____

Corporate Officer — Title(s): _____

Partner — Limited General

Individual Attorney in Fact

Trustee Guardian or Conservator

Other: _____

Signer Is Representing: _____

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **THOMAS O. MCCLELLAN, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **James A. SCHALLER, Mike PARIZINO, Rachele RHEAULT, Rhonda C. ABEL, Kim LUU, Jeri APODACA and Heather SALTARELLI, all of Newport Beach, California, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 19th day of August, A.D. 2015.

ATTEST:

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**



By: *Eric D. Barnes*
Secretary
Eric D. Barnes

Thomas O. McClellan
Vice President
Thomas O. McClellan

State of Maryland
County of Baltimore

On this 19th day of August, A.D. 2015, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **THOMAS O. MCCLELLAN, Vice President, and ERIC D. BARNES, Secretary**, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposed and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

Maria D. Adamski

Maria D. Adamski, Notary Public
My Commission Expires: July 8, 2019



EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this ____ day of JUL 27 2016, 20____.



Gerald F. Haley

Gerald F. Haley, Vice President

CONTRACTOR CERTIFICATION

DRUG-FREE WORKPLACE

PROJECT TITLE: Mission Hills / Hillcrest Library Design - Build Contract

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-17 regarding Drug-Free Workplace as outlined in RFP, "Drug-Free Workplace", of the project specifications, and that;

C. W. DRIVER, INC.

(Name under which business is conducted)

has in place a drug-free workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of subdivisions a) through c) of the policy as outlined.

Signed 

Printed Name DANA ROBERTS

Title CEO

CONTRACTOR ADA CERTIFICATION

AMERICAN WITH DISABILITIES ACT (ADA) COMPLIANCE CERTIFICATION

PROJECT TITLE: Mission Hills / Hillcrest Library Design - Build Contract

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-4 regarding the American With Disabilities Act (ADA) outlined in the RFP, "American With Disabilities Act", of the project specifications, and that;

C.W. DRIVER, INC.

(Name under which business is conducted)

has in place workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of the policy as outlined.

Signed



Printed Name

DANA ROBERTS

Title

CEO

CONTRACTOR STANDARDS CERTIFICATION

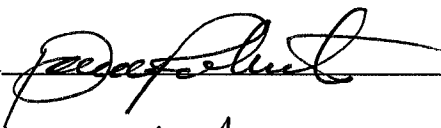
CONTRACTOR STANDARDS – PLEDGE OF COMPLIANCE

PROJECT TITLE: Mission Hills / Hillcrest Library Design - Build Contract

I declare under penalty of perjury that I am authorized to make this certification on behalf of C.W. DRIVER, INC., as Contractor, that I am familiar with the requirements of City of San Diego Municipal Code § 22.3004 regarding Contractor Standards as outlined in RFP ("Contractor Standards"), of the project specifications, and that Contractor has complied with those requirements.

I further certify that each of the Contractor's subcontractors whose subcontracts are greater than \$50,000 in value has completed a Pledge of Compliance attesting under penalty of perjury of having complied with City of San Diego Municipal Code § 22.3004.

Dated this 28th Day of JULY, 2016.

Signed  _____
Printed Name DANA ROBERTS _____
Title CEO _____

AFFIDAVIT OF DISPOSAL

WHEREAS, on the _____ DAY OF _____, 2_____, the undersigned entered into and executed a contract with the City of San Diego, a municipal corporation, for:

Mission Hills / Hillcrest Library Design - Build Contract
(Name of Project)

as particularly described in said contract and identified as RFP No. **K-16-1233-DB2-3-A** SAP (IO/CC/WBS) No. **S-13022** and WHEREAS, the specification of said contract requires the Contractor to affirm that "all brush, trash, debris, and surplus materials resulting from this project have been disposed of in a legal manner"; and WHEREAS, said contract has been completed and all surplus materials disposed of:

NOW, THEREFORE, in consideration of the final payment by the City of San Diego to said Contractor under the terms of said contract, the undersigned Contractor, does hereby affirm that all surplus materials as described in said contract have been disposed of at the following location(s)

and that they have been disposed of according to all applicable laws and regulations.

Dated this _____ DAY OF _____, _____.

_____ Contractor
by

ATTEST:

State of _____
County of _____

On this _____ DAY OF _____, 2_____, before the undersigned, a Notary Public in and for said County and State, duly commissioned and sworn, personally appeared _____ known to me to be the _____ Contractor named in the foregoing Release, and whose name is subscribed thereto, and acknowledged to me that said Contractor executed the said Release.

Notary Public in and for said County and State

City of San Diego

CITY CONTACT: Contract Specialist, Rosa Riego Email: rriego@sandiego.gov

Phone No. (619) 533-3426, Fax No. (619) 533-3633

ADDENDUM "1"

PROPOSAL DOCUMENTS

FOR

MISSION HILLS / HILLCREST LIBRARY DESIGN - BUILD CONTRACT



RFQ NO.:	<u>K-15-1233-DB2-3</u>
RFP NO.:	<u>K-16-1233-DB2-3-A</u>
SAP NO. (WBS/IO/CC):	<u>S-13022</u>
CLIENT DEPARTMENT:	<u>1713</u>
COUNCIL DISTRICT:	<u>3</u>
PROJECT TYPE:	<u>BD</u>

PROPOSAL DUE:

12:00 NOON

JUNE 08, 2016

CITY OF SAN DIEGO

PUBLIC WORKS CONTRACTS

1010 SECOND AVENUE, 14th FLOOR, MS 614C

SAN DIEGO, CA 92101

A. CHANGES TO CONTRACT DOCUMENTS

The following changes to the RFP are hereby made effective as though originally issued with the RFP. The Design-Builders are reminded that all previous requirements to this solicitation remain in full force and effect.

B. BIDDER'S QUESTIONS

- Q1. Reference D/S3.2. Please confirm elevation is at Grid Line G.5, not C?
- A1. Grid Line G.5 is Correct
- Q2. RFP p32 Section 4.8.2: Are full size sets sized at 30x42 and half size at 15x21 acceptable in lieu of 24x36 and 11x17, respectively?
- A2. The 24x36 and 11x17 are the only acceptable sizes
- Q3. Running a quick calculation based on the CPC, the restrooms appear undersized. Please confirm if the City provided relief on this requirement and that the fixture count provided in the bridging documents is acceptable.
- A3. Restroom facilities are required to meet the California Building, Plumbing and Accessibility Codes in regards to size and quantity.
- Q4. Ref S2.4. In regard to the roof trellis supports, structural shows 4 ea. HSS 6 X 2 trellis members continuously running along sloped roof edges between grid lines B & C and E & F. Architectural elevations imply these sit atop large tube steel rafter tails. Please provide a detail clarifying material, shape and size of the rafter tails.
- A4. The intent is to have rafter tails match the truss rafter tails in size, material, and finish, and spaced as indicated.
- Q5. Ref A.06. What are the size member of the galvanized steel trellises shown at the Garden area and at the North Patio?
- A5. 12"high x 4" wide
- Q6. Is the City providing compliance review and inspection services of the abatement process?
- A6. Yes. The city's Asbestos Lead Management program is conducting all abatement oversight, compliance review and clearance testing.
- Q7. Pursuant to the jobwalk on 2/9/16 with the City DEH rep, will full containment be required for the abatement process?
- A7. The contractor needs to provide in detail the methods of removal and the associated containment methodology. This is outlined in the Abatement Spec and is to be submitted to ALMP 30 days prior to abatement start.
- Q8. Pursuant to the jobwalk on 2/9/16 with City DEH rep, there is tile adhered to

wood flooring on the 1st and 2nd floors. Sawing the wood will make the mastic friable. Will washing down surfaces with an airless sprayer be allowed in lieu of fully covering walls and ceilings with poly sheeting?

- A8. Again the means and methods need to be outlined in the submittal 30 days prior to abatement start. Washing of walls is likely to be accepted as long as the contractor can display how the water will be contained and filtered.
- Q9. Pursuant to the jobwalk on 2/9/16 with City DEH rep, the abatement process will require electrical power for fans which will run continuously for several days and nights. Will the City allow a generator to run during the nights?
- A9. During abatement the negative air exhaust machines (NAM) need to remain operational until air clearances have been achieved. If this is not possible due to noise restrictions in the area, the containment will need to be completely sealed overnight to eliminate the potential for dust to migrate outside the containment while the NAM's are not in operation.
- Q10. Ref A.05 Item 5 - Interior glazed ceiling. Please provide description, detail, and/or specification for this system.
- A10. 1" clear insulated glass supported by a heavy duty store front system.
- Q11. Ref Section 21 1300 Fire Suppression Sprinklers. Section implies a pre-action system is required. A pre-action is much more expensive than a wet pipe system. Is a pre-action system indeed required? If yes, please clarify room(s).
- A11. A wet pipe system is acceptable.
- Q12. The proposal form requires the following breakouts, please confirm this relates only to the building abatement and there is no soil remediation required. If soil remediation's required please provide report.
- a) Disposal of Class I Regulated Waste Material
 - b) Disposal of Class II Regulated Waste Material
- A12. Yes, the breakouts relates only to the building abatement and there is no soil remediation required.
- Q13. Previous information issued by the City stated that as-builts of the IBEW building are available at the City. Upon further investigation, the City says it takes 30 days for a copy to be issued and no photos or sketches of the existing plans are allowed if reviewed at the City. After document review, it appears the IBEW building is on a pier foundation and perimeter footings extend beyond the existing basement wall face. It is important for the proposing teams to have full access to the information to adequately plan for the future facility. Can other accommodations be made to distribute the needed information?
- A13. Please contact City project manager thru an email to: samirazizi@sandiego.gov to make an appointment for reviewing the As- Built drawings at 525 B Street.

- Q14. Ref. RFP p429 Brummitt Energy Associates LEED NC 2009 EAp2, EAc1, & EAc2 Results describes 17 points earned under EAc1 for 40% energy improvement. Per LEED NC 2009, 40% for New Buildings equates to 15 points for NC. Please clarify.
- A14. Correct. 15 points are earned for 40% energy improvement.
- Q15. P. 31, item 4.5.2 requests a brief summary of proposed utilization between FF&E, material and finish upgrades and thematic elements. Can you please clarify exactly what is expected for this item?
- A15. Explain how you would balance and harmonize the theme between the material and finishes and the furniture and equipment and how they blend well together. You could provide sample projects.
- Q16. Please confirm the following Owner allowances identified on the Price Proposal Form are included within the stated project value of \$14,820,000.
- a. \$800,000 Field Orders / Contingency - Type II
 - b. \$750,000 FF&E - Type I
 - c. \$250,000 Plan Checking, Permits & Utility Fees - Type 1
- A16. Yes, that is correct.
- Q17. The RFP references an updated soils report prepared by NV5 dated May 29, 2015. It was not part of the RFP. Will you provide it?
- A17. It's in the FTP site in the RFP
- Q18. Sheet 1 of the plans states that the project is Hydro-modification exempt. Please provide reasoning for this. It appears that the project will indeed require hydro-modification management, and additional storm water storage will be needed.
- A18. Bidders should refer to sheet 5 of the civil/grading plans. as noted on this sheet, the preliminary calculations were developed using a "high" susceptibility to erosion, this sheet also states "although a conceptual design is provided, the design-build team is responsible to develop an approach that is compliant with the storm water regulations in place at the time of the ministerial permit." this includes hydro-mod.
- Q19. Were any preliminary storm water reports, or any other technical studies, prepared as part of the bridging documents?
- A19: No additional storm water reports or technical studies were developed.
- Q20. If additional BMPs are needed to meet the storm water requirements, is green roof an option?
- A20. Green roof is not an option.
- Q21: In constructing the new cul-de-sac, the bridging documents show a replacement of existing pavement on Front Street, south of Washington. Can

this existing pavement remain in place and tie into the new cul-de-sac?

- A21. Due to the deteriorated condition of the existing roadway, the bridging documents identify replacing the existing surface.
- Q22. Who will be performing the processing of the grading plan submittals with the City?
- A22. It will be the responsibility of the design-build team to process the grading plans to approval and permit with the city.
- Q23. Is the \$14.8M meant to include both Alternate 1 and Alternate 2 or are these costs in addition to the base bid?
- A23. Base Bid only.
- Q24. Would it be acceptable to utilize metal stud framing in lieu of wood framing for the library building? The RFP calls out wood framing and Brummitt's Energy Performance Analysis states 6" metal stud.
- A24. Metal stud framing is acceptable so long as the wall assemblies meet energy and structural requirements.
- Q25. There is approximately 1550 sf of roof mounted PV shown on the roof plan. Is this what you would like included in the base bid? Or 50kW as stated in the RFP?
- A25. A 28 KW DC PV SYSTEM is to be included in the Base Bid.
- Q26. Brummitt's Energy Performance Analysis states that a solar hot water system is not part of the proposed design. Does the City have an aversion to this or can we explore this as an energy efficient option?
- A26. Yes, this can be an energy efficiency option so long as the roof mounted components of such a system are not visible from the street or do not compromise the building architecture.
- Q27. Please clarify if the parking structure and related utilities are intended to be included in the ZNE designation for the project.
- A27. Parking structure and related utilities are to be included in the zne designation.
- Q28. Selection criteria number 7: "Project Budget and schedule" is worth 25 points maximum. Please describe how points will be allotted in this section. For example will being under the budget and within the time duration be scored a full 25 points or will they be comparatively based what each team presents. If the latter is the case, please provide formula for point distribution.
- A28. There is no specific formula since the two elements of budget and schedule go together and are one and not separate from each other.
- Q29. Does the RFP requirement that all lighting fixtures need to be made in the USA apply for this project?

- A29. Yes, unless otherwise specified by the city of San Diego, all lighting fixtures need to be made the in the USA.
- Q30. The Preliminary Landscape Plan bridging document shows four (4) trees along Washington Street. According to the MTS (transit/bus agency) design manual only one of the trees can be installed (tree furthest west). The majority of the street frontage is red curbed for bus access. Is the library street frontage exempt form MTS standards?
- A30. Remove three (3) trees as indicated on sheet l.01
- Q31. Factor 4.2.4 is the Evaluation of the Project Schedule/Sequence and Budget. Factor 5.1.3 is the proposed construction schedule. Factor 7.1 is the itemized line items with budget and schedule. In which factor would you like us to include the schedule?
- A31. FACTOR 5.1.3.
- Q32: Item 13.4.3 Price Proposals requires that the price be submitted separately from the Technical Proposal yet Item 7.1 Project budget and Schedule asks the D-B team to provide itemized line items with budget. Please confirm where the price should go.
- A32. Price should be submitted separately.
- Q33. If a site visit is organized through the City will we be able to go inside the existing building?
- A33. A site visit was already conducted as part of the previous bid process.
- Q34. What utility rate (\$/kWhr) should we assume SDG&E will charge? Also, if energy is fed back into the grid what utility rate (\$/kWhr) credit can we assume.
- A34. Electric Rate: SDG&E AL-TOU Secondary (average blended rate of the ZNE study was \$0.20/kWh).The second question is not that easy to answer and depends on the goal.
- Energy Performance: This would be based on site energy consumption (i.e. kBtu/sf-yr), so no energy cost is required.
 - Energy cost savings: Annual energy cost savings from PV can be calculated with software such as NREL's System Advisor Model (SAM). Note that this is not a fixed rate (\$/kWh).
- Q35. Sheet E5.0 is a blank page and should have the panel schedules on it. Please provide this sheet.
- A35. Sheet E5.0 is not used and has been removed from the drawings.
- Q36. Per the spec and plans there isn't any information on pockets or fascia for the roller shades, Please advise.
- A36. Provide fascia for the roller shades.

- Q37. I notice there is a grille at the entrance/exit of the parking structure on sheet A.03. Is this an existing grille? I do not see it on the door schedule.
- A37. It is a new coiling grille. See spec section 08 3326 overhead coiling grilles.
- Q38. In the previous RFP Solicitation the City had provided a Required Document Schedule, but that is not included with this issue. Will a document schedule be provided?
- A38. No, since this is a new format this document will not be provided.
- Q39. Because of the pending RFI's that are being submitted we fully request a 2 week extension on this RFP.
- A39. No extension is required.
- Q40. Ref. RFP p29 Section 3.4: Is ZNE Certification required through the Living Building Challenge or some other form of certification, to be accounted for in Additive Alternate 2?
- A40. ZNE Certification is required through the Living Building Challenge.

James Nagelvoort, Director
Public Works Department

Dated: May 31, 2016
San Diego, California

JN/HMC/Lad

CITY OF SAN DIEGO
MISSION HILLS / HILLCREST
LIBRARY
Technical Proposal

C.W. Driver
BUILDERS SINCE 1919



JUNE 8, 2016



June 8, 2016

City of San Diego
Public Works Contracts
1010 Second Avenue, 14th Floor, MS 614C
San Diego, CA 92101
Attention: Lisa Nguyen, Contract Specialist

Re: City of San Diego – Mission Hills \ Hillcrest Library

Dear Members of the Selection Committee,

Our proposed team of C.W. Driver | Manuel Oncina Architects (MOA) | Ferguson Pape Baldwin Architects is excited for the opportunity to be considered for this project. We are a proven team that has demonstrated results, having worked together on numerous public works projects including similar library projects. Our proposed team offers the following:

- Our entire proposed team has experience working together on 3 local library projects for the County of San Diego. In fact, the Fallbrook and Ramona libraries both won awards, which demonstrate our ability to work as a cohesive team on similar projects.
- C.W. Driver, MOA, and Ferguson Pape Baldwin Architects have worked together on 3 design-build projects, which will benefit the City with streamlined processes and proven design/cost/schedule coordination.
- Having four offices in Southern California and routinely working on publicly funded projects, we can help streamline the local outreach and Equal Employment Opportunity process without a learning curve.
- Our team has engaged Manuel Oncina, a noted library expert, to assist in the process bringing his keen insights from eight (8) completed libraries in the region. MOA is a certified MBE/SLBE/SBE/ELBE/DBE firm, which demonstrates our commitment to the Equal Employment Opportunity Process.
- The C.W. Driver team will be led by Andy Feth, who is a DBIA accredited professional. By virtue of his best-practices expertise and library experience, Andy will increase the level of performance and continually improve our design-build project delivery systems to benefit your project.

Enclosed is our response to your Request for Proposal. We hope that the information contained within will give you the confidence that the C.W. Driver | MOA | Ferguson Pape Baldwin Architects Team is the right choice for your project. We look forward to building on our relationship with the City of San Diego and are eager to put our experience to work for you.

Very truly yours,



Richard Freark
Sr. Vice President

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City of Manhattan Beach Library



01

Addenda to this RFP

County of San Diego - Fallbrook Library

ADDENDA TO THIS RFP

C.W. Driver acknowledges the following addenda:

- Addendum 001 - Dated 02.04.16
- Addendum 002 - Dated 02.17.16
- Addendum 1 - Dated 05.31.2016



02

Exceptions to this
RFP

County of San Diego - Fallbrook Library

EXCEPTIONS TO THIS RFP

EXCEPTIONS TO THIS RFP

C.W. Driver takes no exceptions to this Request of Proposals or it's attachments as referenced in this RFP.



03 Project Team

County of San Diego - Fallbrook Library

PROPOSED MANAGEMENT PLAN

PROVEN TEAM WITH PROVEN RESULTS

C.W. Driver has assembled a team of local professionals that combines Southern California's most talented and innovative design and construction firms. We offer the City of San Diego a cohesive team that has a proven track record executing successful Design-Build library and civic projects within budget and schedule objectives. Every person on our team, from Senior Management to the on-site project staff, has considerable experience delivering projects of similar size and scope as the Mission Hills / Hillcrest Library.

C.W. Driver is proposing one of our most experienced Project Directors, Andy Feth, as the dedicated Preconstruction Manager and Design-Build Team Leader. Andy is a native to the San Diego area and grew up very close to the project site. Andy has more than 30 years of experience working in the San Diego construction industry, is certified by the Design Build Institute of America (DBIA), and has past experience working on similar projects, including the Fallbrook, Ramona, and Alpine Library projects. Andy's experience will enable him to streamline the communication and coordination between all members of the Design-Build Team, while guiding the preconstruction process by utilizing the most advanced design and construction technologies.

The proposed Design-Build Team has successfully completed **3 local Design-Build library projects together in the last 5 years.**

Our team includes the following organizations:

- C.W. Driver – Design Build Entity
- Manuel Oncina Architects (MOA) - Architect of Record / Interior / Theming
- Ferguson Pape Baldwin Architects (FPBA) - Production Architect
- McParlane and Associates – Mechanical / Plumbing Engineers
- ELEN Consulting, Inc. – Electrical Engineers
- Hope-Amundson Structural Engineers – Structural Engineers
- Snipes-Dye Associates – Civil Engineers
- Van Dyke Landscape Architects – Landscape Design
- So Cal Soil Testing - Geotechnical Engineers / Testing & Inspection
- Mechanical Building Optimization (MBO) - Commissioning Authority

Those projects include the award-winning County of San Diego Ramona and Fallbrook Libraries, as well as the Alpine Library, currently under construction. C.W. Driver has also completed library projects for the Cities of Whittier, Manhattan Beach, and Cerritos in addition to the numerous library projects for various schools and Universities in California. **Having extensive experience with local library projects, our team can provide benchmark data and lessons learned to benefit and streamline the Mission Hills / Hillcrest Library project.** We hope to demonstrate our enthusiasm to work on this iconic project by offering our most capable and experienced team members.

County of San Diego - Ramona Branch Library

"The Team took on the challenge of the three County goals: high quality, under budget, on time. The results are a facility that has received numerous awards and the community reaction has been ecstatic. The building opened on schedule in January, 2011 with a huge community turnout."

C.W. Driver
BUILDERS SINCE 1919



FERGUSON
PAPE
BALDWIN
ARCHITECTS

Lou Cavagnaro
Department of General Services
County of San Diego

**3 DESIGN - BUILD
PROJECTS TOGETHER**
IN THE LAST 5 YEARS

**3 SAN DIEGO COUNTY
LIBRARY PROJECTS**
WITH THIS DESIGN - BUILD TEAM



Fallbrook Library



Ramona Library

Every member of our Design-Build Team has experience working together on similar projects and can provide streamlined coordination and communication between the design and construction teams, ultimately benefiting the project.

HOW THE STAFF WILL FUNCTION DURING EACH OF THE RESPECTIVE PHASES

The C.W. Driver | MOA | FPBA Design-Build Team functions as an integrated team throughout the entire design, preconstruction, and construction process. While MOA, the Architect of Record, will be under contract to C.W. Driver, the relationship functions as an open, collaborative team rather than a hierarchical relationship. This allows the entire Design-Build Team to work together and strongly promotes using each firm's unique talents to meet the project's goals. However, we note that all design and engineering professionals will be managed by MOA. We have found that this arrangement works best to ensure proper design coordination and communication. The design-assist trades will be under contract with C.W. Driver to allow direct communication and clarification of construction related issues. C.W. Driver encourages and fosters a culture of proactive communication and horizontal management to ensure ideas and information are quickly and efficiently shared.

An important distinction with our organizational approach is that **the C.W. Driver | MOA | FPBA project leaders and managers will be involved in all phases of design and construction.** We feel this is a critical strength of our team as it will ensure the continuity of knowledge and relationships.

DESIGN PHASE

Andy Feth, C.W. Driver's Design-Build Team Leader / Project Director, will have the responsibility of managing the entire team of design and construction professionals. During the design phase, Andy will act as the Design Phase Manager, leading the design process and ensuring that the design team receives continual input from the construction team regarding cost, constructability issues, building systems, equipment, and schedule. In addition, Andy will have access to C.W. Driver's extensive corporate resources for estimating, scheduling, BIM, and Quality Control to assist him during this phase. C.W. Driver team members Matt Christensen, Project Manager, and Will House, Superintendent, will support Andy by setting the stage for construction. Their involvement will increase as the design moves closer to the construction phase as they will manage the bidding process, coordinate with design-assist trade contractors, review the design for constructability issues, and plan for site safety and logistics.

Manuel Oncina, Principal Designer at MOA, and Philip Pape, Principal-in-Charge at FPBA, will be very involved in the design development phase and will continue oversight during construction documents and construction administration to ensure quality control. Amanda Schultz, Architect / Sr. Project Manager, will also be involved in all phases during design and continue involvement through construction to provide a smooth transition between both phases.

CONSTRUCTION PHASE

Once construction begins, C.W. Driver's Andy Feth will transition to Project Director and Matt Christensen, Project Manager, will lead the construction team. Matt will manage all on-site construction activities along with Will House, Superintendent, and will be responsible for providing all project team members with the proper tools and support to successfully construct the project.

Matt and his field management team will be the direct point of contact for the City of San Diego and will report on the progress of the work, ensuring that the budget, schedule, quality, safety, and customer satisfaction are met and recorded.

Will House, Superintendent, will manage the on-site construction team, including all subcontractors, and will provide pre-planning, direction, and assistance for the execution of the work.

The construction team, led by Matt and Will, will develop and implement a site specific quality control and safety program for the project, and maintain a safe and compliant work environment from day one.

We believe that our team members' experience is unrivaled. Please see the following pages for detailed descriptions of each project team member's role, responsibilities, and relevant experience.

County of San Diego - Ramona Branch Library

"This successful project would have not been possible without the outstanding interpersonal and technical skills demonstrated by the C.W. Driver Team... The challenge of balancing code compliance, fiscal resources, citizen input, and library professional involvement is a difficult one."

Lou Cavagnaro
Assistant Director, Department of General Services
County of San Diego



PROJECT TEAM INFORMATION

As demonstrated by our proposed Design-Build Team, we are committed to local outreach and maximizing relationships with SLBE / ELBE firms. Manuel Oncina Architects, who will lead all architectural and engineering design disciplines, is certified MBE/SLBE/SBE/ELBE/DBE. Having a major partner on our team with multiple certifications demonstrates our team's outreach commitment. In addition, each firm within our project team is local to San Diego and understands the requirements and unique characteristics of working on projects in the San Diego area.

DESIGN-BUILD ENTITY

C.W. Driver

7588 Metropolitan Drive
San Diego, CA 92108
P - 619.696.5100

ARCHITECT OF RECORD / INTERIOR / THEMING DESIGN

Manuel Oncina Architects

MBE / SLBE / SBE / ELBE / DBE

5711 La Jolla Blvd.
La Jolla, CA 92037
P - 858.495.1221

PRODUCTION ARCHITECT

Ferguson Pape Baldwin Architects

4499 Ruffin Road, Suite 300
San Diego, CA 92123
P - 619.231.0751

MECHANICAL / PLUMBING ENGINEERS

McParlane & Associates

SBE

4830 Viewridge Ave., Suite A
San Diego, CA 92123
P - 858.277.9721

ELECTRICAL ENGINEERS

ELEN Consulting, Inc.

SBE

9150 Chesapeake Dr., Suite 220
San Diego, CA 92123
P - 619.550.1085

GEOTECHNICAL ENGINEERS / TESTING & INSPECTION

So Cal Soil Testing

SLBE / SBE / SDVOSB / DVBE

4373 Viewridge Ave. #B
San Diego, CA 92123
P - 858.292.7575

STRUCTURAL ENGINEERS

Hope-Amundson Structural Engineers

SBE

1301 Third Ave., Suite 300
San Diego, CA 92101
P - 619.232.4673

CIVIL ENGINEERS

Snipes-Dye Associates

SBE

8348 Center Drive, Suite G
La Mesa, CA 91942
P - 619.697.9234

LANDSCAPE DESIGN

Van Dyke Landscape Design

SLBE / SBE / ELBE

2970 Fifth Ave., #240
San Diego, CA 92103
P - 619.294.8484

COMMISSIONING AUTHORITY

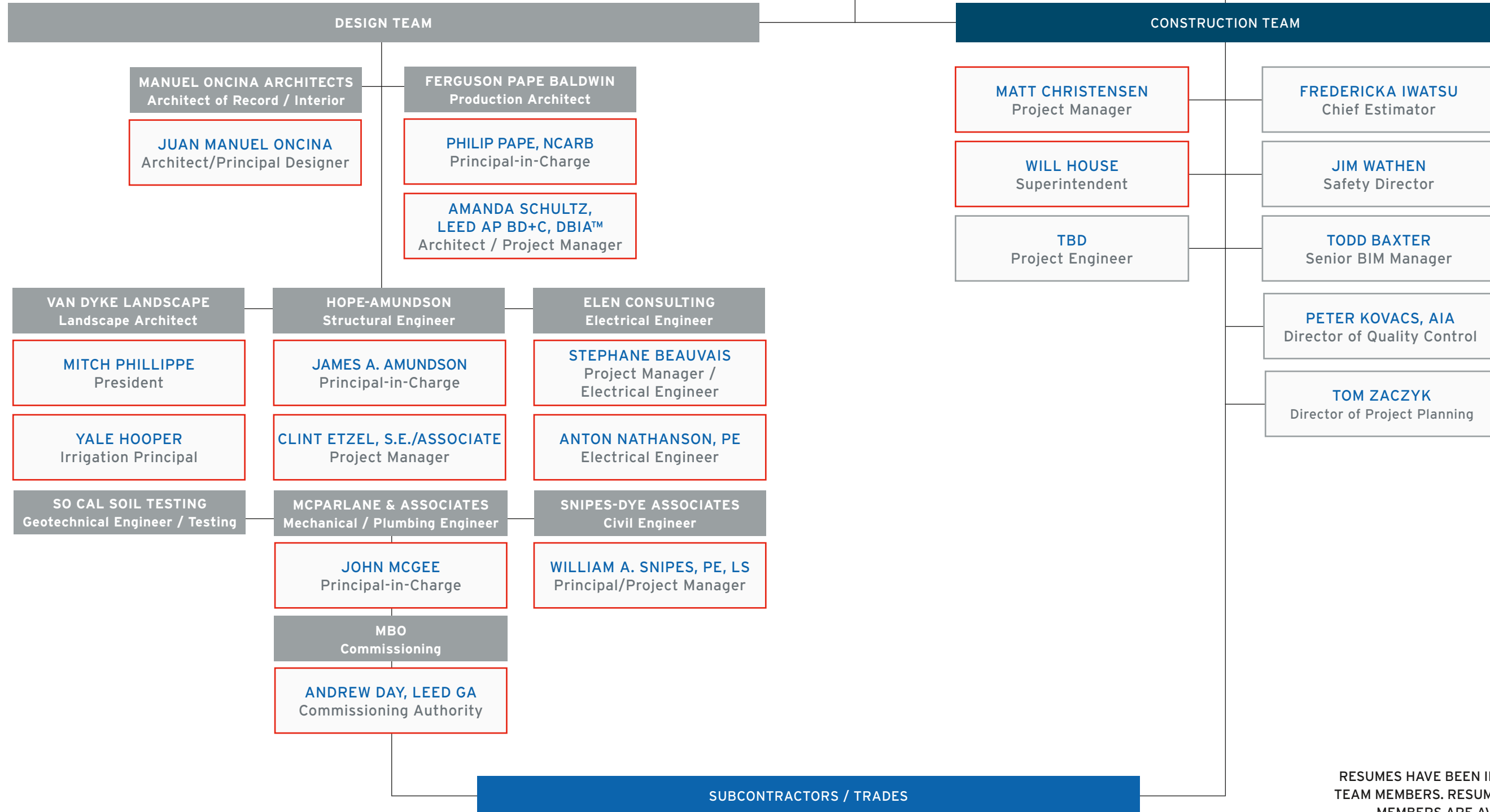
Mechanical Building Optimization (MBO)

SBE

4830 Viewridge Ave., Suite A
San Diego, CA 92123
P - 858.751.5702



ANDY FETH, PE, DBIA, LEED AP
Project Director /
Design-Build Team Leader



RESUMES HAVE BEEN INCLUDED FOR THESE KEY TEAM MEMBERS. RESUMES OF ADDITIONAL TEAM MEMBERS ARE AVAILABLE UPON REQUEST.



ANDY FETH PE, DBIA™, LEED AP
 Project Director / Design-Build Team Leader
C.W. Driver

As Project Director, Andy is responsible for all aspects of the project. This includes supervision of the design phase, project management, and construction. He oversees the Project Manager, Superintendent, and support staff to construct the project. Andy closely coordinates with the Architect and Owner to assure a smooth construction process and timely completion.

30 YEARS EXPERIENCE

- B.S., Civil Engineering
- Registered Professional Engineer (CA)
- LEED Accredited Professional
- Designated Design-Build Professional (DBIA™)
- National DBIA Innovation Committee Member
- Past Board of Directors, Associated Builders & Contractors



COUNTY OF SAN DIEGO - FALLBROOK BRANCH LIBRARY, Fallbrook, CA *DESIGN-BUILD*
 This building replaced the City’s out-of-date 1913 library. Amenities include special gathering spaces for children and teens, a community room and a 1,000 SF Friends of the Library bookstore to encourage interaction. This project is LEED Silver certified. *Project with FPBA + MOA*



COUNTY OF SAN DIEGO - RAMONA BRANCH LIBRARY, Ramona, CA *DESIGN-BUILD*
 The state-of-the-art building incorporates flexible space, energy saving technology including photovoltaic solar panels, a clock tower, and a community meeting room suitable for large scale events. This project is LEED Gold certified. *Project with FPBA + MOA*



COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA *DESIGN-BUILD*
 The new 13,500 SF Branch Library will include spaces for children, teens and adults, a marketplace area, and a computer lab. The Alpine Library is a vital part of the community and will soon have more space to enjoy the resources and services the library can offer. As the County’s first Net Zero Facility, this project is pursuing LEED Gold Certification and ZNE Certification through the Living Building Challenge. *Project with FPBA + MOA*



UCI - ALUMNI CENTER, Irvine, CA *DESIGN-BUILD*
 The new UCI Alumni Center is created to be a beacon for alumni, encouraging them to reconnect with the place they received their education and to be more generous in their support. The resulting 16,072 SF two-story building incorporates an open atrium, library, staff offices, meeting rooms, support areas, board room and conference center with a coffee shop and warming kitchen. This project is LEED Platinum certified. *Project with FPBA*

PROJECT	SIZE (\$)
Fallbrook Branch Library	\$8.8M
Ramona Branch Library	\$9M
Alpine Branch Library	\$10M
UCI Alumni Center	\$6.6M
Bridge Pointe Corporate Center	\$10M
Carlsbad Corporate Center	\$7M
City of Laguna Niguel - City Hall	\$25M
City of Newport Beach - Civic Center and Park Project	\$105M
CSU San Marcos - Student Health (SHCSB)	\$8M
Family Health Centers - City Heights II 3rd Floor TI	\$1M
Family Health Centers - City Heights II Family Health Center	\$5M
MCB Camp Pendleton - Truck Company Operations Complex & Dining Hall - P1040	\$47M
Scripps Health TI-Carlsbad Research	\$14M
SDSU/USGS Environmental Lab	\$7M
SeaWorld - Manta Roller Coaster	\$21M
Sharp Community Hospital of Chula	\$50M



MATT CHRISTENSEN
 Project Manager
C.W. Driver

As the Project Manager, Matt is ultimately responsible for the oversight and success of the entire project. He will be the Owner’s direct point of contact and have decision-making authority to lead the team through design and construction. He will provide the field with the proper tools and support to construct the project and must coordinate closely with the Architect and Owner to assure a smooth construction process and timely completion.



COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA *DESIGN-BUILD*
 The new 13,500 SF Branch Library will include spaces for children, teens and adults, a marketplace area, and a computer lab. The Alpine Library is a vital part of the community and will soon have more space to enjoy the resources and services the library can offer. As the County’s first Net Zero Facility, this project is pursuing LEED Gold Certification and ZNE Certification through the Living Building Challenge. *Project with FPBA + MOA*



UCI - ALUMNI CENTER, Irvine, CA *DESIGN-BUILD*
 The new UCI Alumni Center is created to be a beacon for alumni, encouraging them to reconnect with the place they received their education and to be more generous in their support. The resulting 16,072 SF two-story building incorporates an open atrium, library, staff offices, meeting rooms, support areas, board room and conference center with a coffee shop and warming kitchen. This project is LEED Platinum certified. *Project with FPBA*



AZUSA PACIFIC UNIVERSITY - SEGERSTROM SCIENCE CENTER, Azusa, CA
 The new Segerstrom Science Center is a two and three-story, steel frame, 70,000 SF laboratory building. Elements of the facility include 14 laboratories, seven research laboratories, Vivarium, morgue, 16 classrooms, 90-seat lecture hall, two student breakout rooms, 36 faculty/staff offices and a conference room. LEED® Gold certification was achieved by integrating waste management solutions, recycled materials, local materials, indoor air quality controls, water efficient landscaping, lighting and HVAC controls, energy performance monitors, water use reduction systems, and natural ventilation where possible.

12 YEARS EXPERIENCE

B.A., Political Science
 Certificate in Construction Management

PROJECT	SIZE (\$)
Alpine Branch Library	\$10M
UCI Alumni Center	\$6.6M
APU - Segerstrom Science Center	\$41.4M
Bishop’s School - EBS Hall Renovation	\$7M
Campbell Anderson - Bishops School Dining Commons Building Renovation	\$7M
CSU Northridge - Student Recreation Center	\$49M
Hayes Co. - One East Union, The Container Store	\$5M
LACCD - East Los Angeles CC, New Technology Bldg.	\$24M
Robinsons*May - Simi Valley	\$10M
William S. Hart UHSD - Arroyo Seco Junior School	\$37M



WILL HOUSE
 Superintendent
C.W. Driver

As the Superintendent on the project Will will be responsible for all on-site construction activities, including safety, quality control, scheduling/ coordination of subcontractor work, and interfacing with the Owner’s representatives and the supervising entity. He will work with the project team to develop a construction plan with specific attention towards site logistics with sensitivity to the surrounding area.

33 YEARS EXPERIENCE

- B.S., Education
- 10 Hour OSHA
- First Aid/CPR
- SWPPP Training
- Building Commissioning
- Heat & Illness Prevention
- Training in Scaffold Safety
- Training in Trench/Shoring
- Hazard Awareness Training



COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA *DESIGN-BUILD*

The new 13,500 SF Branch Library will include spaces for children, teens and adults, a marketplace area, and a computer lab. The Alpine Library is a vital part of the community and will soon have more space to enjoy the resources and services the library can offer. As the County’s first Net Zero Facility, this project is pursuing LEED Gold Certification and ZNE Certification through the Living Building Challenge. *Project with FPBA + MOA*



FORT IRWIN - CHILD DEVELOPMENT CENTER, Barstow, CA *DESIGN-BUILD*

This Design-Build project involved constructing a 25,000 SF state-of-the-art child development facility. The building houses 16 classrooms, full administrative areas with staff lounge and training room, a commercial kitchen, outdoor playgrounds and activity areas for infants, toddlers, pre-K, and kindergarten-aged children. The project was contracted with the Army Corps of Engineers and achieved LEED Gold certification.

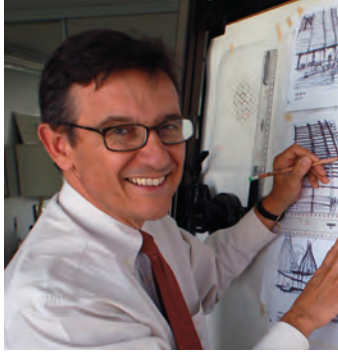


SDSU - DISABLED STUDENT HEALTH SERVICES BUILDING, San Diego, CA *DESIGN-BUILD*

Located on the edge of the campus, this 75,000 SF, four-story state-of-the-art medical office building replaces an outdated 1960’s medical facility. An open-air central courtyard is the main unifying design element, and provides a visual and physical connection to Aztec Walk, which is the primary pedestrian walkway connecting the East and West ends of the campus. The building is occupied by three separate departments: Counseling and Psychological Services, Disabled Student Services, and Student Health Services.

PROJECT SIZE (\$)

PROJECT	SIZE (\$)
Alpine Branch Library	\$10M
Fort Irwin Child Development Center	\$5M
SDSU - Disabled Student Health Services	\$19M
San Diego Hall of Champions Museum	\$7M
Torrey Reserve South Court Office Buildings	\$13M
Sony Technology Center	\$17M
La Jolla Presbyterian Church	\$11M
The Neurosciences Institute	\$14M
Aqua Vista Residential Towers	\$5M
464 Prospect	\$26M
University of San Diego - Parking Structure	\$10M
Marine Corps Air Station - Alterations Hangar #4	\$5M
Western Financial Savings	\$11M
35 West Ash Apartments	\$16M
La Jolla Village Square	\$18M
Santaluz Community Center and Golf Maintenance Facility	\$8M
Toyota of El Cajon	\$10M



JUAN MANUEL ONCINA
 Architect/Principal Designer
Manuel Oncina Architects

With 37 years of experience, Manuel Oncina leads the namesake firm in high quality public and private design. With a special affinity for design, Manuel thinks of every prospective project as a venue for a new vision of architecture and embraces the excitement of discovery, the perseverance of accomplishment and the challenges those goals entail to successfully complete works that are enthusiastically accepted by clients and acclaimed by the communities they serve.



COUNTY OF SAN DIEGO - FALLBROOK BRANCH LIBRARY, Fallbrook, CA *DESIGN-BUILD*
 This building replaced the City's out-of-date 1913 library. Amenities include special gathering spaces for children and teens, a community room and a 1,000 SF Friends of the Library bookstore to encourage interaction. This project is LEED Silver certified. *Project with C.W. Driver + FPBA*



COUNTY OF SAN DIEGO - RAMONA BRANCH LIBRARY, Ramona, CA *DESIGN-BUILD*
 The state-of-the-art building incorporates flexible space, energy saving technology including photovoltaic solar panels, a clock tower, and a community meeting room suitable for large scale events. This project is LEED Gold certified. *Project with C.W. Driver + FPBA*



COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA *DESIGN-BUILD*
 The new 13,500 SF Branch Library will include spaces for children, teens and adults, a marketplace area, and a computer lab. The Alpine Library is a vital part of the community and will soon have more space to enjoy the resources and services the library can offer. As the County's first Net Zero Facility, this project is pursuing LEED Gold Certification and ZNE Certification through the Living Building Challenge. *Project with C.W. Driver + FPBA*



CITY OF ENCINITAS - ENCINITAS COMMUNITY LIBRARY, Encinitas, CA
 The 26,000 SF Encinitas Community Library is located on an incomparable site overlooking the Pacific Ocean. It is conceived as the anchor for a larger master plan project that will include City Hall and a Performing Arts venue. The concept for the project melds organic forms with strong rhythmic geometry to produce a large simple structure offering shelter from the western sun while offering the magnificent ocean view.

37 YEARS EXPERIENCE

B.S., Architecture
 Society of American Registered Architects
 Lambda Alpha International - Member
 State Registration:
 California C13996

PROJECT	SIZE (\$)
Fallbrook Branch Library	\$8.8M
Ramona Branch Library	\$9M
Alpine Branch Library	\$10M
Encinitas Community Library	\$14M
Cardiff-by-the-Sea Library	\$3.5M
Malcolm X Library	\$4.2M
Earl and Birdie Taylor Library	\$2.5M
Mark Twain Library	\$5M
Carlsbad City Library Learning Center	\$4.5M



PHILIP PAPE NCARB
 Principal-in-Charge
Ferguson Pape Baldwin Architects

Firm Principal since 2002, Phil has over 26 years of architectural experience, and has been an integral part of the firm’s design leadership. He particularly enjoys the relationships he builds when working with his clients. This collaboration of designer and client has generated multiple aesthetically-pleasing facilities visible throughout San Diego County including community spaces and public libraries.

26 YEARS EXPERIENCE

Bachelor of Architecture
 NCARB Certified
 State Registration:
 California, Arizona, Ohio



COUNTY OF SAN DIEGO - FALLBROOK BRANCH LIBRARY, Fallbrook, CA *DESIGN-BUILD*
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COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA *DESIGN-BUILD*
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UCI - ALUMNI CENTER, Irvine, CA *DESIGN-BUILD*
 The new UCI Alumni Center is created to be a beacon for alumni, encouraging them to reconnect with the place they received their education and to be more generous in their support. The resulting 16,072 SF two-story building incorporates an open atrium, library, staff offices, meeting rooms, support areas, board room and conference center with a coffee shop and warming kitchen. This project is LEED Platinum certified. *Project with C.W. Driver*

PROJECT	SIZE (\$)
Fallbrook Branch Library	\$8.8M
Ramona Branch Library	\$9M
Alpine Branch Library	\$10M
UCI Alumni Center	\$6.6M
City of San Diego - College of Rolando Branch Library	\$6M
La Jolla Country Day School Library Academic Center	\$12.6M
Poway Library	\$5M
Carlsbad Library, City of Carlsbad	\$10M
Murrieta City Hall	\$13M
Poway City Hall	\$12M
BMR Coast 9 Amenities	\$6.5M
Cymer Café	\$4.5M



AMANDA SCHULTZ DBIA™, LEED AP BD + C
 Project Architect/LEED Coordinator

Ferguson Pape Baldwin Architects

As a licensed architect and Designated Design-Build Professional, Amanda is committed to the “Design-Build Done Right” principles defined by the Design Build Institute of America (DBIA) and is actively involved with the Western Pacific Region in advancing project team innovation and integration. Projects while at FPBA include hospitality and advanced technology manufacturing facilities with an emphasis on sustainability and efforts to achieve LEED and ZNE Certification.



COUNTY OF SAN DIEGO - FALLBROOK BRANCH LIBRARY, Fallbrook, CA DESIGN-BUILD

This building replaced the City’s out-of-date 1913 library. Amenities include special gathering spaces for children and teens, a community room and a 1,000 SF Friends of the Library bookstore to encourage interaction. This project is LEED Silver certified. *Project with C.W. Driver + MOA*



COUNTY OF SAN DIEGO - RAMONA BRANCH LIBRARY, Ramona, CA DESIGN-BUILD

The state-of-the-art building incorporates flexible space, energy saving technology including photovoltaic solar panels, a clock tower, and a community meeting room suitable for large scale events. This project is LEED Gold certified. *Project with C.W. Driver + MOA*



COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA DESIGN-BUILD

The new 13,500 SF Branch Library will include spaces for children, teens and adults, a marketplace area, and a computer lab. The Alpine Library is a vital part of the community and will soon have more space to enjoy the resources and services the library can offer. As the County’s first Net Zero Facility, this project is pursuing LEED Gold Certification and ZNE Certification through the Living Building Challenge. *Project with C.W. Driver + MOA*



BMR ROAD TO THE CURE, San Diego, CA

This project includes Class A interior improvements offering flexible space plans for 27,000 SF office/lab suites and common area improvements, including extensive lobby upgrades, fitness center with shower and locker facilities, and 1,200 SF Conference Center with outdoor expansion capabilities.

10 YEARS EXPERIENCE

B.Arch, Architecture
 LEED Accredited Professional,
 Building Design and
 Construction (BD+C)
 Designated Design Build
 Professional™
 State Registration:
 California

PROJECT	SIZE (\$)
Fallbrook Branch Library	\$8.8M
Ramona Branch Library	\$9M
Alpine Branch Library	\$10M
BMR Road to the Cure	\$6M
Illumina Pedestrian Bridge	\$13M
ViaSat Building 6	\$6M
San Diego Zoo - Elephant Odyssey	\$45M
Zoological Society of San Diego - Wildlife Disease Prevention + Control Center	\$6M
El Cajon Animal Shelter	\$10M
Health Care Properties - Lots 14 + 16	\$20M
La Jolla Institute for Allergy + Immunology South Lab	\$4M
Health Care Properties - 10355 Science Center Dr.	\$5M



JAMES A. AMUNDSON

Principal-in-Charge

Hope-Amundson Structural Engineers

Jim will serve as Principal-in-Charge for Hope-Amundson Structural Engineers. In this role, he will be responsible for all contractual matters, executive direction of the structural design and staffing needs. He will provide overall project coordination and conduct internal project quality control reviews. Jim's proven experience and understanding of the Client's needs has been a major factor in the overall success of the projects with which he has been involved.



COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA *DESIGN-BUILD*

The new 13,500 SF Branch Library will include spaces for children, teens and adults, a marketplace area, and a computer lab. The Alpine Library is a vital part of the community and will soon have more space to enjoy the resources and services the library can offer. As the County's first Net Zero Facility, this project is pursuing LEED Gold Certification and ZNE Certification through the Living Building Challenge. *Project with C.W. Driver, FPBA, + MOA*



COUNTY OF SAN DIEGO - RANCHO SAN DIEGO LIBRARY, San Diego, CA

This one-level, 20,000 square foot wood framed library, includes library stacks, periodical spaces and media library center. Desire for large column free stack/reading areas necessitated the use of long span heavy timber trusses. Truss design also accounted for clerestory windows.



CITY OF MURIETTA - MURIETTA PUBLIC LIBRARY, Murrieta, CA

This one-level 25,000 square foot wood and steel-framed library contains a children's library, a computer resource center, a heritage room and a 100-seat theater.



CSU SAN MARCOS - KELLOGG LIBRARY, San Diego, CA *DESIGN-BUILD*

This five-story, 200,000 square foot steel framed library, includes library stacks, curriculum and periodical spaces, media library center, classrooms and food services.

33 YEARS EXPERIENCE

B.S. Architectural Engineering
Structural Engineers Association
of San Diego; 2004 - 2005
President

Structural Engineers Association
of California; 2012 - 2013
President

Applied Technology Council;
2010 - 2016 Director

American Concrete Institute

PROJECT SIZE (\$)

Alpine Branch Library \$10M

Rancho San Diego Library

Murietta Public Library

CSU, San Marcos - Kellogg Library



CLINT ETZEL, S.E./ASSOCIATE
 Project Manager
Hope-Amundson Structural Engineers

Clint will serve as Project Manager Hope-Amundson Structural Engineers, responsible for project team/consultant coordination and day-to-day design issues. He will attend all meetings, lead the coordination effort with the architect and the construction administration effort. Clint is an enthusiastic member of the team and knowledgeable within the technical arena of structural engineering.

11 YEARS EXPERIENCE

B.S. Architectural Engineering,
 University of Texas, Austin
 Structural Engineer, California
 #S5744
 Structural Engineers Association
 of San Diego
 Structural Engineers Association
 of California



COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA *DESIGN-BUILD*
 The new 13,500 SF Branch Library will include spaces for children, teens and adults, a marketplace area, and a computer lab. The Alpine Library is a vital part of the community and will soon have more space to enjoy the resources and services the library can offer. As the County's first Net Zero Facility, this project is pursuing LEED Gold Certification and ZNE Certification through the Living Building Challenge. *Project with C.W. Driver, FPBA, + MOA*



CITY OF SAN DIEGO - HORTON PLAZA IMPROVEMENT PROJECT, San Diego, CA
 Public plaza revitalization project, including planters, fountains, water features, site 'furniture', canopies and other shade-type structures. The project also includes site retaining walls, the refurbishing of the historical Electric Fountain, three new permanent kiosks within the Plaza, public restrooms, storage, operations and mechanical equipment.



CSU, SAN MARCOS - STUDENT HEALTH AND COUNSELING SERVICES BUILDING, San Diego, CA *DESIGN-BUILD*
 Four-story, 206,000 SF, steel-framed structure that consists of steel moment frame and braced frame construction. The educational facility houses math biology, chemistry, physical sciences and administrative/common functions. Spaces include classrooms, offices, laboratories and support spaces, a greenhouse and an astronomy observation area. *Project with C.W. Driver*



VICTOR VALLEY PUBLIC SAFETY TRAINING CENTER, Apple Valley, CA *DESIGN-BUILD*
 A 30,000-square-foot training facility consisting of administrative offices, classrooms, laboratories and a shooting range.

PROJECT SIZE (\$)

PROJECT	SIZE (\$)
Alpine Branch Library	\$10M
Horton Plaza Improvement Project	
Victor Valley Public Safety Training Center	
CSU, San Marcos - Student Health and Counseling Services	
SDCCD Mesa College Mathematics and Natural Sciences Building	



JOHN MCGEE
Principal-in-Charge
McParlane & Associates

John will execute his responsibility as Principal-in-Charge for McParlane & Associates by ensuring that the mechanical / plumbing team is properly and adequately staffed, communicating with the team to make certain that the desired scope of work is understood, and that scheduled construction deadlines are met.



COUNTY OF SAN DIEGO - FALLBROOK BRANCH LIBRARY, Fallbrook, CA *DESIGN-BUILD*

This building replaced the City's out-of-date 1913 library. Amenities include special gathering spaces for children and teens, a community room and a 1,000 SF Friends of the Library bookstore to encourage interaction. This project is LEED Silver certified. *Project with C.W. Driver, FPBA, + MOA*



COUNTY OF SAN DIEGO - RAMONA BRANCH LIBRARY, Ramona, CA *DESIGN-BUILD*

The state-of-the-art building incorporates flexible space, energy saving technology including photovoltaic solar panels, a clock tower, and a community meeting room suitable for large scale events. This project is LEED Gold certified. *Project with C.W. Driver, FPBA, + MOA*



COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA *DESIGN-BUILD*

The new 13,500 SF Branch Library will include spaces for children, teens and adults, a marketplace area, and a computer lab. The Alpine Library is a vital part of the community and will soon have more space to enjoy the resources and services the library can offer. As the County's first Net Zero Facility, this project is pursuing LEED Gold Certification and ZNE Certification through the Living Building Challenge. *Project with C.W. Driver, FPBA, + MOA*



THE BISHOP'S SCHOOL MANCHESTER LIBRARY LEARNING CENTER, La Jolla, CA

The 22,000 SF facility consists of three stories with two stories above grade and one below. The facility includes research space, reading rooms, entrance, lobby area, stack reading space, restrooms, outdoor decks, indoor/outdoor study areas, and storage. Full service HVAC design included variable refrigerant flow split system heat pumps in all conditioned library and office spaces, air distribution from fan coils, exhaust fans for the restrooms, and an independent air conditioning for elevator machine room. *Project with C.W. Driver,*

29 YEARS EXPERIENCE

University of California San Diego, HVAC Design Course, 1988. First place in design competition

Grossmont College Architectural and Engineering Focused Curriculum

ASHRAE HVAC Design Course, 1985, Certificate

The Trane Company & Carrier Corporation Design Course

Bell & Gossett Fluid Handling & Steam Design Course

Carrier Corporation Continue Education Course: Air Distribution System Design & The Evolution of Engineering Projects

American Society of Heating Ventilation and Refrigeration Engineers (ASHRAE)

PROJECT	SIZE (\$)
Fallbrook Branch Library	\$8.8M
Ramona Branch Library	\$9M
Alpine Branch Library	\$10M
Thomas Jefferson School of Law	\$3.4M



WILLIAM A. SNIPES PE, LS
 Principal/Project Manager
Snipes-Dye Associates

Bill will be the Project Civil Engineer and manager as part of the proposed team for the civil engineering portion of the project for the proposed branch library. He maintains a “hands on” active involvement through every phase of his projects to ensure the Client’s goals are met from initial scoping through deliverables to construction administration.

32 YEARS EXPERIENCE

BS Civil Engineering
 Registered Civil Engineer
 California, Arizona 50477
 Licensed Land Surveyor
 California 8034



COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA *DESIGN-BUILD*
 The new 13,500 SF Branch Library will include spaces for children, teens and adults, a marketplace area, and a computer lab. The Alpine Library is a vital part of the community and will soon have more space to enjoy the resources and services the library can offer. As the County’s first Net Zero Facility, this project is pursuing LEED Gold Certification and ZNE Certification through the Living Building Challenge. *Project with C.W. Driver, FPBA, + MOA*

PROJECT SIZE (\$)

Alpine Branch Library	\$10M
Cardiff Branch Library	\$3.5M
Roselle Street/Bio-Med Realty	
Rutherford Road/Genoptix	



CARDIFF BRANCH LIBRARY, Cardiff, CA
 The project consisted of preparing and processing grading and improvement plans with the City of Encinitas for the construction of the Cardiff Branch Library on a small parcel of land that included on-site parking. The plans also included ADA access through the project site from the public right-of-way. We provided construction administration for the project during the construction phase of the project through record plans.



ROSELLE STREET/BIO-MED REALTY, San Diego, CA The project consisted of converting office spaces from a concrete tilt-up building into a corporate meeting center, gym, café, and outdoor seating and patio area to be utilized by all tenants within the business complex. Our services included the design for drainage and ADA access for all the parking spaces, patio area and paths of travel. *Project with FPBA*



RUTHERFORD ROAD/GENOPTIX, Carlsbad, CA
 The project consisted of tenant improvements and associated parking assessment for a vacant commercial building to suit the new tenant. Our services included assessing the ADA path of travel from the public right-of-way and ADA parking spaces. After assessment was completed construction documents were prepared and processed with the City of Carlsbad for approval. *Project with FPBA*



MITCH PHILLIPPE
 President
Van Dyke Landscape

Mitch is responsible for design and production oversight for the project. He will oversee the development of the landscape architectural design scope of the project as well as the integration with the other design disciplines. He will ensure the Library’s goals and objectives for the project are satisfied. Mitch brings a wealth of knowledge and experience from past public library projects.

34 YEARS EXPERIENCE

BLA., Landscape Architecture
 Licensed Landscape Architect,
 State of California, 1991, No.
 3781



COUNTY OF SAN DIEGO - FALLBROOK BRANCH LIBRARY, Fallbrook, CA *DESIGN-BUILD*
 This building replaced the City’s out-of-date 1913 library. Amenities include special gathering spaces for children and teens, a community room and a 1,000 SF Friends of the Library bookstore to encourage interaction. This project is LEED Silver certified. *Project with C.W. Driver, FPBA, + MOA*



COUNTY OF SAN DIEGO - RAMONA BRANCH LIBRARY, Ramona, CA *DESIGN-BUILD*
 The state-of-the-art building incorporates flexible space, energy saving technology including photovoltaic solar panels, a clock tower, and a community meeting room suitable for large scale events. This project is LEED Gold certified. *Project with C.W. Driver, FPBA, + MOA*



COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA *DESIGN-BUILD*
 The new 13,500 SF Branch Library will include spaces for children, teens and adults, a marketplace area, and a computer lab. The Alpine Library is a vital part of the community and will soon have more space to enjoy the resources and services the library can offer. As the County’s first Net Zero Facility, this project is pursuing LEED Gold Certification and ZNE Certification through the Living Building Challenge. *Project with C.W. Driver, FPBA, + MOA*



CITY OF SAN DIEGO - COLLEGE ROLANDO BRANCH LIBRARY, San Diego, CA
 This 15,000 SF library serving the College-Rolando neighborhoods, features landscaped entry, courtyards, and gardens, public art, computer lab, community room, large children’s area, an outdoor fireplace, Wi-Fi access, and Preschoolers Door to Learning Center. *Project with FPBA.*

PROJECT	SIZE (\$)
Fallbrook Branch Library	\$8.8M
Ramona Branch Library	\$9M
Alpine Branch Library	\$10M
Grossmont Healthcare - Grossmont Healthcare Library	\$2.8M
ViaSat, Inc. - ViaSat Cafe and Courtyard	\$550,000
Beckman Properties - Centerpointe Plaza	\$20M
Cymer Inc. - Corporate Campus	\$45M
County of Riverside - Transportation Highway Operations Center	\$43M



YALE HOOPER
 Irrigation Principal
Van Dyke Landscape

Yale is a Principal at Van Dyke Landscape Architects and serves as Director of Irrigation services. He has over 15 years of water conservation and construction management experience, including central control system design and retrofits. Yale has managed the irrigation planning and design for large scale master planned communities, streetscapes, libraries, school sites, slope restorations and national cemeteries.

15 YEARS EXPERIENCE

- Irrigation Design Curriculum
- Mesa College, San Diego, 1999
- Certified Irrigation Designer - Irrigation Association (IA)
- Certified Landscape Irrigation Auditor (IA)
- Recycled Water Site Supervisor (RWSS-IA)
- EPA Water Sense Partner
- Water ReUse Association



COUNTY OF SAN DIEGO - FALLBROOK BRANCH LIBRARY, Fallbrook, CA *DESIGN-BUILD*
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COUNTY OF SAN DIEGO - RAMONA BRANCH LIBRARY, Ramona, CA *DESIGN-BUILD*
 The state-of-the-art building incorporates flexible space, energy saving technology including photovoltaic solar panels, a clock tower, and a community meeting room suitable for large scale events. This project is LEED Gold certified. *Project with C.W. Driver, FPBA, + MOA*



COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA *DESIGN-BUILD*
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CITY OF SAN DIEGO - COLLEGE ROLANDO BRANCH LIBRARY, San Diego, CA
 This 15,000 SF library serving the College-Rolando neighborhoods, features landscaped entry, courtyards, and gardens, public art, computer lab, community room, large children’s area, an outdoor fireplace, Wi-Fi access, and Preschoolers Door to Learning Center. *Project with FPBA.*

PROJECT SIZE (\$)

Fallbrook Branch Library	\$8.8M
Ramona Branch Library	\$9M
Alpine Branch Library	\$10M
Grossmont Healthcare - Grossmont Healthcare Library	\$2.8M
ViaSat, Inc. - ViaSat Cafe and Courtyard	\$550,000
Veterans Honor Courtyard	\$240,000
Santa Fe Depot Transit Center	\$1.2M
San Diego Unified School District (50+) Projects	
Stonebridge Estates Community Development	\$2.7M



STEPHANE BEAUVAIS
Project Manager/Electrical Engineer
ELEN Consulting

Stephane has worked on library buildings, college campuses, corporate, education, and high-rise residential projects. His expertise includes medium and low voltage power distribution, fire alarm and other protective signaling systems, network systems, interior and exterior lighting, overhead power lines modification/expansion, power distribution, photovoltaic systems and architectural lighting design.



COUNTY OF SAN DIEGO - FALLBROOK BRANCH LIBRARY, Fallbrook, CA *DESIGN-BUILD*

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COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA *DESIGN-BUILD*

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CARLSBAD CITY LIBRARY LEARNING CENTER

The 10,665 SF Carlsbad Library Learning Center project encompasses the renovation and addition to the former Girl's Club building across Holiday Park on Eureka Place. The addition doubles the size of the facility and offers an expanded variety of programs, including the Adult Learning Center, the Centro de Informacion and Headstart, in a much needed modern venue. *Project with MOA*

20 YEARS EXPERIENCE

BS, Electro-Mechanical Engineering

Electrician Apprenticeship/Practicum

Design Build Institute of America

Custom Control Panel Builders

Certification; Underwriters Listed Seminar

Professional Electrical Engineer, CA #E19108

PROJECT SIZE (\$)

Fallbrook Branch Library	\$8.8M
Ramona Branch Library	\$9M
Alpine Branch Library	\$10M
Linda Vista Teen Center	\$1.2M
La Jolla Presbyterian Church	\$12M
Eastlake Church Auditorium	\$3.9M
Horizon Christian Fellowship	\$4M
Carlsbad City Library Learning Center	



ANTON NATHANSON, PE
 Electrical Engineer
ELEN Consulting

Anton has been a part of the electrical engineering design industry for over 10 years with experience in a variety of projects including commercial, residential, educational, and military. His expertise includes an in-depth understanding of electric code and electric power distribution systems with the ability to analyze complex engineering problems, evaluate and suggest alternatives, and communicate his recommendations effectively.

10 YEARS EXPERIENCE

Bachelor of Science in Electrical Engineering, San Diego State University
 Professional Electrical Engineer, CA #E21090



COUNTY OF SAN DIEGO - FALLBROOK BRANCH LIBRARY, Fallbrook, CA *DESIGN-BUILD*
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COUNTY OF SAN DIEGO - RAMONA BRANCH LIBRARY, Ramona, CA *DESIGN-BUILD*
 The state-of-the-art building incorporates flexible space, energy saving technology including photovoltaic solar panels, a clock tower, and a community meeting room suitable for large scale events. This project is LEED Gold certified. *Project with C.W. Driver, FPBA, + MOA*



COUNTY OF SAN DIEGO - ALPINE BRANCH LIBRARY, Alpine, CA *DESIGN-BUILD*
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PROJECT	SIZE (\$)
Fallbrook Branch Library	\$8.8M
Ramona Branch Library	\$9M
Alpine Branch Library	\$10M
Alga Norte Community Aquatic Park	\$15M
UC Irvine Anza Borrego Research Center	\$8M
Civita Park Comfort Buildings	\$1.5M



ANDREW DAY, LEED AP
Commissioning Authority
MBO

Andy is a Certified Commissioning Authority holding a certification for LEED as a Green Associate (GA) and has a background in testing and verification of various types and sizes of HVAC systems, Domestic Hot Water Systems, Photovoltaic, Irrigation Controls and Lighting Control systems. The experiences acquired throughout his involvement in these projects has enabled him to become an emerging player in the ever growing commissioning industry constantly troubleshooting, analyzing and optimizing the operation and performance of various building systems under all modes of operation.

8 YEARS EXPERIENCE

5 years Commissioning
3 years Testing & Balancing
ACG CxA – AABC
Commissioning Group (2014)
LEED GA – Leadership in
Energy and Environmental
Design Associate (2012)
OSHA 10 Hours of Safety
Training (2011)
Carrier’s Certificated Technical
Development Program (2010)
UCSD HVAC Design (2009)
San Diego City College Fluid
Flow Dynamics (2008)



MCAS MIRAMAR TOFT, San Diego, CA

This project consists of modifying Rooms 134, 136 and 137 for Building #8656 at MCAS Miramar for the installation of one FA/18C technical operations trainer simulator. A new mechanical equipment yard will be constructed exterior to the building. The yard will house new chillers and associated equipment to cool the new Toft #6.



PETCO HEADQUARTERS, Rancho Bernardo, CA

The 303,000 SF Petco Headquarters project is a multi-level, LEED Silver, office building located in Rancho Bernardo, CA. The first floor features a large atrium that opens to a mechanical platform which overlooks the open basement area. This pet friendly office facility also features multiple dog parks.



SAN DIEGO COUNTY OPERATIONS BUILDING, San Diego, CA

The 1M-Square Foot San Diego County Operations Facility is a multi-building project. Each building is four stories tall and houses office, meeting, and administrative space. The project includes LEED Silver, Gold, and Platinum Certifications.



TORREY PINES HIGH SCHOOL, San Diego, CA

The project is located on the existing Torrey Pines High School campus in San Diego, CA. This project consists of remodeling Buildings J (Science) approximately 7,163 SF. and K (Athletic Weight Rm.) approximately 3,445 SF.

PROJECT SIZE (\$)

Torrey Pines High School
MCAS Miramar Toft
Petco Headquarters
San Diego County Operations Building
P-114 Quality of Life Package

04

Technical Approach & Design Concept



City of Newport Beach - Civic Center

APPROACH TOWARD DESIGN DEVELOPMENT

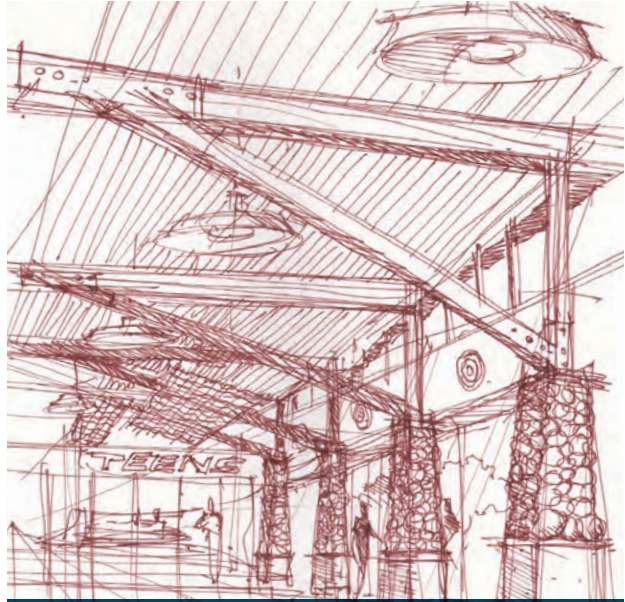
APPROACH TO DESIGN

Libraries today are complex. They encompass the latest technical and scientific research as well as entertainment for the general public and avid readers. What was once a repository for old books has become the “Third Place”: today’s vanguard of learning, socializing, communing, and interacting with people from multiple generations, from all walks of life and experience. The C.W. Driver / MOA / FPBA team understands this “phenomenon”, perhaps better than most, and brings to the Mission Hills / Hillcrest Library expertise and passion to develop and produce a better, more efficient, beautiful, and delightful facility aimed to foster the motto of the San Diego Public Library as it seeks to inspire lifelong learning through connections to knowledge and each other.

Our approach to design development is to preserve the integrity of the bridging documents while offering suggestions for improvements learned from other recent Design-Build library projects. After a review of the RFP, some areas of further design development identified are outlined in the following sections.

The **main entry doors** are shown in the bridging documents as automatic swinging. Based on prior experience, our team recommends the use of automatic sliding doors in lieu of swinging doors due to a higher level of safety associated with two-way traffic. Automatic swinging doors are safest if used with one-way traffic while automatic sliders offer the same functionality and greater safety for two-way traffic.

Trash collection poses a challenge as currently shown in the bridging documents, as well a security issue, due to its accessible yet secluded location. We can fully explore a method of conveyance to the trash collection area that removes the use of stairs and provides a gated enclosure, if desired.



*Example: Young Adult Area
Clerestory Concept*

The Youth Services area provides opportunity for further development to become a memorable, youth-oriented space conducive to imaginative learning and interaction. The Children’s place is perhaps the most important area of the entire library. This is where parents bring their children for their first forays into the public world. The library should be a place of wonder and be filled with family-friendly, fun activities that lead to a lifetime of learning. It is a place where children can feel as comfortable as at home with the excitement of mingling with others in their age group. This is a place where a variety of vibrantly-colored surfaces and volumes will entice children to listen to a story-teller, sit with a parent for a one-on-one lesson in one of the reading nooks, partake in a group craft project, or simply lounge with a friend, reading an engaging picture book. This is also a place where tots will get their first with a computer or play with educational toys designed to open their inquisitive minds.



Example: Hobbit House Storytelling Area Design Concept

The **Young Adult** area is another space our team can explore further. Our experience, gathered through community outreach meetings with teens, has taught us that spaces tailored to teens with personal, group, and lounging areas dedicated to their use are highly appreciated by those on the verge of adulthood and tend to keep teens in the library longer. Special environments for teens are the order of the day in modern libraries. Further, our solution would explore using ceilings, art, and furniture to configure spaces. The Meeting Rooms near the Young Adults area can be fitted with a movable wall system to allow for more flexibility in their use, accommodating larger groups, if desired.

The **storytelling area** can be further developed as the center piece of the Children's area. Various opportunities exist with ceiling treatments, art, casework, and furniture to create an inviting and engaging place for children and parents to spend their time. An opportunity to carve out an area specific to toddlers will be investigated with the goal of creating a nurturing cocoon with low, soft furniture and toys. The same opportunities exist to specifically carve out an area for tweens, a special space for those who are no longer children in the traditional sense, but not quite teens.

Opportunities for **public artwork created by Janet Zweig** are plentiful in this library. At the entry court and interior garden, many possibilities exist from vertical applications on walls to free-standing art pieces. Other venues exist within the library itself, from the entry lobby to the general reading room to the youth services area. As the artist has a vast portfolio of art spanning many mediums, our team brings past library public art experience to the table to be able to work with her to come up with an art scope that is both unique, striking, and fits within the desired 'Craftsman's style and scale.

The **LED lighting system** in combination with occupancy sensors, daylight sensors, dimming drivers, and automated controls will allow the facility personnel to focus on helping and assisting the patrons and the local community. Such a system will operate efficiently and reduce the energy consumption of the building. The automated Variable Refrigerant Flow mechanical system will provide targeted heating and cooling, providing a flexible and efficient system.

Final landscape design will be appropriate to accent the 'Craftsman' architectural character of the library, as well as site characteristics and challenges. These include, but are not limited to narrow, restricted areas, different sun exposures, soil conditions, and drought restrictions. The final landscape will be inviting and provide visual interest while also minimizing maintenance needs.

DESIGN - BUILD APPROACH

DESIGN -BUILD APPROACH

Our management philosophy will be that of a “Contractor-led” Design-Build Team. C.W. Driver will take responsibility as the single point of contact for the City of San Diego during the course of all design and construction efforts to ensure clear lines of communication and decision-making authority. Authority for all contractual decisions on issues of schedule, budget, design intent, or quality will rest exclusively with the C.W. Driver Design-Build Team Leader, Andy Feth, after consultation with all project stakeholders.

PROJECT APPROACH

Our approach to the project will include the following tactics:

Our team will establish a **Project Strategic Plan** at the beginning of the project, which is similar to a “business plan” or a “road map to success”. This plan will outline strategies for a successful project, incorporating items such as lean design and construction strategies, BIM management plans, and quality control plans identifying potential risk factors.

We will utilize **Building Information Modeling (BIM)** technologies to develop and coordinate the design between disciplines. The team will utilize BIM to not only develop concise drawings, but will leverage the technology for the following:

- Preparation of early cost models to guide the design based on the budget
- Analyze cost impacts in real time as the design changes to manage the budget
- Coordination of building systems and clash detection analysis for quality purposes
- Development of energy models to guide system selection and life cycle cost analysis

OUR DESIGN-BUILD PHILOSOPHIES

Apply an integrated team approach from the start and work in a cohesive environment so that we can leverage each firm’s unique expertise to help realize the project’s goals.

Respect the specific expertise of each team member while also sharing the compromises required to balance cost, schedule, and design.

Implement a lean project delivery system to maximize value and efficiencies for the project.

Include the City of San Diego as a team member as we collectively strive to find the best solutions to maximize the budget and deliver the desired project.



Our team will implement a **lean project delivery system** to maximize value and efficiencies for the project. Some of the lean concepts that we utilize include the following:

- Employ Target Value Design concepts and manage the design based on the project budget
- Utilize principles of the Last Planner System to manage the schedule with all stakeholders. Our team will identify critical milestone activities and fill in the activities needed to accomplish each milestone as a team discussing issues such as durations, sequencing, long lead items, and potential areas for acceleration.
- Analyze building components that are suitable for prefabrication with a goal to improve on cost, schedule, quality and/or safety
- Leverage mobile technologies and cloud based protocols for design review and coordination, which improves efficiency and reduces the cost for printed plans

Our team will incorporate **early trade contractor involvement** for design reviews, scheduling, cost estimating, building system integration, and equipment selection. This will allow our team to streamline the construction process since the trade contractors will be able to identify and alleviate any issues that might hinder their portion of work prior to the start of construction.

We will produce a **project specific communication plan** for all project stakeholders. The team will prepare continual project status updates so all stakeholders know what has been completed and what to expect for any given week.

We will provide our project team with **support personnel** including estimating, scheduling, safety, and BIM services.

PROJECT BUDGET REVIEW PROCESS

Our team fully embraces the concept of “Target Value Design” to monitor and control the budget during the course of the design phase. After an initial partnering session and collaborative discussions regarding our basic design solution and its relativity to community goals, our team will prepare a very detailed schematic estimate in a “systems” or “Unifomat” breakdown. This estimate will be reviewed in detail by ALL team members, including the Owner, to create a very well established baseline and set of expectations at the outset of design. From this initial baseline our team will monitor and track the cost impacts of the design decisions using our Design Evolution Log. Every team meeting will begin with a discussion of the current state of the budget. All deviations from the initial estimate will be discussed and resolved at the meeting. We will reconcile the Design Evolution Log into a new comprehensive detailed estimate at appropriate milestones in the design phase, but this will serve more for record keeping than fact finding. The true power of real time pricing occurs through using the Design Evolution Log as our budget communication tool.

OUR IN-HOUSE BIM TEAM HAS 50+ YEARS OF COMBINED BIM EXPERIENCE AND HAS AUTHORED SEVERAL CASE STUDIES AND BEST PRACTICES FOR AUTODESK USER GROUP INTERNATIONAL. OUR GOAL IS TO LEVERAGE THE LATEST TECHNOLOGY TO BENEFIT THE CITY OF SAN DIEGO ON THIS PROJECT.

BUILDING INFORMATION MODELING (BIM)

C.W. Driver plays an integral part in BIM design and coordination processes. Our team prides itself on being a strong advocate for innovative construction technologies. Our early adoption and implementation of BIM practices has been an investment which continues to pay dividends to our clients. Our cloud-based platforms will be instrumental in the development of the design.

This project will require an extensive level of BIM integration to ensure the design is vetted and properly realized in the construction phase. Our approach is to start with a project specific BIM Execution Plan that will be a road map to success for the entire team. Although each phase of the project is interwoven and connected to each other—we have identified three phases as we approach our BIM efforts on this project: Design/Preconstruction, Construction, and Close-out.

Design/Preconstruction

Our team will leverage Social BIM throughout the entire project. However, Social BIM will be essential to the development of the project's design.

Social BIM shares the virtual models with all the team members and high levels of collaboration naturally become part of our daily work flow. In addition to this, these models become integrated into the life cycle process. With free model viewers available in the browser, everyone who wants to be involved (owner, stakeholder, Facilities Management (FM) team) can participate and review the models.

Central to this approach is the model sharing between the engineering, architectural, and construction management teams. As one team, we are able to leverage the information and content within the model to better convey design intent, optimize building systems, and to extract real-time information to assist in a target value design.

....Design/Preconstruction

Our team will also leverage BIM for the following:

- Integration and coordination of building systems through clash detection.
- Real-time optimization of cost and schedule impacts as the design progresses.
- Evaluation of alternate materials, equipment and systems.
- In-house BIM foremen who provide constructability reviews of mechanical and plumbing systems to the design team.
- Assess the cost/benefit of prefabrication of certain elements such as plumbing walls, curtain wall systems, and other highly congested or complex systems.
- Enhance our communication with subcontractors to ensure that all scopes of work are adequately covered.
- Submit a fully coordinated set of drawings to plan check and eliminate deferred submittals.
- Paperless cloud-based document and file sharing between team members.

Construction

The construction phase of our BIM approach will be an intensive mixture of systems coordination and installation verification. C.W. Driver has developed several proprietary tools which enhance the efficiency, accuracy and tracking of our coordination efforts. We will also leverage BIM to do the following:

- Enhance communication of design intent and construction detailing to subcontractors.
- Automate fabrication and installation of the MEPF systems based off of the coordinated models.
- Mobile quality control verification to ensure materials and systems have been properly installed.
- The development of logistical plans including safety plans, delivery of materials, etc.

Close-Out

In conjunction with the close-out process, C.W. Driver will transfer the record project models. At a minimum, C.W. Driver will deliver all of the submittal data, material product information, warranty information and training manuals in a hyperlinked digital format. Based on the client's current needs and FM resources, additional FM/6D tools are available and can be evaluated as to whether or not they meet the required demands, functionality, and cost/benefit of the client.

SUBCONTRACTOR PRE-QUALIFICATION & INVOLVEMENT DURING THE DESIGN PHASE

We believe that inclusion of key subcontractors as members of our design-build team enhances the quality of our effort. We prefer to engage structural expertise in the concrete and structural steel trades; water intrusion expertise in the areas of glass and glazing, roofing, flashings and sheet metal and caulking and waterproofing; and major systems expertise in conveying systems, fire protection, plumbing, HVAC, and electrical. Our pre-qualification process is inherently a best value selection as we will subcontract with firms who have a successful track record with us on projects. We bring these trades into the design phase effort with the same expectations we have of our design partners, including cost control, quality, and scheduling input for the betterment of the project. They will be present at design team meetings as appropriate.

CONSTRUCTABILITY REVIEW PROCESS

While interdisciplinary coordination and continuous peer review will be the primary responsibility of MOA, C.W. Driver will also play a very active role in the design of the project and shall perform in-depth reviews of the plans and specifications (constructability reviews). Key trade contractors and consultants will also be utilized for specific input. At each review, a detailed list of corrections and suggested solutions will be provided to all members of the design team and the City. The subsequent set of drawings will be checked against the matrix to assure that all conflicts have been resolved.



PROCESS TO DEFINE QUALITY EXPECTATIONS

From the very start, the C.W. Driver | MOA Design-Build Team will establish the high-quality expected on this project through proactive and detailed meetings which consider outstanding design and cost requirements concurrently. The BIM model will be used continuously to vet out issues and remove conflicts prior to field work. During design and moving towards construction, C.W. Driver's in-house Quality Control Director will assist the team in producing a Quality Control Program specifically designed for the project. This plan will incorporate constructability reviews, subcontractor selection, BIM coordination, moisture intrusion avoidance, submittal review, issues management, and building commissioning.

QUALITY CONTROL PROCESS

Our team's quality control process, from RFP through close-out, includes the following:

Preconstruction Phase

- Constructability review
- Program compliance
- Build-ability
- Bid-ability
- Coordination
- Site Verifications

Construction Phase

- Meetings
- Reporting and documentation
- Submittal review
- Non-conformance procedures
- Testing and Inspection
- Water intrusion prevention
- Building enclosure mock-up
- MEP coordination
- Building commissioning
- Pre-cover inspection
- Punch-list

SIMILAR PROJECT EXPERIENCE

Our Design-Build team is comprised of local construction professionals with proven experience working in the San Diego area on Library and Civic Center projects.

Working together on 3 Design-Build library projects in the last 5 years, C.W Driver, MOA, and FPBA have established an exceptional working relationship based on collaboration and integration. Each firm possesses a strong portfolio of successful projects and repeat clients. The Design-Build process for the Mission Hill / Hillcrest Library will benefit from the established history of collaboration and integration that C.W Driver, MOA, and FPBA have built.

Our team has proven success providing preconstruction and construction services on library projects and understands the complexities of constructing these types of projects. We can bring our wealth of experience and lessons learned on recent projects, such as the Alpine Branch Library, to mitigate potential challenges on the Mission Hills / Hillcrest Library.

We believe our team members' experience is unrivaled. On the following pages, we have included profiles of key projects that display our Design-Build team's experience on projects similar in size and scope to the Mission Hills / Hillcrest Library project. In particular, our sample projects emphasize aesthetics, functionality, and durability as requested in the RFP.



City of Manhattan Beach - Library



PROJECT FEATURES

- *Design-Build Project*
- *CWD, MOA, & FPBA Team*
- *San Diego County Library*
- *Multi-Functional Space*
- *LEED Silver Certified*
- *Community Room*
- *Administrative Offices*
- *Conference / Meeting Rooms*
- *Green Roof Garden*
- *19,151 SF*
- *Sustainable Design*

2011

FALLBROOK, CA
19,151 SF

CONTRACT AMOUNT
\$8,800,000

EXECUTIVE ARCHITECT
Ferguson Pape Baldwin Architects

DESIGN ARCHITECT
Manuel Oncina Architects

OWNER
County of San Diego

PROJECT AWARDS

DBIA, Western Pacific Region- Award of Excellence, 2011

Design Award of Merit, California Society of American Registered Architects

American Concrete Institute - Art in Concrete Award for Civic Projects

Associated Builders and Contractors of San Diego - Award of Excellence

San Diego Architectural Foundation People's Choice Orchid Award

The Fallbrook Branch Library is a model for low-impact, sustainable development, architectural engineering, landscaping systems design, design-build construction, and building operation.

AESTHETICS

The architecture for the Fallbrook Branch Library evolved from the semi-rural but urbanizing community. The building rests against the slope on Mission Road, providing a public face via a green roof set in a farm aesthetic. The focus of the building is the saddle-shaped roof reminiscent of the nearby rolling hills. The first space is the Great Room where patrons browse latest titles in a Barnes and Noble atmosphere with comfortable seating. The Outdoor Reading Garden area is cooled by a sculpted shade structure and a retaining wall crafted by local artists.

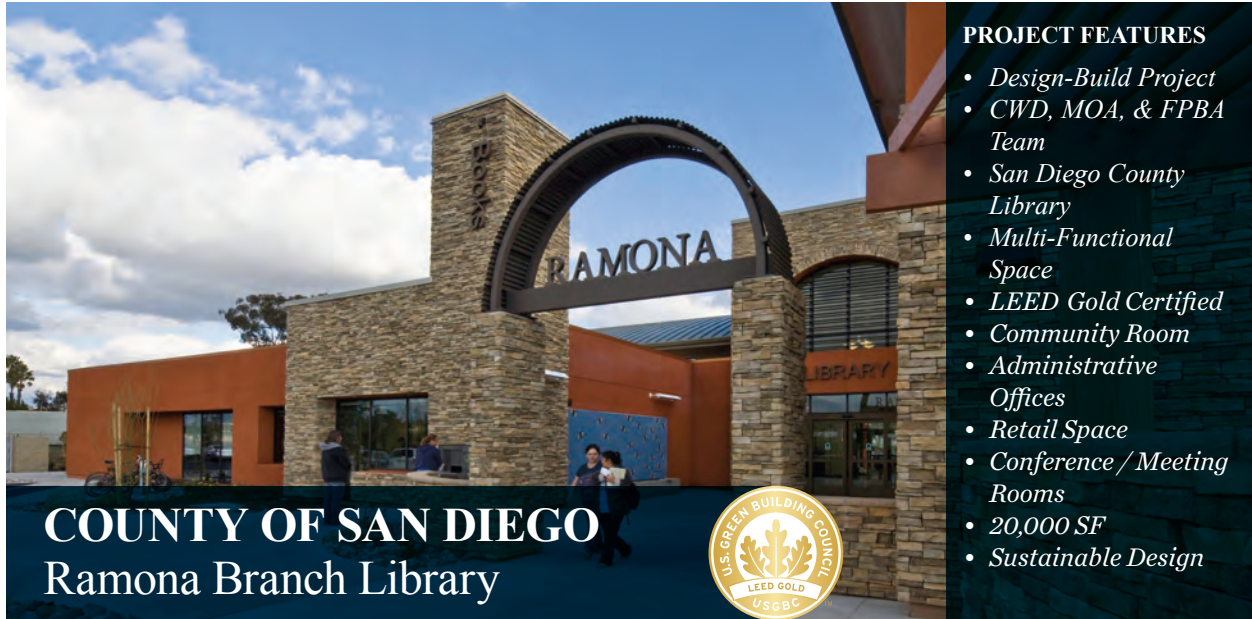
FUNCTIONALITY

By implementing an open plan with low shelving and lots of glass, all public spaces are visible from two staff workstations, allowing the County to lean operations while maintaining a safe environment.

The exterior book drop is conveniently located next to the main entry and connects to the book sorter in the Staff Receiving area, maximizing efficiency by minimizing transport of books throughout the library. All spaces are uniquely designed for the age groups they serve, and movable partitions in the Study Rooms and Community Room accommodate a wide array of group gathering.

DURABILITY

The Fallbrook Branch Library was designed and constructed to serve as an educational platform for sustainability, to be a living example for low impact development and sustainable design principles with high-impact aesthetic. **This project is LEED Silver Certified, and demonstrates the capabilities of the proven Design-Build team of C.W. Driver, MOA, and Ferguson Pape Baldwin Architects.**



PROJECT FEATURES

- *Design-Build Project*
- *CWD, MOA, & FPBA Team*
- *San Diego County Library*
- *Multi-Functional Space*
- *LEED Gold Certified*
- *Community Room*
- *Administrative Offices*
- *Retail Space*
- *Conference / Meeting Rooms*
- *20,000 SF*
- *Sustainable Design*

COUNTY OF SAN DIEGO Ramona Branch Library



2011

RAMONA, CA
20,000 SF

CONTRACT AMOUNT
\$9,000,000

EXECUTIVE ARCHITECT
Ferguson Pape Baldwin Architects

DESIGN ARCHITECT
Manuel Oncina Architects

OWNER
County of San Diego

PROJECT AWARDS

2010 Award of Honor by Council Society
or American Registered Architects

2012 Library of the Year Award by Library
Journal for San Diego County Library

The Ramona Library reinforces the traditional aesthetic of Ramona's Main Street and serves as both a focal point and object of pride for the community.

AESTHETICS

The facility effectively joins modern library concepts with learning museum ideas. **The City's history is celebrated in the architecture which features Mission Revival planning concepts, Southwest adobe architectural material, and Tuscan details and colors.**

FUNCTIONALITY

Designed for social, educational, and recreational uses, the 20,000 SF library incorporates a community room, great room, administration and staff support offices, and retail space. Uniquely designed spaces have been created for children, families, teens, and adults while a range of private and public spaces can accommodate quiet reading, study groups, Wii games, meetings, and large-scale community gatherings.

DURABILITY

The library is a County model for low impact development and sustainable design principles, practices, and performance. The facility has made great strides in minimizing negative environmental impact. **This project is LEED Gold Certified and demonstrates the capabilities of the proven Design-Build team of C.W. Driver MOA, and Ferguson Pape Baldwin Architects.**



PROJECT FEATURES

- *Design-Build Project*
- *CWD, MOA, & FPBA Team*
- *San Diego County Library*
- *Multi-Functional Space*
- *LEED Gold Target*
- *County's First Zero Net Energy Facility*
- *Resource Room*
- *Computer Lab*
- *Conference / Meeting Rooms*
- *13,500 SF*
- *Sustainable Design*

COUNTY OF SAN DIEGO

Alpine Branch Library

2016

ALPINE, CA
13,500 SF

CONTRACT AMOUNT
\$10,00,000

EXECUTIVE ARCHITECT
Ferguson Pape Baldwin Architects

DESIGN ARCHITECT
Manuel Oncina Architects

OWNER
County of San Diego



The New Alpine Branch Library integrates the rich history of the community, creates a signature gathering place that respects the quiet grandeur of the local landscape, and acts as a model of sustainability as the County's first zero net energy facility.

AESTHETICS

Alpine's culturally rich history evolves from its original inhabitants still among us today, the Kumeyaay; Spanish land grants and ranchos, U.S. Mail routes, and nationally acclaimed beekeeping and honey production.

As an enhancement to its historical context, the new library not only serves as a learning center and book repository but creates a bright beacon for individuals and families to participate in community-building activities.

FUNCTIONALITY

The new library includes unique spaces for children, teens, and adults; a marketplace area – featuring popular books and media; a computer lab, homework center, and expandable study rooms; a resource room with a movable

partition to divide the space into two and glass overhead sectional doors leading to the exterior for flexible programming; and leverages exterior real estate for added reading and gathering space.

DURABILITY

All finishes pay close consideration to County maintenance, with durability, accessibility, cost, and cleanability of prime concern will maximizing aesthetic. Life-cycle cost analyses were completed to guide the decision-making process in design. **The Alpine Branch Library will be the first net-zero facility for the County of San Diego and is pursuing both LEED Gold Certification and the Living Building Challenge Zero Net Energy Certification.**

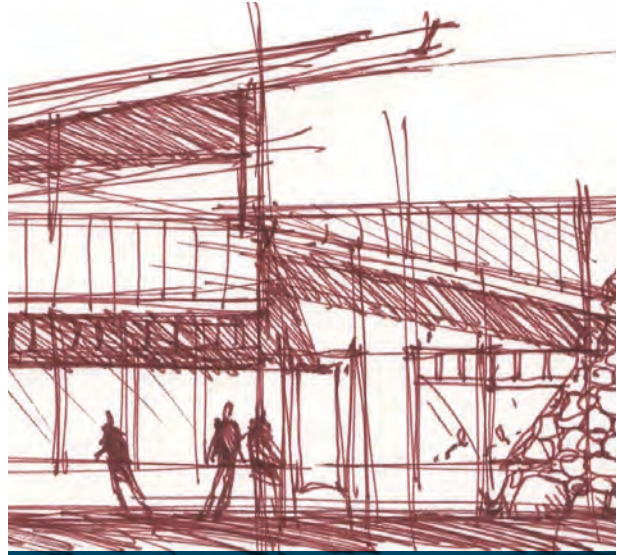
PROJECT DESIGN DESCRIPTION

PROJECT DESIGN DESCRIPTION

Our proposal seeks to bring to life and remain faithful to the design set forth in the bridging documents for the Mission Hills / Hillcrest Library that entails building a new single story, 14,500 sf library over a 37,800 sf two-story underground parking garage. The architectural style of the building is to be 'Craftsman' and will achieve a minimum LEED Gold rating. Our approach will be to respect the plan and exterior design that has been so thoroughly thought out by the designers and accepted by the City, donors, and community. We will seek to refine the design and details, looking for opportunities to improve the design in aesthetics, functionality and durability.

Our proposal includes services for site improvements including a new cul-de-sac, sidewalks, street paving, and storm water collection systems. The landscape will include street trees with grates from the approved list in the Uptown Community Plan, a green wall at the Healing Garden, drought tolerant and low maintenance plantings at all exterior landscape areas, appropriate plant material for filtering water at the bio-retention ponds, and highly-efficient irrigation systems.

The library exterior will be wood-framed with the exception of the Main Reading Room's steel trusses and required steel support. The parking garage below will be concrete. The exterior envelope will be optimized to provide increased energy efficiency, utilizing durable cement plaster and stone veneer, high-performance glazing, standing seam metal roofing at sloped conditions and single ply roofing with a high solar reflectance index at low-sloped roofs, painted steel pergolas and trellises, folding glass at the Community Room will open on to the South Patio and decorative, graffiti-resistant gates.



Example: Northeast Corner Design Concept

Solution for building framing and incorporation of local materials and natural light

The interior will have carpet tile at all main library spaces and ceramic tile flooring in the restrooms, interior storefront systems per plan, suspended acoustic ceiling tile, gypsum board ceilings at core areas, exposed wood paneling in the Main Reading Room, and custom grade built-in casework with plastic laminate and solid surface countertops. Theming, finishes and furniture will be thoroughly considered to create a unique environment for the Mission Hills / Hillcrest community, young and old, with a particular emphasis placed on the Youth Services area.

The mechanical system will consist of a highly efficient variable refrigerant volume system capable of servicing various zones with either heating or cooling simultaneously. A three-stop, hole-less, hydraulic elevator will serve the two underground parking levels and main level of the library.

The electrical system will include all copper wiring, highly energy efficient automated lighting systems and a 28kW solar photovoltaic system.

SUMMARY OF VALUE ADDED

Our team will analyze the following areas for adding value and creating enhancements depending on final budget amount:

ARCHITECTURAL

- Providing a folding partition between Meeting Room 2 115 and Meeting Room 3 116 to increase flexibility of use
- Theming of the children's area
- Additional art beyond the RFP
- Enhanced donor wall
- Upgraded finishes
- Audiovisual system at the Community Room Addition of gates at trash enclosure for security and to avoid vandalism

MECHANICAL

- The outside air supply fan will be controlled by carbon dioxide (CO₂) sensors that will measure the carbon dioxide within each space and modulate the quantity of outside air to maintain a healthy environment.
- Evaluate the insulating values of the exterior solid wall and the roof assemblies beyond code requirements to achieve the best value return and increase energy efficiency.
- Evaluate the exterior glazing performance values, most notably, the Solar Heat Gain Coefficient at the south, east, and west exposures beyond code requirements to increase energy efficiency and achieve the best value return with direct cost savings.

STRUCTURAL

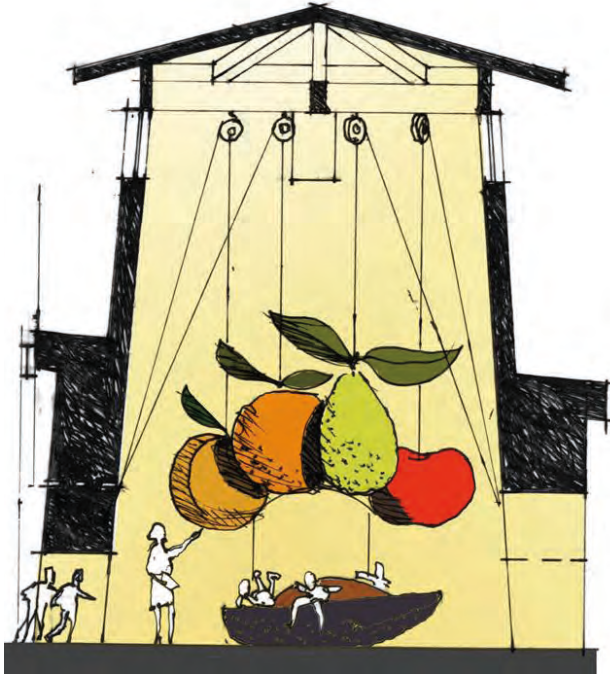
- Providing retaining walls for the parking garage at the south end of the site that do not cross the property line and encroach into the neighboring school's parcel. The retaining walls, using the standard, most cost-effective method, would require placing tie back rods that extend across the property line under the school next door, on the south side. The school would prefer that we do not use that method and the library conveyed that they desire we utilize a method that would keep the entire retaining wall structure under Library property.

ELECTRICAL

- Low impedance high efficient transformers with copper windings to minimize energy losses in wiring and distribution
- Providing outlets with USB charging ports throughout the library for user convenience and the added benefit of energy efficiency as the use of USB draws less power than a standard wall charger
- A low-profile raised floor system is envisioned for the Main Reading Room to allow for easy flexibility of wiring to support a variety of seating configurations.
- Using only high-efficiency LED source fixtures inside and out instead of a mix of LED and fluorescents per the lighting fixture schedule, creating regularity by minimizing unique fixture parts for Facilities Maintenance Staff.
- Exterior light fixtures will be controlled with photocells and central lighting control panels to eliminate unnecessary lighting during daytime and times when spaces are unoccupied.
- Parking garage fixtures will be equipped with occupancy sensors to eliminate unnecessary lighting during unoccupied periods.
- Installing sophisticated computerized lighting control system, including occupancy sensors, time switches and central solid-state astronomical lighting control panel throughout
- Enhanced lighting at the Community Room to allow for a stage/audience configuration

LANDSCAPE

- Upsize landscape planting materials (ex: 24" box to 36" box, 1 gal. to 5 gal., etc)
- Interpretive / educational elements incorporated into exterior improvements (see Section 5: Community Impact for additional information)
- Provide seating opportunities within the Healing Garden to create additional usable space and provide patrons with a variety of seating options.
- Provide additional seating in the Front Porch area to create additional usable space and provide patrons with a variety of seating options.



Left Image: Theming sketch of the Children's area at Fallbrook Branch Library

Right Image: Completed Children's area at Fallbrook Branch Library



YOUNG ADULT SPACE

Our Design-Build Team's experience on other library projects proves that spaces with rich context are prized and respected by teens and tweens. For the Mission Hills / Hillcrest Library, we propose providing a textured environment for the energetic group of young adults which are eager to learn and interact. Dynamic seating arrangements which encourage dialogue, comfortable lounging areas, and flexible study areas have consistently been a successful trend in Young Adult spaces. Our concept is to provide a mixture of diner-like seating, powered tables with comfortable task seating, group study areas, and informal seating for Wii consoles or other technology. Likewise, ceiling treatments, whether high or low, need to be stimulating. For high ceiling treatments, hanging elements should break up the scale. If the treatments are low, they should be enlivened with colored and textured surfaces. However, the suggested design is proposed to stay within the overarching Craftsman context, but be enriched with complementary accents in the lighting and furniture palette.

CHILDREN AND STORY-TELLING AREA

The story-telling nook is perhaps the most important area of the Children's Library. As in many new libraries, it acts as the central hub for young kids to learn about story-telling and play-acting and is essential for encouraging imaginative thinking. For the Mission Hills / Hillcrest Library, our suggestion is to develop the Craftsman-style building into a Tolkien-inspired environment replete with a "Hobbit House", stuffed mythical animals, friendly gnomes, and other "Middle Earth" creatures.

The preferred place for this environment would be in the Northeast corner of the library, away from passing patron traffic and busy Washington Avenue. The cobble-faced alcove will climb up the wall and continue through the roof, culminating as a chimney topped by a "Solatube", which will bring in an ethereal natural light in the cave-like space.

We also envision the ceiling of the Children's space to be smaller in scale to capture noise before it can reverberate, offering a more intimate atmosphere conducive to learning and interacting. The furniture would be inspired by the rounded ends of timbers, giving it a soft look and feel while saving delicate knees and shins. The colors would be soft and natural evoking golden sunrises, green woods, and blazing sunsets. Nineteenth century California landscape paintings would be the natural muse. Lighting and other accessories complement the architecture and furniture by providing a soft, friendly, and comfortable ensemble reminiscent of a stately country home.

ADULT AREA

A great library must include the ability for all age groups to mingle in a single space and pursue their activities in a communal atmosphere, respecting each person's desire for peace and quiet. After all, an acoustically dead space is more difficult to tolerate than one exuding a sense of familiarity and community. For the Adult Reading Area, our team proposes a variety of volumes specially tailored for the activities being undertaken.

For example, the reading area next to the window on Washington Avenue would feature a lower ceiling reminiscent of a Greene and Greene home. The space would include low eaves, soft task lighting, and a fireplace to create a sense of repose and cultivate conversation about the latest novel. The General Adult Shelving Area would open up in a grand volume creating the library's focal point and giving the casual visitor a great impression about the Mission Hills / Hillcrest neighborhood and its community. The large hall would admit natural light from the clerestory windows on its perimeter while displaying its Craftsman-inspired framing, from which large milk glass light fixtures diffuse warm, soft light. The General Seating Area will be a great library study area with large college-like tables, task lighting, and comfortable task seating. The tables will be configured to focus on the wonderful exterior garden on the West side of the room. This environment would present the perfect segue into the lower ceiling area of the Young Adult realm, inspiring young adults while preparing them for their eventual adulthood.



Alpine Library - Teen & Children Areas Sketches



ENERGY EFFICIENCY

PROJECT DESIGN DESCRIPTION

The C.W. Driver team strives to be innovators and continual learners of sustainable architecture. As strong advocates of sustainability, a comprehensive, environmentally responsive approach with regional focus is integral throughout the design and construction of every project. By investigating the specific material, energy, and waste flows of the site and building, we strive to reduce the dependence on natural, non-renewable resources and minimize the negative impacts on the environment from the waste streams that leave the site. We believe that intangible features such as access to natural light, thermal comfort and optimal indoor air quality are equally as important as the tangible components and have immeasurable health benefits for building occupants. We seek to advance the client's vision of creating a robust sense of environmental stewardship and assist in maximizing the client's economic return while providing a safe, aesthetic environment and enhancing the quality of life for the end user.

We have extensive knowledge of the Leadership in Energy and Environmental Design (LEED) program and are capable of completing all administrative efforts in-house led by our numerous LEED Accredited Professionals.

By taking a leadership role in the documentation, we have direct control to ensure credit compliance and can offer primary interaction with the client to assure needs have been met, pushing the envelope to investigate all available opportunities to ensure the most coveted level of certification is realized. We utilize a collaborative methodology with our multi-disciplinary, integrated team to generate client-specific solutions, proposing building systems that consider the comparison between first cost and life cycle cost analyses based on the client's unique project budget. The use of Building Information Modeling, Energy Pro, and solar studies are powerful tools that we use to consider the local influences, and our past LEED projects have given us the confidence to continue to pursue the certification process efficiently and insightfully.

The project is currently tracking Gold certification under LEED NC 2009 (v3) with explanatory notes of points pursued per credit category identified below. Additional strategies that hold sustainable weight but do not assist in the achievement of credits as currently shown are listed separately. Explanatory notes for achieving Platinum certification per Additive Alternate 1 and Zero Net Energy per Additive Alternate 2 can be found at the end of this document.



C.W. DRIVER HAS COMPLETED MORE THAN 20 LEED CERTIFIED PROJECTS IN THE LAST 5 YEARS



LEED Gold City of Newport Beach - Civic Center

SUSTAINABLE SITES

Points Pursued

An erosion and sedimentation control plan will be created and implemented for all construction activities associated with the project (SSp1). The Mission Hills/Hillcrest Library protects sensitive lands by utilizing a previously developed site in close proximity to moderately high density living units, amenities and services, encouraging pedestrian-oriented interaction with the area (SSc1; SSc2), while its adjacency to public transportation and provisions for secure bicycle storage and showers foster low-impact means of transportation (SSc4.1). Electric vehicle supply equipment (EVSE) will be installed for three (3) parking stalls, exceeding 2% of all parking used by the facility (SSc4.3). Site remediation of asbestos and lead contamination present in the existing building to be demolished will mitigate exposure to health risks (SSc3).

Based on new storm water regulations, the project will implement a storm water management plan that captures and treats the storm water runoff from 90% of the average annual rainfall and is capable of removing 80% of the average annual post-development total suspended solids (TSS) load (SSc6.2). All parking will be subterranean (SSc7.1; IDc1.3), minimizing heat islands created by traditional surface parking lots.

Additional Strategies

Preferred parking for carpools/vanpools further encourage alternatives and amenities for low-impact means of transportation. Single-ply roof membranes will contain a high Solar Reflectance Index, reducing the heat island effect and subsequent mechanical cooling load. Concrete walkways boast high albedo characteristics, and plentiful shade from building components and landscaping will assist in further reduction of the heat island effect.

WATER EFFICIENCY

Points Pursued

To complement the design theme of the architecture, native, drought-resistant plants and colorful species geared toward a beautiful and sustainable landscape design local to the Mission Hills and Hillcrest areas will be emphasized (WEp1/c1). The simplicity of cascading vegetation along vertical surfaces at the West end of the building will create a seamless transition from streetscape to sustainably innovative building skin while remaining sensitive to minimize ongoing maintenance requirements. While natural environments will be preserved to the fullest extent, the plant palette will reduce the amount of potable water for irrigation by over 50%, as well as fertilizer and maintenance needed to sustain the landscaping (WEc1). Inside the building, low-flow fixtures will assist in the reduction of potable water use by 30% (WEp2/c3).

ENERGY & ATMOSPHERE

Points Pursued

The building's energy performance is optimized by 40% through place responsive design, efficient equipment and MEP systems, and on-site renewable energy from a 28 kW DC roof-mounted photovoltaic (PV) system that generates over 15% of the electricity needed (EAp2/c1/c2; IDc1.4; RPc1.1). Fundamental and enhanced commissioning and the development and implementation of a measurement and verification (M&V) plan of building energy systems through a third-party commissioning agent will ensure that all systems are performing per the bases of design and owner requirements have been met well after construction has finished (EAp1/c3/c5). The Design-Build Entity will engage in a 2-year renewable energy contract to provide at least 100% of the project's electricity from renewable sources based on the quantity of energy consumed (EAc6; IDc1.5).



MATERIALS & RESOURCES

Points Pursued

A designated collection area will be provided on the property for recycling, at a minimum, plastics, metals, paper, cardboard, and glass to serve the entire building (MRp1). Over 75% of the non-hazardous construction and demolition waste will be diverted from the landfill, with a plan in place to identify the materials to be diverted from disposal and whether the materials will be sorted on-site or comingled (MRc2). Materials with recycled content, regionally manufactured and extracted, sustainably harvested, and/or repurposed will be specified where appropriate in efforts to stimulate local economies, minimize energy required for transport, and encourage regenerative design (MRc4/c5).

Absorptive materials stored on-site and installed will be protected from moisture damage until the building is completely sealed from the exterior. Any permanently installed air handling equipment used during construction will contain filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 at each return air grille and replaced prior to occupancy. Air sample testing will be completed to ensure contaminants such as Formaldehyde, Particulates, Total Volatile Organic Compounds (TVOCs), 4-Phenylcyclohexene (4-PCH), and Carbon Monoxide (CO) levels are not exceeded prior to occupancy (EQc3.1-3.2). Adhesives, sealants, paints, coatings, flooring systems, composite wood and agrifiber products installed on-site will be low-emitting (EQc4.1-4.4).

INDOOR ENVIRONMENTAL QUALITY

Points Pursued

By California state law, the project must provide ventilation air in accordance with the Title 24-2013 energy code, which exceeds the referenced ASHRAE standard (EQp1). By California state law, no smoking is allowed in this building and signage will be provided around the perimeter prohibiting smoking at least 25 feet away from entries and outdoor air intakes or onsite entirely to align with City requirements (EQp2). A Construction Indoor Air Quality (IAQ) Management Plan will be developed and implemented for construction and preoccupancy phases.

Individual lighting controls will be provided for at least 90% of individual occupant spaces to enable occupants to adjust the lighting, as needed, with optimal light output ideal for reading and viewing activities (EQc6.1). The mechanical design analyzes ambient and radiant temperature, relative humidity, and air movement coupled with the anticipated metabolic rate and clothing level of users in the space, delivering a balanced approach to thermal neutrality and thermal delight through body and mind, a state of equilibrium between internally generated energy and energy loss to the environment to achieve a mindset of satisfaction with the thermal environment (EQc7.1).

The City has confirmed their commitment to assess building occupant thermal comfort over time (EQc7.2). Spatial daylight autonomy is achieved for 75% of all regularly occupied floor area, with glare control devices installed in all regularly occupied spaces, and direct line of sight to the exterior is achieved for 75% of all regularly occupied floor area (EQc8.1-8.2; RPe1.2).

Additional Strategies

Hard lid ceilings with self-closing doors at indoor spaces with cross contamination potential and strategic placement of outdoor air intakes to prevent pollutant contamination from exterior sources will be considered to enhance indoor air quality (EQc5)

INNOVATION

Points Pursued

Based on the LEED Checklist provided by the Bridging Design Team, the City is committed to contracting with a janitorial staff that implements green cleaning policies, reducing the chemical pollutants introduced into the facility (IDc1). A number of principal participants of the project team are LEED Accredited Professionals, fully capable to act as the LEED Project Administrator (IDc2). Explanatory notes for additional ID credits are described above.

REGIONAL PRIORITY

Explanatory notes for RP credits are described above.

MECHANICAL SYSTEMS

System

The library will be air conditioned, heated and ventilated by a variable refrigerant flow (VRF) system. The VRF system distributes refrigerant from the outdoor unit to the multiple indoor fan coil units providing efficiency, individual user control and reliability in one package. Comfort and efficiency is achieved by the use of variable speed inverter compressors - only the amount of energy required is used to provide the necessary cooling or heating to each individual indoor fan coil.

The condensing unit will be located in a mechanical well on the roof with ladder access. The condensing unit is connected to the indoor concealed fan coil units using copper piping.

Ventilation will be provided by a dedicated outside air supply fan with a variable speed motor. The outside air supply fan will have a Merv-13 filter bank and an air measuring station with DDC control interface. The outside air supply fan will be controlled by carbon dioxide sensors (CO2 sensors) that will measure the carbon dioxide within each space and modulate the quantity of outside air to maintain a healthy environment. The reduction of outside air when the space is not fully occupied will have a significant impact on the total energy consumption of the building annually. A building pressure relief fan with a variable speed drive will remove air from the building to ensure proper outdoor air exchange. The building relief fan will be controlled by a building pressure sensor.

Controls

The heating, ventilation and air conditioning system (HVAC) will be completely automated. The VRF system will have an integrated control system with a local display and an integrated remote connection to the County's remote monitoring site. The staff will be trained on how to monitor the system for alarms and adjust hours of operation.

General Exhaust

Each space requiring an exhaust system will have an independent fan that will be switched with the lighting motion sensors for optimum control and efficiency.

Spaces Requiring 24/7 Air Conditioning

Spaces requiring 24/7 air conditioning for electronic equipment will be served by a dedicated exhaust fan and a high efficiency ductless split system air conditioning system. The thermostatically controlled exhaust fan will draw air from the conditioned library to cool the space. When the space temperature exceeds 75°F the exhaust fan will be disabled and the ductless split system unit will be enabled to maintain space temperature.



ELECTRICAL SYSTEMS

Distribution

The electrical power distribution system will be designed to minimize energy losses in wiring and distribution equipment by implementing the following:

- All copper wiring for services, feeders and branch circuits
- Low impedance high efficient transformers with copper windings
- Copper busses in all service, distribution and branch circuit panel boards

Exterior Lighting

Exterior lighting strategies will provide energy efficiency by implementing the following:

- Exterior lighting, including building mounted lighting, will utilize only high efficiency LED source fixtures
- Exterior fixtures will be controlled with photocells and central lighting control panels to eliminate unnecessary lighting during daytime and times when buildings are unoccupied
- Parking garage fixtures will be equipment with occupancy sensors to eliminate unnecessary lighting during unoccupied periods

Interior Lighting

Interior lighting strategies will provide energy efficiency by implementing the following:

- Installation of only high efficiency LED source fixtures
- Installation of a sophisticated computerized lighting control system including occupancy sensors, time switches and central solid-state astronomical lighting control panel
- Control over interior lighting system provided at the Branch Manager's office and staff administration areas with multi-level switching to reduce energy consumption and facilitate the use of task lighting
- Together above strategies will lower lighting power density while providing the required illumination levels for the various building areas per the RFP and IES recommendations

LEED GOLD CHECKLIST



LEED 2009 for New Construction and Major Renovation

Project Checklist

Mission Hills | Hillcrest Branch Library

6/8/2016

19 7 Sustainable Sites Possible Points: 26

Y	N	?	Prereq	Description	Points
Y			Prereq 1	Construction Activity Pollution Prevention	
1			Credit 1	Site Selection	1
5			Credit 2	Development Density and Community Connectivity	5
1			Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
3			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
2			Credit 4.4	Alternative Transportation—Parking Capacity	2
1			Credit 5.1	Site Development—Protect or Restore Habitat	1
1			Credit 5.2	Site Development—Maximize Open Space	1
1			Credit 6.1	Stormwater Design—Quantity Control	1
1			Credit 6.2	Stormwater Design—Quality Control	1
1			Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
1			Credit 8	Light Pollution Reduction	1

4 6 Water Efficiency Possible Points: 10

Y	N	?	Prereq	Description	Points
Y			Prereq 1	Water Use Reduction—20% Reduction	
2	2		Credit 1	Water Efficient Landscaping	2 to 4
2			Credit 2	Innovative Wastewater Technologies	2
2	2		Credit 3	Water Use Reduction	2 to 4

29 2 4 Energy and Atmosphere Possible Points: 35

Y	N	?	Prereq	Description	Points
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
15		4	Credit 1	Optimize Energy Performance	1 to 19
7			Credit 2	On-Site Renewable Energy	1 to 7
2			Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
3			Credit 5	Measurement and Verification	3
2			Credit 6	Green Power	2

5 9 Materials and Resources Possible Points: 14

Y	N	?	Prereq	Description	Points
Y			Prereq 1	Storage and Collection of Recyclables	
3			Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
1			Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2
2			Credit 3	Materials Reuse	1 to 2

Materials and Resources, Continued

Y	N	?	Credit	Description	Points
2			Credit 4	Recycled Content	1 to 2
1	1		Credit 5	Regional Materials	1 to 2
1			Credit 6	Rapidly Renewable Materials	1
1			Credit 7	Certified Wood	1

11 4 Indoor Environmental Quality Possible Points: 15

Y	N	?	Prereq	Description	Points
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
1			Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
1			Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
1			Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1

5 1 Innovation and Design Process Possible Points: 6

Y	N	?	Credit	Description	Points
1			Credit 1.1	Innovation in Design: LEED Education Program	1
1			Credit 1.2	Innovation in Design: Green Cleaning Program (Owner)	1
1			Credit 1.3	Exemplary Performance: Under Cover Parking (100%)	1
1			Credit 1.4	Exemplary Performance: On-Site Renewable Energy (15%)	1
1			Credit 1.5	Exemplary Performance: Green Power (100%)	1
1			Credit 2	LEED Accredited Professional	1

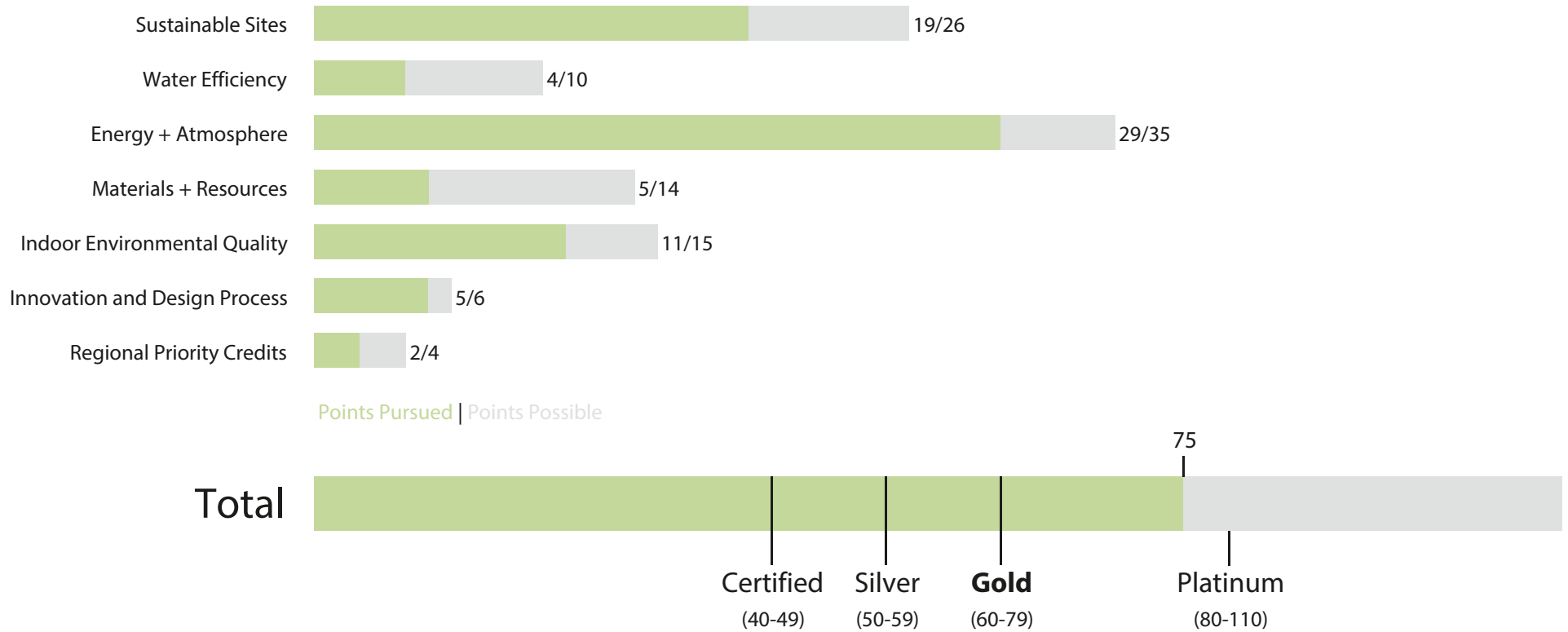
2 2 Regional Priority Credits Possible Points: 4

Y	N	?	Credit	Description	Points
1			Credit 1.1	Regional Priority: EAc2 On-Site Renewable Energy (1%)	1
1			Credit 1.2	Regional Priority: EQc8.1 Daylight and Views - Daylight	1
1			Credit 1.3	Regional Priority: WEC3 Water Use Reduction (40%)	1
1			Credit 1.4	Regional Priority: WEC2 Innovative Wastewater Technologies	1

75 31 4 Total Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

LEED GOLD CHECKLIST SUMMARY



ADDITIVE ALTERNATE 1: ACHIEVING LEED NC 2009 PLATINUM

The library will serve as an educational platform for sustainability, a living example of low impact development and sustainable design principles, practices, and performance. Sustainable features will be highlighted via signage throughout for educational immersion, displaying a variety of performance information related to energy production, energy cost savings, water reduction, and passive design strategies (IDc1). Ultra-efficient low-flow plumbing fixtures will be utilized to increase the reduction of potable water use from 30% to 40% (WEc3; RPe1.3). CO2 monitors will be installed at all densely occupied spaces to enhance indoor air quality (EQc1).

ADDITIVE ALTERNATE 2: ACHIEVING NET ZERO

To achieve net zero based on the design in the bridging documents, a 185 kW-DC PV system will need to be provided. Our team will evaluate the current design per the below to find opportunities to lower energy consumption and reduce the PV system while preserving the aesthetic to the maximum extent possible.

The building's energy performance will achieve net-zero through place responsive design, using nature as a catalyst for what it will allow and help us to do, and efficient equipment and MEP systems to reduce energy consumption coupled with on-site renewable energy from roof-mounted and freestanding photovoltaic (PV) arrays to offset the remaining load in its entirety. The net zero design will maximize indirect daylight on the North façade and indirect, controlled daylight on the South, with minimal exposure on the East and West facades that pose a challenge in overheating hours of the day. Its juxtaposition will form a balanced approach to boost human delight while optimizing the surface to volume ratio and responding to the neighboring buildings, ensuring its mass does not excessively shade, obstruct, or diminish access to fresh air or daylight.

North windows will be maximized at ground and clerestory levels, ideal for hot climates with mild winters, allowing indirect daylight to flood the space, minimizing glare with even distribution, and energizing the library space. Horizontal louvers, dramatic vertical fins, deep recesses of storefront systems, roof overhangs, and careful massing of building extensions will assist in shading South, West, and East facades with direct sunlight potential, resulting in filtered, diffused light, ideal for reading and viewing activities. Small apertures will allow light to enter on East and West facing facades, shaded with vertical elements to mitigate the morning and afternoon sun. All exterior glazing will be high-performance, insulated glass, with higher-performing values on South, East, and West facades with higher heat gain potential.

The utilization of higher insulating materials at both vertical and horizontal surfaces will diminish thermal swings throughout the day, maximized for a best value return with significant impact to energy reduction.

Based on the extremely efficient building envelope and air conditioning system, natural ventilation will not be needed to attain net zero energy. Avoiding natural ventilation will result in a cleaner library with minimized presence of allergens, less maintenance, lower chance of water and pest infiltration, burglary, better sound control, and simplified environmental control overall.

The roof layout will be evaluated to achieve maximum energy production. South-sloping roofs and/or PV panels tilted at an angle of 33° are ideal, with variations reducing energy production accordingly.

LEED PROFESSIONALS

C.W. Driver has more than 60 LEED Accredited Professionals on staff, including Andy Feth, our Design-Build Team Leader. Our firm has successfully completed more than 20 LEED Certified projects in the past five years.

LEED PLATINUM CHECKLIST



LEED 2009 for New Construction and Major Renovation

Project Checklist

Mission Hills | Hillcrest Branch Library

6/8/2016

19 7 Sustainable Sites Possible Points: 26

Y	N	?	Prereq	Description	Points
Y			Prereq 1	Construction Activity Pollution Prevention	
1			Credit 1	Site Selection	1
5			Credit 2	Development Density and Community Connectivity	5
1			Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
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1			Credit 5.2	Site Development—Maximize Open Space	1
1			Credit 6.1	Stormwater Design—Quantity Control	1
1			Credit 6.2	Stormwater Design—Quality Control	1
1			Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
1			Credit 8	Light Pollution Reduction	1

6 4 Water Efficiency Possible Points: 10

Y	N	?	Prereq	Description	Points
Y			Prereq 1	Water Use Reduction—20% Reduction	
2	2		Credit 1	Water Efficient Landscaping	2 to 4
2			Credit 2	Innovative Wastewater Technologies	2
4			Credit 3	Water Use Reduction	2 to 4

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Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
15		4	Credit 1	Optimize Energy Performance	1 to 19
7			Credit 2	On-Site Renewable Energy	1 to 7
2			Credit 3	Enhanced Commissioning	2
2			Credit 4	Enhanced Refrigerant Management	2
3			Credit 5	Measurement and Verification	3
2			Credit 6	Green Power	2

5 9 Materials and Resources Possible Points: 14

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1			Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2
2			Credit 3	Materials Reuse	1 to 2

Materials and Resources, Continued

Y	N	?	Credit	Description	Points
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1	1		Credit 5	Regional Materials	1 to 2
1			Credit 6	Rapidly Renewable Materials	1
1			Credit 7	Certified Wood	1

12 3 Indoor Environmental Quality Possible Points: 15

Y	N	?	Prereq	Description	Points
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Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
1			Credit 2	Increased Ventilation	1
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1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
1			Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
1			Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1

6 Innovation and Design Process Possible Points: 6

Y	N	?	Credit	Description	Points
1			Credit 1.1	Innovation in Design: LEED Education Program	1
1			Credit 1.2	Innovation in Design: Green Cleaning Program (Owner)	1
1			Credit 1.3	Exemplary Performance: Under Cover Parking (100%)	1
1			Credit 1.4	Exemplary Performance: On-Site Renewable Energy (15%)	1
1			Credit 1.5	Exemplary Performance: Green Power (100%)	1
1			Credit 2	LEED Accredited Professional	1

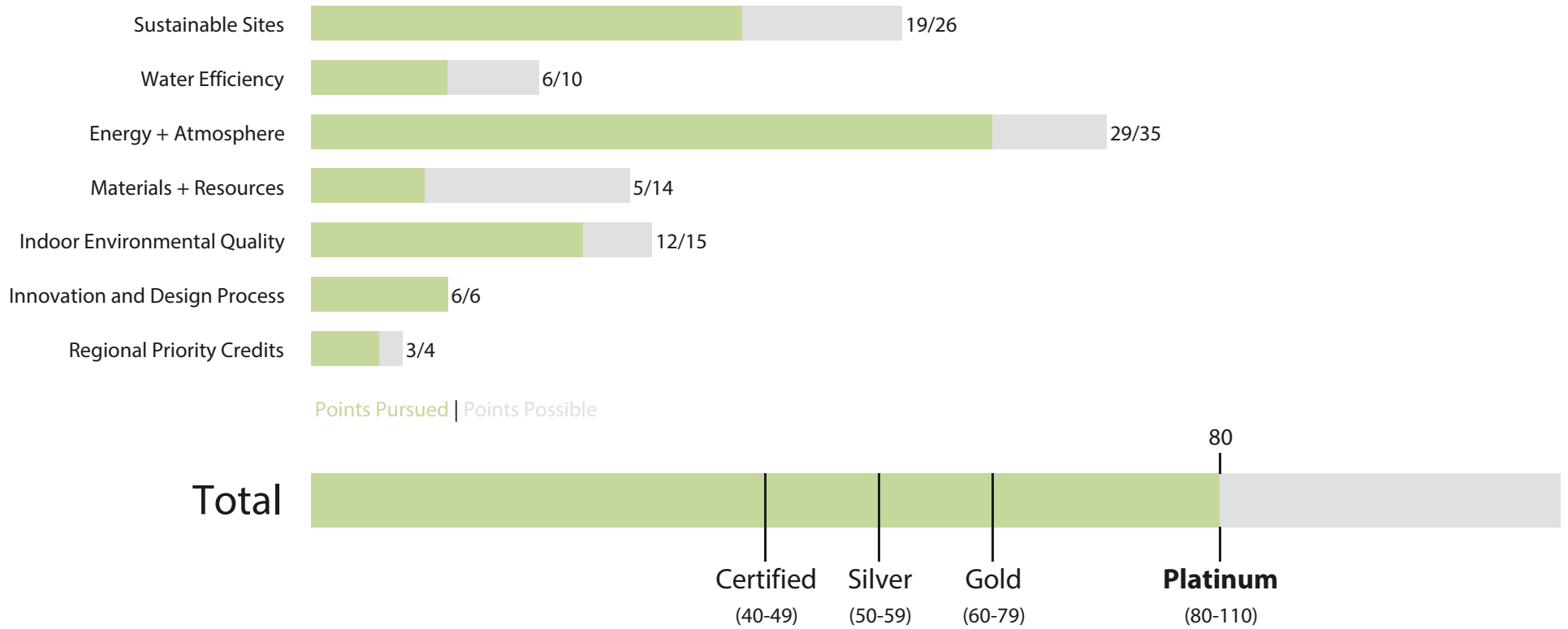
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1			Credit 1.4	Regional Priority: WEC2 Innovative Wastewater Technologies	1

80 26 4 Total Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

LEED PLATINUM CHECKLIST SUMMARY



MINIMUM REQUIREMENTS

MINIMUM PROGRAM & PERFORMANCE REQUIREMENTS

We certify that all mandatory program and performance requirements set forth in the RFP for the Mission Hills / Hillcrest Library project have been satisfied in this proposal.



Richard Freeark
Senior Vice President, San Diego
C.W. Driver



05

Construction Plan

RAMONA



County of San Diego - Ramona Library



C.W. DRIVER'S MANAGEMENT TEAM WILL BE RESPONSIBLE FOR CREATING AN ENVIRONMENT OF TRUST AND RESPECT, MANAGING CHANGE, AND COORDINATING PROJECT ISSUES BETWEEN TEAM MEMBERS.

APPROACH & METHODS

CONSTRUCTION APPROACH & METHODS

Our approach to the construction of the project will include the following tactics:

- Proper Planning
- Appropriate Staffing
- Leverage Construction Technologies
- Budget & Schedule Management
- Quality Control
- Safety
- Detailed Project Closeout

PROPER PLANNING

Our team will establish a Project Strategic Plan prior to the start of construction, which is similar to a “business plan” or a “road map” to success. This strategic plan will outline strategies for a successful project incorporating items such as lean construction strategies, BIM management plans, quality control plans identifying potential risk factors and site specific safety procedures. The C.W. Driver team will ensure that all team members and subcontractors understand the Project Strategic Plan prior to starting any activities on site, which we believe is an essential step to a successful construction project. We will provide each subcontractor with a policies and procedures manual to ensure compliance.

APPROPRIATE STAFFING

Our approach to staffing this project is to offer a proven team that has successfully worked together on a similar library project in San Diego County. Since this team has worked together on similar projects we can operate efficiently from the start, utilizing benchmark data and lessons learned to benefit the project. We are also offering one of our most experienced Project Directors, Andy Feth, who has over 30 years of experience working in the San Diego construction industry. Andy recently completed 3 local library projects and is certified by the Design Build Institute of America (DBIA), which demonstrates his knowledge and competence of managing this type of project.

Our onsite management team will include Matt Christensen (Project Manager) and Will House (Superintendent), who worked together with Andy Feth on a recent library project. Having a team that has worked together on a similar project, we can streamline the communication and coordination process between the design and construction teams and help guide the construction process using proven tools and the most advanced virtual design and construction technologies. We hope to demonstrate our enthusiasm to work on this iconic project by offering some of our most experienced team members.

SCHEDULE MANAGEMENT

Prior to the start of construction, we will have established a complete CPM schedule for the project. This schedule will be created using a combination of traditional CPM methodology as well as pull planning sessions with the pre-awarded trades. The schedule will be detailed and include all activities for the project including critical submittals and lead times. Each of these elements will be scheduled, tracked, monitored and reviewed with the entire project team on a weekly basis.

The schedule updates are published and distributed on a routine basis during Pull Planning sessions. This prompts subcontractor buy-in for each weekly “promise” of work to be completed the following week, and ensures the project stays on track more reliably. The “Weekly Productivity” or Percent Planned Complete (PPC) process will be used to measure the overall productivity of completing work for each week. Our schedules are updated monthly and actual trade progress is monitored versus planned progress.




BUDGET CONTROL & MANAGEMENT

C.W. Driver will be providing updates to the project budget at requested intervals or on a monthly basis, at minimum. These updates will include real time analysis of the entire project costs to date, the remaining committed costs, and all projected costs through completion. These projections will be conducted collaboratively with the entire team so all stakeholders are aware of the budget. We will also provide a weekly tally of all project allowances, contingencies, and reimbursables so the funding sources are clearly understood at all phases of the project.

LEVERAGE CONSTRUCTION TECHNOLOGIES

Our onsite management team will leverage construction technologies to maximize coordination efforts and minimize the waste of resources. Our team utilizes various technologies to help coordinate with trade contractors including Revit, Navisworks, Sketchup, Bluebeam, Viewpoint, and Plan Grid, among other technologies. C.W. Driver has also developed several proprietary tools which enhance the efficiency, accuracy and tracking of our coordination efforts. We will also leverage construction technologies to do the following:

- Enhance communication of design intent and construction detailing to subcontractors.
- Automate fabrication and installation of the MEPF systems based off the coordinated models.
- Mobile quality control verification to ensure materials and systems have been properly installed.



The top left screenshot shows a floor plan for '19A201 (1st Floor Building 19 & 20)' with numerous red and blue circles indicating design issues. The top right screenshot shows a list of issues with details such as issue number, category (e.g., Framing Issues, Electrical, Mock Up), description, date, and assigned person. The bottom left screenshot shows a detailed view of a specific issue: 'Concrete Finish' in the 'North Side Of Building 20', assigned to 'alex@dfperez.com', with a status of 'Open'. The description for this issue is 'Sack patch concrete walls around perimeter of the building'.

EXAMPLE: QUALITY CONTROL TOOLS

Our team utilizes the software “PlanGrid” for the design review process. The software is a mobile platform that allows our team to easily share plans, markups, photos and reports to the entire team remotely. The value of the software is that it enables our team to identify design issues directly in the drawings, and track the issues until they are completely resolved.

The images are examples of a design review using PlanGrid. Each circle on the drawing represents a design issue (see top left image). By clicking on each design issue, a detailed description of the issue can be viewed including who is responsible and the status of the issue (see bottom left image). We track each issue until they are resolved, and can clearly monitor and report all unresolved issues (see top right image).



ELEMENTS OF QUALITY CONTROL PROGRAM

Our firm's subcontractor selection process focuses on attracting highly qualified and quality-oriented subcontractors, engaging only the top level craftsmen. We regularly inspect the work as it is being installed to ensure the highest quality.

As part of our Site Specific Quality Control (QC) Plan, we hold foreman start-up meetings, pre-installation conferences, and daily "plan table" meetings to communicate quality and craftsmanship expectations of subcontractors.

We require a thorough review of all submittals. Submittals do not go to the architect until they are ready for approval. Shop drawings are reviewed for dimensioning, quantity, location and coordination with contiguous systems, attachments, and conformance with specifications.

QUALITY CONTROL

A site-specific Quality Control Plan will be developed and tailored to fit the individual needs and associated risks of the Mission Hills /Hillcrest Library. Key components of the Quality Control Plan include moisture intrusion prevention, issues management, submittal review, pre-installation meetings, pre-cover inspections, and our zero punchlist process. Our team utilizes a multi-faceted approach to ensure exceptional construction quality and craftsmanship.

The use of mock-ups is an important component in determining and communicating the level of expected quality, verifying products and workmanship, and identifying previously unknown coordination issues. Prior to the start of the project, we will identify those elements where a mock up is recommended. Possible mock-ups for this project would include:

- Exterior concrete / specialty paving samples
- Exterior façade and finishes, particularly where different finishes intersect.
- Glass enclosures and window systems with all associated flashings and waterproofing components
- Casework
- Security hardware and access control systems

These mock-ups will allow standards to be set for craftsmanship / workmanship of various products and will provide an approved physical sample to which all subsequent work can be gauged. The goal of our process is to ensure that the installed products, craftsmanship, and workmanship are in accordance with the project documents and approved submittals while meeting the highest industry standards.



SAFETY

Our comprehensive Environmental Health & Safety Program reflects C.W. Driver's commitment to the overall safety of our project teams, subcontractors, all site visitors, and the community. We are dedicated to the elimination of incidents and their associated costs by preventing, removing, or mitigating unsafe acts and conditions, and by responding properly to challenging situations. In pursuance of that goal, we have an extensive safety program that is rigorously enforced at each of our jobsites. Our team will be supported with a dedicated Safety Manager who will ensure compliance by everyone on site.

We take a proactive approach to safety. Rather than simply reacting to incidents and correcting contributing factors, our objective is to be proactive and prevent incidents from occurring. Aggressive safety management techniques such as improved hazard recognition, hazard correction, and employee involvement help reduce occupational injuries and illnesses. We promote our EH&S Program as a corporate-wide process that helps us ensure a safe work environment for everyone on the project site.

DETAILED PROJECT CLOSEOUT

At the end of the project, we will institute a commissioning plan to assure the building performance and document that all applicable equipment and systems are installed according to the design, manufacturer's recommendations, and industry standards. The commissioning process also serves as a key component in training owner's operating personnel to ensure optimal performance of the building systems and equipment.

Our commissioning process provides the following:

- Enhanced communication and coordination between trades during construction and closeout.
- Fully documented assurance that all mechanical systems, equipment, controls and safety systems are installed and operating in compliance with the design objectives.
- Verification of Operation & Maintenance documentation is complete.
- Training that enables facilities and service personnel to effectively operate controls and systems.

The Project Manager will be responsible for all administrative close-out procedures including final accounting, contractual closeout requirements, archiving of documents and final subcontractor evaluations. The Superintendent will coordinate the demobilization of the project site and will also participate in subcontractor evaluations. Project close-out tasks include:

- Preparation of O&M Manuals
- As Built (Record) Drawings
- Owner Stock
- Training Verification
- Warranties & Insurance
- Permit Closures
- Inspection Sign-Offs
- Notice of Completion Certificates
- Subcontractor Evaluation
- Demobilization

As our commitment to customer satisfaction, C.W. Driver will provide an 11-month follow-up with the City to ensure any outstanding issues are resolved prior to warranty expiration.



LEAN TECHNIQUES

C.W. Driver is committed to delivering our projects in a LEAN fashion. We understand that LEAN principles include integrated teams, combining process design with project design, decentralizing decision making which empowers project team members, and handing off work tasks to create a more efficient work stream. It's all about eliminating waste and creating value.



LEAN SCHEDULING

This process is a collaborative effort with our project design teams, in which all subcontractors performing work on the project participate in the process. **At the inception of the design development and preconstruction phases, the LEAN scheduling efforts begin by seeking input, or buy-in, from the design team, subcontractors, and the Owner.**

This is a collaborative effort in which, as a team, we develop the goals, expectations, and project activity durations for the project. Through this process we collaboratively find opportunities to enhance our schedule.



PREFABRICATION

On our projects, materials are being prefabricated off-site in ideal shop conditions to the greatest extent possible. This results in less time being spent with expensive field labor doing assembly on-site in difficult conditions. **Embracing shop prefabrication on complex projects makes the construction process more efficient and decreases congestion on-site.** This has a positive impact on the schedule as time will not be wasted assembling in the field.



JUST-IN-TIME

Just-in-Time is the application of LEAN principles to field logistics during our construction phases. Efficiency of handling, staging, and installing materials will be improved through advanced planning.

For example, rather than delivering materials to the site long before they will actually be used, deliveries will be timed to arrive “Just-in-Time” for installation. **The result is a reduction in material stock on the job site which improves flow, efficiency, schedule, and safety.** This not only makes the project team more efficient, but limits the need for occupying the limited job site space. Just in Time is a very valuable tool, especially on projects on tight urban sites with limited staging and laydown area.

PHASING PLAN

CONSTRUCTION APPROACH & METHODS

Our approach to the phasing of construction activities is to determine the most efficient construction sequence while minimizing impact to the community. During the design and preconstruction phase, our team will finalize the details of the construction schedule utilizing input from all team members including subcontractors, and will determine the most appropriate sequence and duration of activities. Since the project includes road and offsite improvements that will require temporary road and sidewalk closures, the development of our phasing plan will entail close coordination with the City and local community.

Our proposed phasing of construction activities includes the following sequence of activities, which is also graphically illustrated on the following pages:

Mobilization

The first thing that we will do is mobilize on-site, and prepare for the demolition of the IBEW building. Our team will erect fencing around the entire site for safety measures. We will need to close the sidewalk along Washington Street for general access during construction, and a portion of Front Street for truck loading and delivery of materials. We will provide two access points to the site: a worker access gate at the NW corner and a main entrance gate for construction vehicles on the NE corner of the site. Our team will install a covered walkway along Washington Street for pedestrian safety, and will work with the City to keep the current bus stop operational if possible. Our team plans to lease office space at an off-site location nearby, since there isn't any room on-site for a jobsite trailer.

Demolition & Excavation

Once we have mobilized on-site, we will prepare for the demolition of the IBEW building starting with hazardous material abatement. After the building is free and clear of hazardous materials, we will start the demolition of the building and parking lot with a goal of recycling as many materials as possible to divert debris from the landfill. We will consider using a spoils conveyor at the south end of the site to efficiently load debris onto trucks without having to create a ramp system. Once demolition has been completed, we will install the perimeter shoring system and start the excavation of soil for the underground parking garage. Our team will implement a dust control plan since there are residential buildings in close proximity to the site.





Parking Garage and Building Construction

Construction on-site will start with the subterranean parking garage and proceed with the building of the library on top. Our team will utilize a material lay-down / staging area on the SE portion of the site along Front Street. Since there is not much room on-site, our team will utilize just-in-time delivery concepts for efficient use of the site.

Off-site Improvements

Once the building construction is complete, site fencing will be expanded to cordon off Front Street for road and offsite improvements. Since we will be upgrading the sidewalks along Front Street, we will have to collaboratively plan work to maintain access to existing residences. We will also remove the covered walkway along Washington Street for the sidewalk upgrades, and will possibly need to relocate the bus stop temporarily.







Final Completion

Our team will re-open the sidewalk along Washington Street and access to Front Street once all offsite improvements have been completed. Our team will proceed with commissioning and inspections of the building to ensure that all the systems are working appropriately. We will turn the building over to the City to prepare for the opening of the library once we have final approvals.

*Note: Job Trailer to be in Leased Space Offsite

Excavation & Construction

Key

-  Site Fence
-  Main Gate
-  Worker/Service Access
-  Site Water
-  Port-o-John
-  Concrete Washout

Export & Material Delivery

- Trucks will arrive moving west on Washington St. and back into the site to the Truck Loading Area.
- Export soil will be loaded onto the Spoils Conveyor and into the Truck.
- Once filled, the truck will pull-out straight and Merge onto Washington St.

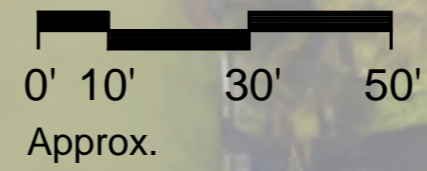
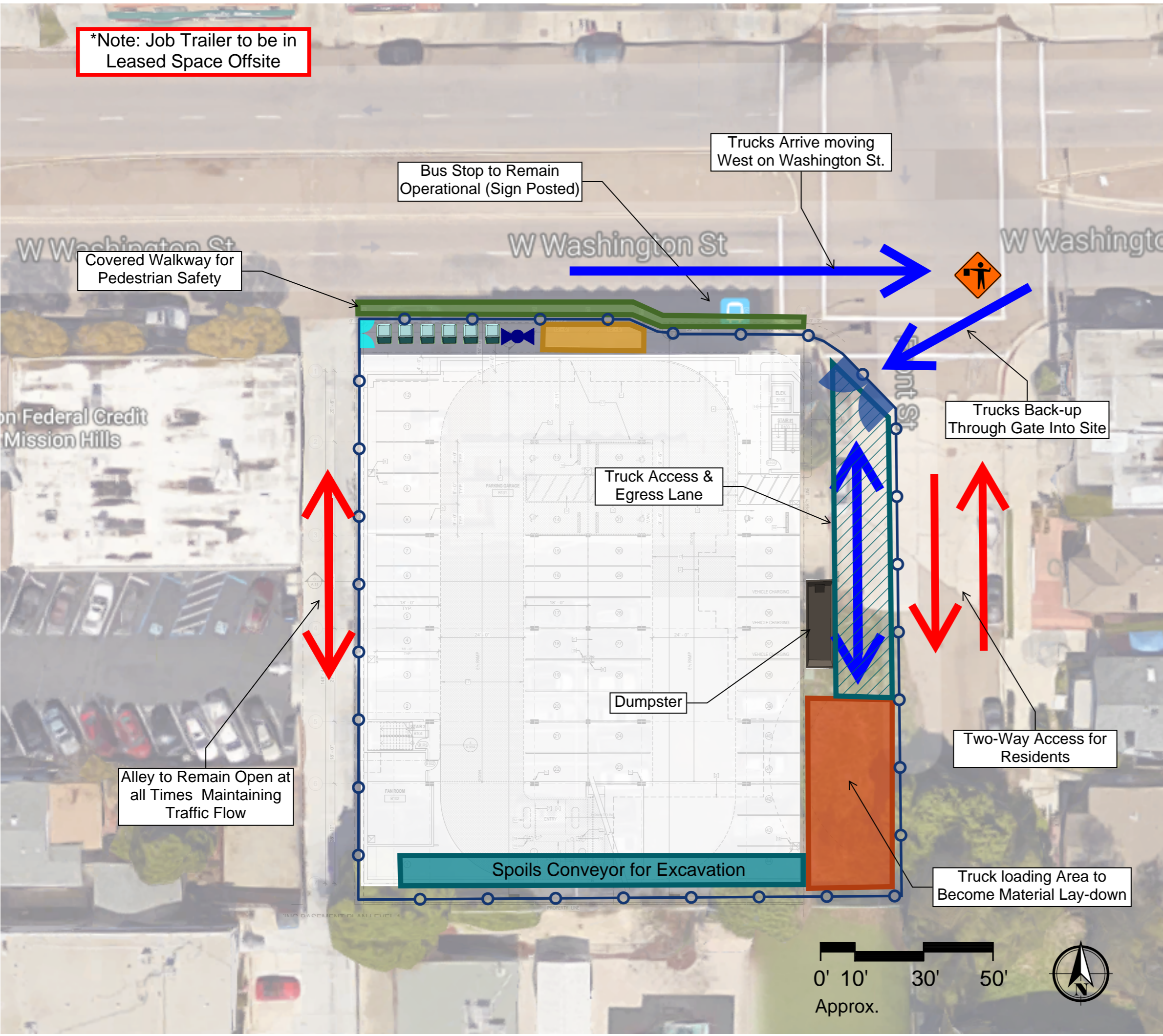
- Materials will be delivered "Just-In-Time" and stored in Material Lay-Down area.

Safety

- Covered walkways will be provided for pedestrians along Washington St.
- Perimeter fence will maintain a secure site.
- Flagmen will direct truck access and alert Washington St. Traffic.

Traffic Flow







- Alley to the West of the site will remain clear at all times.
- A portion of Front St. will be closed, but still allowing full access for Residents.
- Parking aisle along Washington will be used for pedestrian walkway.
- Job site parking will be off-site minimizing congestion.



***Note: Job Trailer to be in Leased Space Offsite**

Off-site Construction

Key

	Site Fence
	Main Gate
	Worker/Service Access
	Site Water
	Port-o-John
	Concrete Washout

Site Concrete & Pavement

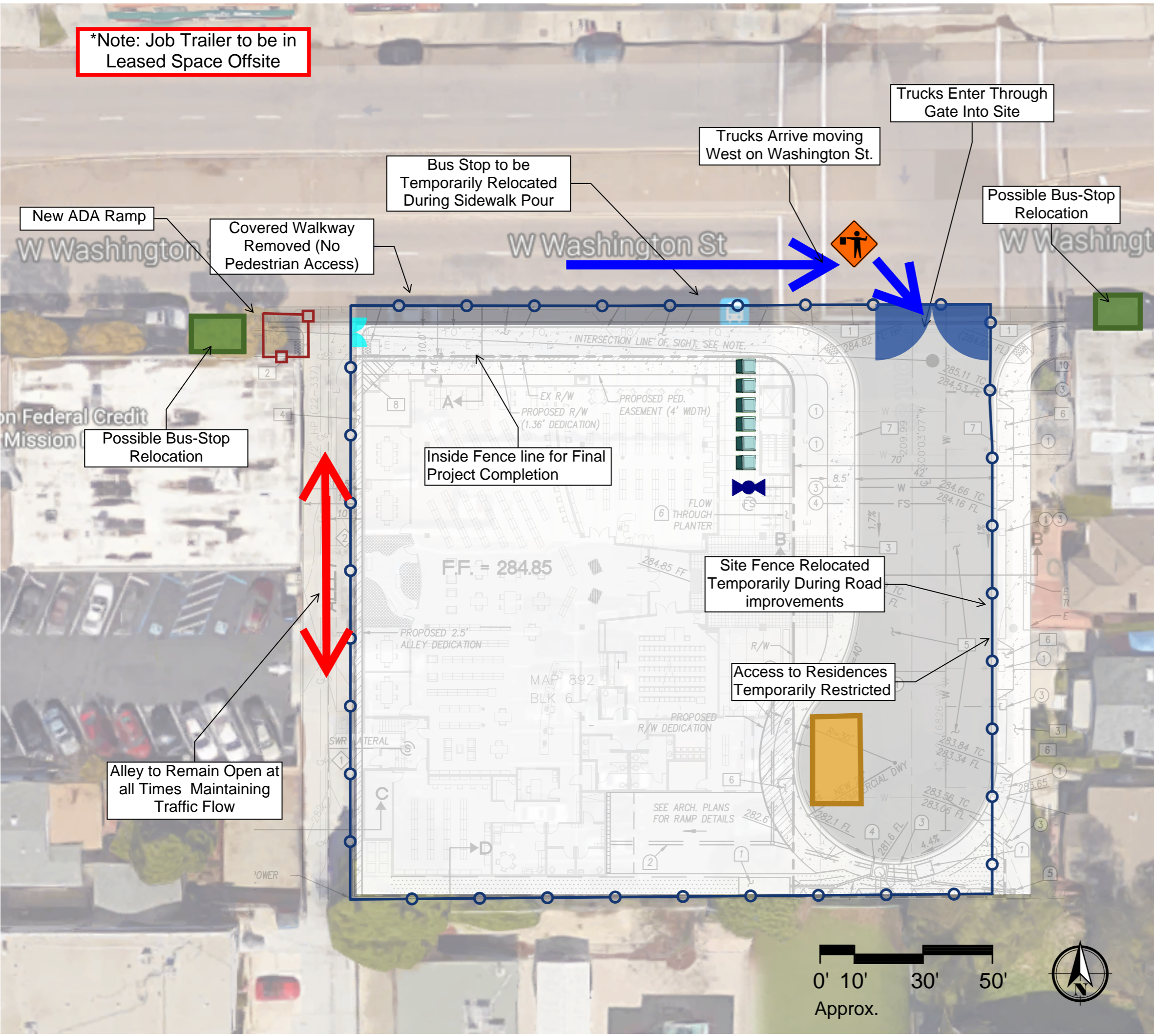
- Trucks will arrive moving west on Washington St. and enter the site at main gate.
- Existing sidewalk and asphalt along Washington St. and Front St. to be replaced.

Safety

- Pedestrians will be re-routed temporarily along Washington St. during sidewalk upgrades.
- Perimeter fence will maintain a secure site, maintaining pedestrian access along Front St.
- Flagmen will direct truck access and alert Washington St. Traffic.
- Bus stop will have to be relocated temporarily during sidewalk upgrades.

Traffic Flow

- Alley to the West of the site will remain clear at all times.
- Front St. will be closed temporarily during road improvements.
- Job site parking will be off-site.



PROPOSED CONSTRUCTION SCHEDULE

PROPOSED CONSTRUCTION SCHEDULE

We understand from the RFP that the City of San Diego would like the library to be open to the public by July 2018. We anticipate a construction duration of approximately 18 month (369 day) starting on January 20, 2017 and finishing on July 3, 2018. Our proposed construction duration finishes the project 211 working days prior to the allotted contract period of 682 working days, which allows approximately 6 additional months for the plant establishment period. Our schedule also includes a 2-week allowance for rain delays. The proposed project milestone dates include:

- Abatement and Demolition: 01/20/17 - 03/20/17
- Grading/Parking Garage: 03/20/17 - 11/16/17
- Library: 11/17/17 - 05/10/18
- Commissioning: 05/11/18 - 05/25/18
- Final Inspection/Testing: 05/22/18 - 06/22/18

Once our team begins interior finishes inside the building, there will be concurrent activities including the installation of underground utilities, hardscape, including the new roadwork, and landscaping. **Please see the following pages for a detailed CPM construction schedule.** We have also provided a full Design-Build CPM schedule, including design and preconstruction activities, located in Tab 07 - Budget & Schedule.

TRAFFIC CONTROL MANAGEMENT

We understand that there will be a constant flow of traffic surrounding the site, and our team will implement a project specific traffic control management plan. We will monitor and maintain the public right of ways at the perimeter of the site to be free and clear of hazards for safe paths of travel for both pedestrians and cars. Special precaution will be used for construction traffic to and from the site including the delivery of materials. The delivery of materials will include flagman for the safety of pedestrians, and other considerations such as the time of delivery and size of delivery vehicles will also be considered. The perimeter of the project site will include clear signage to communicate and direct traffic as well. We will work with the City during the planning and implementation of our traffic control plan, and ensure that the community is constantly aware of construction activities.



Rendering of Mission Hills / Hillcrest Library

Activity ID	Activity Name	DUR	Start	Finish	2016												2017												2018												19
					2016												2017												2018												
					May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					
2014-0785 - City of San Diego - Mission Hills / Hillcrest Library 2416																																									
Project Milestones																																									
PCM-1000	Selection and Notification	1	Jul-08-16*	Jul-08-16	Selection and Notification																																				
PCM-1040	Design / Build NTP	0	Aug-23-16*		◆ Design / Build NTP																																				
PCM-1140	Demolition Permit Issued	0		Jan-19-17													◆ Demolition Permit Issued																								
PCM-1090	Start Abatement Removal	0	Jan-20-17														◆ Start Abatement Removal																								
PCM-1060	Demolition Complete	0		Mar-20-17													◆ Demolition Complete																								
PCM-1130	Grading Permit Issued	0		Mar-20-17													◆ Grading Permit Issued																								
PCM-1150	Building Permit Issued	0		Apr-13-17													◆ Building Permit Issued																								
PCM-1110	Start Building Construction	0	Apr-14-17														◆ Start Building Construction																								
PCM-1080	Inclement Weather Allowance	10	Jun-20-18	Jul-03-18																									■ Inclement Weather Allowance												
PCM-1070	C of O	0		Jul-03-18																									◆ C of O												
PCM-1020	Project Complete	0		Jul-09-18																									◆ Project Complete												
Construction																																									
Mobilization / Abatement																																									
MA-1010	Review of Environmental Repoert & Recommendation	2	Jan-16-17	Jan-17-17													Review of Environmental Repoert & Recommendation for Contract																								
MA-1000	Environmental ACM/HazMat Report	15	Jan-16-17	Feb-03-17													■ Environmental ACM/HazMat Report																								
MA-1020	Contract Environmarital ACM/HazMat Abatement	2	Jan-18-17	Jan-19-17													Contract Environmarital ACM/HazMat Abatement Plan																								
MA-1030	Install Construction Fence	2	Jan-20-17	Jan-23-17													■ Install Construction Fence																								
MA-1040	Set office Trailer / Install Phones Temp Power	3	Jan-20-17	Jan-24-17													■ Set office Trailer / Install Phones Temp Power																								
MA-1050	APCD 10 Calendar Day Notification	10	Jan-20-17	Feb-02-17													■ APCD 10 Calendar Day Notification																								
MA-1060	Environmental Prepares and Presents Abatement F	2	Jan-23-17	Jan-24-17													Environmental Prepares and Presents Abatement Plan																								
MA-1070	Install Temporary Signage	1	Jan-24-17	Jan-24-17													Install Temporary Signage																								
MA-1080	Install SWPPP	1	Jan-25-17	Jan-25-17													Install SWPPP																								
MA-1090	Soft Demolition and Preparation	3	Jan-25-17	Jan-27-17													■ Soft Demolition and Preparation																								
MA-1100	Set up for Abatement	3	Jan-25-17	Jan-27-17													■ Set up for Abatement																								
MA-1110	Removal of ACM	7	Feb-03-17	Feb-13-17													■ Removal of ACM																								
MA-1120	APCD Clearance for Building	1	Feb-14-17	Feb-14-17													APCD Clearance for Building																								
Demolition																																									
DE-1060	Safe Off MEP's	3	Feb-15-17	Feb-17-17													Safe Off MEP's																								
DE-1120	Remove Chain Link Fence	1	Feb-20-17	Feb-20-17													Remove Chain Link Fence																								
DE-1110	Demolish Building and Basement	21	Feb-20-17	Mar-20-17													■ Demolish Building and Basement																								
DE-1130	Demolish Low Site Mansonry Walls	2	Feb-21-17	Feb-22-17													Demolish Low Site Mansonry Walls																								
DE-1140	Demolish Existing Asphalt Paving	3	Feb-21-17	Feb-23-17													■ Demolish Existing Asphalt Paving																								
DE-1100	Cut/Cap Below Grade utilities in SOG	4	Feb-21-17	Feb-24-17													■ Cut/Cap Below Grade utilities in SOG																								
Parking Level 2 & 3																																									
PL2/3-1220	Site Grade and Prep	16	Mar-21-17	Apr-11-17													■ Site Grade and Prep																								
PL2/3-1230	Survey for Soldier Piles	2	Apr-12-17	Apr-13-17													Survey for Soldier Piles																								
PL2/3-1240	Drill and Install Soldier Piles	10	Apr-14-17	Apr-27-17													■ Drill and Install Soldier Piles																								
PL2/3-1250	5 Foot cuts / Place Lagging / Install tie-backs	20	Apr-28-17	May-25-17													■ 5 Foot cuts / Place Lagging / Install tie-backs																								
PL2/3-1260	Foundations / Slab on Grade	30	May-26-17	Jul-10-17													■ Foundations / Slab on Grade																								
PL2/3-1270	Waterproof Lagging	10	Jul-11-17	Jul-24-17													■ Waterproof Lagging																								
PL2/3-1280	Place Shotcrete on Perimeter Walls	10	Jul-25-17	Aug-07-17													■ Place Shotcrete on Perimeter Walls																								
PL2/3-1300	Layout for CIP walls and Columns	2	Aug-08-17	Aug-09-17													Layout for CIP walls and Columns																								
PL2/3-1290	Form one side of CIP Walls	8	Aug-10-17	Aug-21-17													■ Form one side of CIP Walls																								
PL2/3-1310	Reinforcing Steel for CIP Walls and Columns	3	Aug-22-17	Aug-24-17													Reinforcing Steel for CIP Walls and Columns																								
PL2/3-1320	Close CIP walls and Columns	3	Aug-25-17	Aug-29-17													■ Close CIP walls and Columns																								
PL2/3-1350	Reinforcing Steel Inspection	2	Aug-30-17	Aug-31-17													Reinforcing Steel Inspection																								

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- Remaining Level of Effort ◆ Milestone
- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work

City of San Diego
Mission Hills / Hillcrest Library
Proposal Schedule - Construction Jun-07-16





Mission Hills / Hillcrest Area

COMMUNITY IMPACT

COMMUNITY IMPACT

Our goal is to minimize the impact to the community, and will implement a communication plan so that the community is aware of all construction activities at all times. We will also strive to incorporate the community into the planning, design and construction process as well. One method is to involve the designated artist in leading the community in creative workshops addressing any issues in humorous, technological or historical ways. Other solutions could involve the design-build team, the City, the artist and design team in providing fun ways to involve the community in experiencing the building process. Options include:

- A fun or artistic project fence
- A live camera feed available on websites and monitors in key places such as coffee houses and other public venues
- A time-lapse photography of the construction process
- Design-Builder led tours and lunch for the adjacent elementary school children
- An artist or design-build drawing competition for the elementary school children (this draws the parents as well)
- A “builder-for-a-day” program for kids (when appropriate)

Communication with the community is a key element of success when a construction project may cause inconvenience. Our team is very experienced with working the community, and proactively informs and works with the public to minimize any impacts. We also have experience speaking at neighborhood meetings, showing the progress of construction, and listening to the public’s comments and suggestions.

Post-construction, the courtyard areas lend themselves to added community-based elements such as tiles or plaques to be inset into walls, benches or hardscape to recognize local community leaders, or to feature art by local school children. Additional treatments that could be incorporated to add interest include custom hardscape patterns. Any of these treatment options could reflect a chosen theme or tell a story. For instance, in-set tiles or medallions sprinkled throughout could lead children and adults on a scavenger hunt to uncover literary facts, quotes or characters related to the San Diego region.

The Donor Wall is a place for community recognition. The Design Development phase would provide time to explore ideas to share with the Friend’s group and the Donor(s). Recognition could include building naming and smaller donor recognition in the guise of a decorative element incorporated in the structure or stand alone. There appears to be sufficient venues for the development of this element in the current building configuration; from the Patios at the entry, to the actual Entry and the New Book Display space.

06 Equal Employment & Contracting Opportunity



County of San Diego - Alpine Library

EQUAL EMPLOYMENT & CONTRACTING OPPORTUNITY

C.W. Driver is an equal opportunity employer and makes decisions on the basis of merit, qualifications, and abilities. It is C.W. Driver's fundamental policy not to discriminate on the basis of race, ancestry, color, sex, national origin, age, medical condition, physical or mental disability, status as a Vietnam-era or special disabled veteran, or any other consideration made unlawful by federal, state, or local laws.

SUBCONTRACTOR PARTICIPATION & OUTREACH

C.W. Driver is dedicated to the principles of equal opportunity, which is demonstrated in our proposed subcontractor participation and outreach plan. Our plan has provided ample opportunities for SLBE/ELBE/DVBE/DBE certified firms, and has exceeded the mandatory participation requirement of 13.7% for SLBE and ELBE firms. Our team's total subcontracting participation percentage for SLBE/ELBE/DVBE/DBE certified firms is greater than 30%.

The following pages include a list of subcontractors to demonstrate our Subcontractor Documentation, Participation Levels, and Proof of Certification for each subcontractor.

DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

In accordance with the requirements of the "Subletting and Subcontracting Fair Practices Act", Section 4100, of the Public Contract Code (PCC), The Design-Builder is to list below the name and address of each Subcontractor who will perform work, labor, render services or specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Design-Builder's total Bid. The Design-Builder is to list below the portion of the work which will be done by each Subcontractor. The Design-Builder is to list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed by the Subcontractor is to be stated for all Subcontractors listed. Failure to comply with the listing of the Subcontractors as specified may result in the Bid being rejected as non-responsive and ineligible for award. The Design-Builder is to list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, WoSB, SDB, HUBZone, and SDVOSB Subcontractors that Design-Builder are seeking recognition towards achieving any subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <u>So Cal Soil Testing (SCST)</u> Address: <u>6280 Riverdale St.</u> City: <u>San Diego</u> State: <u>CA</u> Zip: <u>92120</u> Phone: <u>619.280.4321</u> Email: <u>Dmarino@scst.com</u>	Constructor	Engineering License # C54902	Testing & Inspection		SLBE SDVoSB	City US Dept of Vet Affairs	
Name: <u>Landmark Consulting</u> Address: <u>9555 Genesee Ave., Ste 200</u> City: <u>San Diego</u> State: <u>CA</u> Zip: <u>92121</u> Phone: <u>858.587.8750</u> Email: <u>Rona@lmco.net</u>	Contractor	Engineering License # L7226	Survey & Layout		SLBE SB	City CADoGS	

As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

As appropriate, Design-Builder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Design-Builder will not receive any subcontracting participation percentages if the Design Builder fails to submit the required proof of certification.

CWD Sub List
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Name: <u>Clauss Construction</u> Address: <u>8956 Wintergardens Blvd.</u> City: <u>Lakeside</u> State: <u>CA</u> Zip: <u>92040</u> Phone: <u>619.390.4940</u> Email: <u>Estimator@claussconstruction.com</u>	Constructor	630564	Demolition & Abatement		DVBE SB	CADoGS	
Name: <u>Concrete Contractors Interstate (CCI)</u> Address: <u>12599 Stotler Court</u> City: <u>San Diego</u> State: <u>CA</u> Zip: <u>92064</u> Phone: <u>858.679.5550</u> Email: <u>Nick@seicci.com</u>	Constructors	530842	Cast-in-Place Concrete		SLBE	CITY	

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State of California's Department of General Services	CADoGS	City of Los Angeles	LA
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Name: <u>Williams & Sons Masonry</u> Address: <u>13780 Highway 8 Business</u> City: <u>El Cajon</u> State: <u>CA</u> Zip: <u>92021</u> Phone: <u>619.443.1751</u> Email: <u>Scott@sons.sdcoxmail.com</u>	Constructor	480899	Masonry				
Name: <u>San Diego Steel Solutions</u> Address: <u>579 Enterprise St.</u> City: <u>Escondido</u> State: <u>CA</u> Zip: <u>92029</u> Phone: <u>760.489.9990</u> Email: <u>Tony@sandiegosteelcolutions.com</u>	Constructor	932783	Structural Steel, Metal Fabrications Metal Gates		SLBE SB DBE WBE MBE	City CADoGS CUCP Caltrans Caltrans	

As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

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Name: <u>Rocky Coast Builders, Inc.</u> Address: <u>135 S. Market Place</u> City: <u>Escondido</u> State: <u>CA</u> Zip: <u>92029</u> Phone: <u>760.489.7770</u> Email: <u>cmadsen@rcbcorp.com</u>	Constructor	745061	Rough Carpentry		SB	CADoGS	
Name: <u>Applied Restoration</u> Address: <u>3562 Grove Street</u> City: <u>Lemon Grove</u> State: <u>CA</u> Zip: <u>91906</u> Phone: <u>619.433.4701</u> Email: <u>bkennedy@appliedrestoration.com</u>	Constructor	759308	Water-proofing		SLBE	City	

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State of California’s Department of General Services	CADoGS	City of Los Angeles	LA
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CWD Sub List
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Name: <u>Vorwaller & Brooks, Inc. (VBI)</u> Address: <u>72182 Corporate Way</u> City: <u>Thousand Palms</u> State: <u>CA</u> Zip: <u>92276</u> Phone: <u>760.262.6300</u> Email: <u>Sheldon@vbidoor.com</u>	Constructors	832987	Doors, Frames & Hardware		SB	CADoGS	
Name: <u>Centex</u> Address: <u>8260 Commercial St.</u> City: <u>La Mesa</u> State: <u>CA</u> Zip: <u>91942</u> Phone: <u>619.644.1981</u> Email: <u>jeffwischmeyer@cwntexglazing.com</u>	Contractor	806989	Glazing		SB	CADoGS	

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State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Design-Builder will not receive any subcontracting participation percentages if the Design Builder fails to submit the required proof of certification.

CWD Sub List
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DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

In accordance with the requirements of the "Subletting and Subcontracting Fair Practices Act", Section 4100, of the Public Contract Code (PCC), The Design-Builder is to list below the name and address of each Subcontractor who will perform work, labor, render services or specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Design-Builder's total Bid. The Design-Builder is to list below the portion of the work which will be done by each Subcontractor. The Design-Builder is to list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed by the Subcontractor is to be stated for all Subcontractors listed. Failure to comply with the listing of the Subcontractors as specified may result in the Bid being rejected as non-responsive and ineligible for award. The Design-Builder is to list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, WoSB, SDB, HUBZone, and SDVOSB Subcontractors that Design-Builder are seeking recognition towards achieving any subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <u>Standard Drywall</u> Address: <u>9902 Channel Rd.</u> City: <u>Lakeside</u> State: <u>CA</u> Zip: <u>92040</u> Phone: <u>619.443.7034</u> Email: <u>randym@standarddrywall.com</u>	Constructor	444328	Drywall Plaster				
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							

As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

- | | | | |
|---|--------|--|---------|
| Certified Minority Business Enterprise | MBE | Certified Woman Business Enterprise | WBE |
| Certified Disadvantaged Business Enterprise | DBE | Certified Disabled Veteran Business Enterprise | DVBE |
| Other Business Enterprise | OBE | Certified Emerging Local Business Enterprise | ELBE |
| Certified Small Local Business Enterprise | SLBE | Small Disadvantaged Business | SDB |
| Woman-Owned Small Business | WoSB | HUBZone Business | HUBZone |
| Service-Disabled Veteran Owned Small Business | SDVOSB | | |

As appropriate, Design-Builder shall indicate if Subcontractor is certified by:

- | | | | |
|--|--------|--|----------|
| City of San Diego | CITY | State of California Department of Transportation | CALTRANS |
| California Public Utilities Commission | CPUC | San Diego Regional Minority Supplier Diversity Council | SRMSDC |
| State of California's Department of General Services | CADoGS | City of Los Angeles | LA |
| State of California | CA | U.S. Small Business Administration | SBA |

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DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

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NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED ②	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <u>Mitsubishi Electric US INC</u> Address: <u>5900 A Katella Ave.</u> City: <u>Cypress</u> State: <u>CA</u> Zip: <u>90630</u> Phone: <u>714.220.2885</u> Email: <u>erik.moeller@meus.me.com</u>	Contractor	791291	Elevators				
Name: <u>A-I Fire Protection</u> Address: <u>8655 Miramar Place</u> City: <u>San Diego</u> State: <u>CA</u> Zip: <u>92121</u> Phone: <u>858.623.2753</u> Email: <u>jill@aifpi.com</u>	Contractor	388358	Fire Suppression System		ELBE SB WBE	City CADoGS WBENC	

① As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

② As appropriate, Design-Builder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California’s Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

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CWD Sub List
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DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

In accordance with the requirements of the “Subletting and Subcontracting Fair Practices Act”, Section 4100, of the Public Contract Code (PCC), The Design-Builder is to list below the name and address of each Subcontractor who will perform work, labor, render services or specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Design-Builder’s total Bid. The Design-Builder is to list below the portion of the work which will be done by each Subcontractor. The Design-Builder is to list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed by the Subcontractor is to be stated for all Subcontractors listed. Failure to comply with the listing of the Subcontractors as specified may result in the Bid being rejected as non-responsive and ineligible for award. The Design-Builder is to list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, WoSB, SDB, HUBZone, and SDVOSB Subcontractors that Design-Builder are seeking recognition towards achieving any subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED ^②	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <u>Scott Michael</u> Address: <u>1565 Creek St. #102</u> City: <u>San Marcos</u> State: <u>CA</u> Zip: <u>92078</u> Phone: <u>760.744.2807</u> Email: <u>scottmichaelinc@sbcglobal.net</u>	Constructor	668809	Plumbing		ELBE	City	
Name: <u>Associate Mechanical Contractors, Inc. (AMC)</u> Address: <u>622 South Vinewood Street</u> City: <u>Escondido</u> State: <u>CA</u> Zip: <u>92029</u> Phone: <u>760.294.3517</u> Email: <u>christinap@amcmechinc.com</u>	Constructor	741000	HVAC		MBE MBE SBE Section 3	NMSDC CUCP Port of Long Beach SDHC	

① As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

② As appropriate, Design-Builder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California’s Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

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DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

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Name: <u>Rowan Inc., dba Rowan Electric</u> Address: <u>2778 Loker Ave. West</u> City: <u>Carlsbad</u> State: <u>CA</u> Zip: <u>92010</u> Phone: <u>760.692.0700</u> Email: <u>laura@rowanelectric.com</u>	Constructor	746837	Electrical		SB	CADoGS	
Name: <u>Sunterra Solar</u> Address: <u>35 Pamaron Way Suite A</u> City: <u>Novato</u> State: <u>CA</u> Zip: <u>94949</u> Phone: <u>415.883.6800</u> Email: <u>cbunas@sunterrasolar.com</u>	Constructor	940158	Photo-Voltaic		DVBE, SB	CADoGS	

① As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
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Service-Disabled Veteran Owned Small Business	SDVOSB		

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City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California’s Department of General Services	CADoGS	City of Los Angeles	LA
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Name: <u>F.J. Willert Contracting Co.</u> Address: <u>1869 Nirvana Ave.</u> City: <u>Chula Vista</u> State: <u>CA</u> Zip: <u>91911</u> Phone: <u>619.421.1980</u> Email: <u>boba@fjwillert.com</u>	Constructor	402473	Earthwork				
Name: <u>Hayward Baker, Inc.</u> Address: <u>10303 Channel Rd.</u> City: <u>Lakeside</u> State: <u>CA</u> Zip: <u>92040</u> Phone: <u>619.956.0850</u> Email: <u>browan@haywardbaker.com</u>	Constructor	482246	Shoring				

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Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
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California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
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Name: <u>QSB Construction</u> Address: <u>365 W. Second Ave. Ste. 215</u> City: <u>Escondido</u> State: <u>CA</u> Zip: <u>92025</u> Phone: <u>760.432.0300</u> Email: <u>Katie.jones@qsbconstruction.com</u>	Constructor	956107	Site Concrete		ELBE SB W/MBE SDVoSB	City CADoGS CUCP Dept of Vet Affairs	
Name: <u>Merino Landscape Inc.</u> Address: <u>2556 Palm Avenue</u> City: <u>San Diego</u> State: <u>CA</u> Zip: _____ Phone: <u>619.426.4940</u> Email: <u>chrism@merinolandscape.com</u>	Constructor	797785	Landscape & Irrigation		DVBE, SB	CADoGS	

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NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED ^②	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <u>Manuel Oncina Architects Inc.</u> Address: <u>5711 La Jolla BLVD.</u> City: <u>La Jolla</u> State: <u>CA</u> Zip: <u>92037</u> Phone: <u>858.459.1221</u> Email: <u>moncina@oncinaarc.com</u>	Designer	N/A	Design Architect		ELBE M/WBE SB DBE	City Supplier Clearinghouse CADoGS Caltrans	
Name: <u>Rand Engineering</u> Address: <u>2959 Night Watch Way</u> City: <u>Alpine</u> State: <u>CA</u> Zip: <u>91901</u> Phone: <u>619.722.6767</u> Email: <u>Bill@randengineering.com</u>	Constructor	875024	Site Utilities				

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Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
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CWD Sub List
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DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

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Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							

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DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

ADDITIVE/DEDUCTIVE ALTERNATE

The Design-Builder is to list all Subcontractors described in the Design-Builder's Base Bid whose percentage of work will increase or decrease if alternates are selected for award. The Design-Builder is to also list additional Subcontractors not described in the Design-Builder's Base Bid who, as a result of the alternates, will perform work or labor, or render services, or specially fabricate and install a portion [type] of work or improvements in an amount in excess of 0.5%. Failure to comply with this requirement may result in the Bid being rejected as non-responsive and ineligible for award. The Design-Builder is to list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors that Design-Builder are seeking recognition towards achieving any mandatory, voluntary, or both subcontracting participation percentages.

Subcontractors' License Number must be filled in. Failure to provide the information specified may deem the bidder **non-responsive**.

ADDITIVE/DEDUCTIVE ALTERNATE	NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCT OR OR DESIGNER	SUBCONTRACT OR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB ^①	WHERE CERTIFIED ^②	CHECK IF JOINT VENTURE PARTNERSHIP
Add 1 & 2	Name: <u>Rowan Inc., dba Rowan Electric</u> Address: <u>2778 Loker Ave. West</u> City: <u>Carlsbad</u> State: <u>CA</u> Zip: <u>92010</u> Phone: <u>760.692.0700</u> Email: <u>laura@rowanelectric.com</u>	Constructor	746837	Electrical		SB	CADoGS	
Add 1 & 2	Name: <u>Sunterra Solar</u> Address: <u>35 Pamaron Way Suite A</u> City: <u>Novato</u> State: <u>CA</u> Zip: <u>94949</u> Phone: <u>415.883.6800</u> Email: <u>cbunas@sunterrasolar.com</u>	Constructor	940158	Photo-Voltaic		DVBE, SB	CADoGS	

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Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
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State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Design-Builder will not receive any subcontracting participation percentages if the Design-Builder fails to submit the required proof of certification.

DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

ADDITIVE/DEDUCTIVE ALTERNATE

The Design-Builder is to list all Subcontractors described in the Design-Builder's Base Bid whose percentage of work will increase or decrease if alternates are selected for award. The Design-Builder is to also list additional Subcontractors not described in the Design-Builder's Base Bid who, as a result of the alternates, will perform work or labor, or render services, or specially fabricate and install a portion [type] of work or improvements in an amount in excess of 0.5%. Failure to comply with this requirement may result in the Bid being rejected as non-responsive and ineligible for award. The Design-Builder is to list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors that Design-Builder are seeking recognition towards achieving any mandatory, voluntary, or both subcontracting participation percentages.

Subcontractors' License Number must be filled in. Failure to provide the information specified may deem the bidder **non-responsive**.

ADDITIVE/DEDUCTIVE ALTERNATE	NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCT OR OR DESIGNER	SUBCONTRACT OR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB ^①	WHERE CERTIFIED ^②	CHECK IF JOINT VENTURE PARTNERSHIP
Add 1 & 2	Name: <u>Manuel Oncina Architects Inc.</u> Address: <u>5711 La Jolla BLVD.</u> City: <u>La Jolla</u> State: <u>CA</u> Zip: <u>92037</u> Phone: <u>858.459.1221</u> Email: <u>moncina@oncinaarc.com</u>	Designer	N/A	Design Architect		ELBE M/WBE SB DBE	City Supplier Clearinghouse CADoGS Caltrans	
	Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							

① As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

- | | | | |
|---|--------|--|---------|
| Certified Minority Business Enterprise | MBE | Certified Woman Business Enterprise | WBE |
| Certified Disadvantaged Business Enterprise | DBE | Certified Disabled Veteran Business Enterprise | DVBE |
| Other Business Enterprise | OBE | Certified Emerging Local Business Enterprise | ELBE |
| Certified Small Local Business Enterprise | SLBE | Small Disadvantaged Business | SDB |
| Woman-Owned Small Business | WoSB | HUBZone Business | HUBZone |
| Service-Disabled Veteran Owned Small Business | SDVOSB | | |

② As appropriate, Design-Builder shall indicate if Subcontractor is certified by:

- | | | | |
|--|--------|--|----------|
| City of San Diego | CITY | State of California Department of Transportation | CALTRANS |
| California Public Utilities Commission | CPUC | San Diego Regional Minority Supplier Diversity Council | SRMSDC |
| State of California's Department of General Services | CADoGS | City of Los Angeles | LA |
| State of California | CA | U.S. Small Business Administration | SBA |

The Design-Builder will not receive any subcontracting participation percentages if the Design-Builder fails to submit the required proof of certification.

DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

ADDITIVE/DEDUCTIVE ALTERNATE

The Design-Builder is to list all Subcontractors described in the Design-Builder's Base Bid whose percentage of work will increase or decrease if alternates are selected for award. The Design-Builder is to also list additional Subcontractors not described in the Design-Builder's Base Bid who, as a result of the alternates, will perform work or labor, or render services, or specially fabricate and install a portion [type] of work or improvements in an amount in excess of 0.5%. Failure to comply with this requirement may result in the Bid being rejected as non-responsive and ineligible for award. The Design-Builder is to list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors that Design-Builder are seeking recognition towards achieving any mandatory, voluntary, or both subcontracting participation percentages.

Subcontractors' License Number must be filled in. Failure to provide the information specified may deem the bidder **non-responsive**.

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	Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							
	Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							

① As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

② As appropriate, Design-Builder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Design-Builder will not receive any subcontracting participation percentages if the Design-Builder fails to submit the required proof of certification.

DESIGN-BUILD NAMED EQUIPMENT/MATERIAL SUPPLIER LIST TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

For credit calculations for City-funded contracts, see Chapter 11 in The WHITEBOOK. For non-City funded contracts, refer to the Funding Agency Provisions. If no indication of the supplier, manufacturer, or non-supplier is provided, listed firm will receive no credit for purpose of calculating the Subcontractor Participation Percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF VENDOR/SUPPLIER	MATERIALS OR SUPPLIES	DOLLAR VALUE OF MATERIAL OR SUPPLIES	SUPPLIER (Yes/No)	MANUFACTURER (Yes/No)	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED
Name: <u>Penn Air Control Inc.</u> Address: <u>5941 Lakeshore Drive</u> City: <u>Cypress</u> State: <u>CA</u> Zip: <u>90630</u> Phone: <u>714.220.9091</u> Email: <u>andrew@pennairgroup.com</u>	HVAC Equipment supplier to Associate Mechanical Contractors (AMC)		Yes	No	DVBE, SB	CADoGS
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____						

As appropriate, Design-Builder shall identify Vendor/Supplier as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

- | | | | |
|---|--------|--|---------|
| Certified Minority Business Enterprise | MBE | Certified Woman Business Enterprise | WBE |
| Certified Disadvantaged Business Enterprise | DBE | Certified Disabled Veteran Business Enterprise | DVBE |
| Other Business Enterprise | OBE | Certified Emerging Local Business Enterprise | ELBE |
| Certified Small Local Business Enterprise | SLBE | Small Disadvantaged Business | SDB |
| Woman-Owned Small Business | WoSB | HUBZone Business | HUBZone |
| Service-Disabled Veteran Owned Small Business | SDVOSB | | |

As appropriate, Design-Builder shall indicate if Vendor/Supplier is certified by:

- | | | | |
|--|--------|--|----------|
| City of San Diego | CITY | State of California Department of Transportation | CALTRANS |
| California Public Utilities Commission | CPUC | San Diego Regional Minority Supplier Diversity Council | SRMSDC |
| State of California's Department of General Services | CADoGS | City of Los Angeles | LA |
| State of California | CA | U.S. Small Business Administration | SBA |

The Design-Builder will not receive any subcontracting participation percentages if the Design-Builder fails to submit the required proof of certification.

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For credit calculations for City-funded contracts, see Chapter 11 in The WHITEBOOK. For non-City funded contracts, refer to the Funding Agency Provisions. If no indication of the supplier, manufacturer, or non-supplier is provided, listed firm will receive no credit for purpose of calculating the Subcontractor Participation Percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF VENDOR/SUPPLIER	MATERIALS OR SUPPLIES	DOLLAR VALUE OF MATERIAL OR SUPPLIES	SUPPLIER (Yes/No)	MANUFACTURER (Yes/No)	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB ^①	WHERE CERTIFIED ^②
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____						
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____						

① As appropriate, Design-Builder shall identify Vendor/Supplier as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

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City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Design-Builder will not receive any subcontracting participation percentages if the Design-Builder fails to submit the required proof of certification.



THE CITY OF SAN DIEGO

January 15, 2016

SCST, Inc.
Mr. Neal Clements
6280 Riverdale Street
San Diego, CA 92120

Subject: Small Local Business Enterprise Certification

Dear Mr. Clements:

Congratulations! We have reviewed your **renewal application** and you have been approved for re-certification as a City of San Diego Small Local Business Enterprise (SLBE). Your certification number is 14SC1042 and your classification is Professional Services. Please reference this certification number when bidding on City projects. For the City's Small Local Business Enterprise (SLBE) Program, your certification is effective January 15, 2016. This certification expires on January 15, 2018 at which time you will need to reapply in accordance with the SLBE guidelines.

To receive potential contracting opportunities, please ensure that you register with the City's web-based vendor registration and bid management system, BidsOnline™ hosted by PlanetBids System. For additional information go to:

<http://www.sandiego.gov/purchasing/bids-contracts/vendorreg.shtml>

Construction Contractors: Contractors desiring to bid as a prime contractor on City of San Diego public works construction projects must be prequalified in accordance with the San Diego Municipal Code §22.3004(a).

Contractors certified as an emerging or small local business under the City's SLBE program may, **upon submittal of their bond letter**, be prequalified to bid as a prime contractor for projects up to \$1 million or their single-project bond limit, **whichever is less**. To become prequalified, go to the "Prequalification" tab in the vendor profile on PlanetBids, select "Prequalification for City Certified SLBE", and upload a current bond letter, addressed to the City of San Diego, stating single project and aggregate bonding limits.

To become prequalified as a prime contractor and bid on large projects valued at **more than \$1 million**, complete the online Prequalification Program Application found on PlanetBids. Contractors will need to provide references, a complete, current reviewed or audited financial statement and a current bond letter via PlanetBids.

Purchasing & Contracting Department
Equal Opportunity Contracting
1200 Third Avenue, Suite 200
San Diego, CA 92101-4195
Tel (619) 236-6000 Fax (619) 236-5904

Page 2 of 2
Mr. Clements
January 15, 2016

To bid on a specific project, the prequalification application must be received at least two weeks **prior** to the bid due date. Upon prequalification approval, an automated email notification will be forwarded from PlanetBids. Please be sure to print your prequalification approval letter for your records.

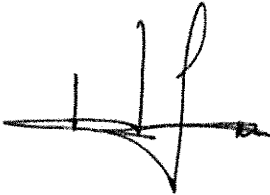
For questions regarding the Prequalification Program, please contact Dave Stucky at (619) 533-3474 or email DStucky@sandiego.gov.

For questions regarding the SLBE Program, please contact Equal Opportunity Contracting at (619) 236-6000 or e-mail ContactEOC@sandiego.gov.

If there are any changes in your firm's status during this certification period, you are required to notify this office *immediately*.

Equal Opportunity Contracting reserves the right to withdraw this certification at any time and request additional information and/or conduct on-site visits for purposes of verification.

Thank you,

A handwritten signature in black ink, appearing to read 'Henry Foster III', written over a horizontal line.

Henry Foster III
Program Manager
Equal Opportunity Contracting

City of San Diego



**Small Local Business Enterprise (SLBE)
Program Certification**

SCST, Inc.

**Small Local Business Enterprise (SLBE)
*Professional Services***

(NAICS: 541330, 541350, 541620, 541380, 562910)

Certification Number: 14SC1042

Effective: 1/15/2016 - 1/15/2018

A handwritten signature in black ink, appearing to read "H. Foster III", is written over a horizontal line.

Henry Foster III
Equal Opportunity Contracting
Program Manager



DEPARTMENT OF VETERANS AFFAIRS
Center for Verification and Evaluation
Washington, DC 20420

SEP 08 2014

In Reply Refer To: 00VE

Mr. Neal Woodson Clements
Southern California Soil and Testing, Inc.
DUNS: 049899362
6280 Riverdale Street
San Diego, CA 92120

Dear Mr. Clements:

On behalf of the U.S. Department of Veterans Affairs (VA), Center for Verification and Evaluation (CVE), I am writing to inform you that Southern California Soil and Testing, Inc. has been verified as a service-disabled Veteran-owned small business (SDVOSB) and added to the Veteran business database at www.vip.vetbiz.gov. Southern California Soil and Testing, Inc. will be eligible to participate in Veterans First Contracting Program opportunities with VA. **This verification is valid for two years from the date of this letter.**

To promote Southern California Soil and Testing, Inc.'s verified status, you may use the following link to download the logo for use on marketing materials and business cards:

http://www.vetbiz.gov/cve_completed_s.jpg

To ensure that Southern California Soil and Testing, Inc. is correctly listed in the Vendor Information Pages, check Southern California Soil and Testing, Inc.'s profile for the verified logo. Please notify us if the logo is not present within 72 hours of receipt of this letter.

While CVE has confirmed that Southern California Soil and Testing, Inc. is in compliance with the regulation, Southern California Soil and Testing, Inc. must inform CVE of any changes or other circumstances that would adversely affect its eligibility. Eligibility changes not reported to CVE within 60 days could result in a referral to the Office of Inspector General (OIG), a referral to the Debarment and Suspension Committee, and the initiation of cancellation proceedings—all of which could result in Southern California Soil and Testing, Inc. being removed from the VIP Verification Program.

Please be advised that this letter and other information pertaining to Southern California Soil and Testing, Inc.'s verification application may be subject to Freedom of Information Act (FOIA) requests. In addition, all companies approved for the program may be required to participate in one or more post-verification audits. Please retain a copy of

Page 2.

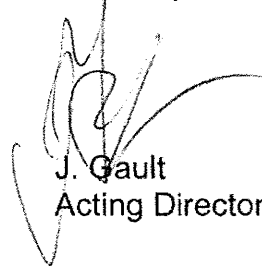
Mr. Neal Woodson Clements

this letter to confirm Southern California Soil and Testing, Inc.'s continued program eligibility.

At any time if Southern California Soil and Testing, Inc. discovers one or more NAICS Code(s) that are other than small on its CVE VIP profile, CVE will require all other than small NAICS Codes to be removed within five (5) business days. If these NAICS Codes are not removed within the allotted five (5) business days, CVE may request the U.S. Small Business Administration (SBA) to conduct a formal size determination. In addition, CVE may initiate a referral to OIG, Debarment and Suspension Committee and or pursue cancellation proceedings. All of the aforementioned referrals and procedures could result in Southern California Soil and Testing, Inc. being removed from the VIP Verification Program.

Thank you for your service to our country and for continuing to serve America through small business ownership.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Gault', with a long, sweeping horizontal stroke extending to the right.

J. Gault
Acting Director

City of San Diego



**Small Local Business Enterprise (SLBE)
Program Certification**

**Brncic, Inc. DBA Landmark Consulting
Small Local Business Enterprise (SLBE)
*Professional Services***

(NAICS: 541330, 541370)

Certification Number: 14BI0997

Effective: 9/13/2015 - 9/13/2017

A handwritten signature in black ink, appearing to read "Henry Foster III", is written over a horizontal line.

**Henry Foster III
Equal Opportunity Contracting
Program Manager**



CALIFORNIA PROFILE

BidSync Supplier Name	Bmdc, Inc. dba Landmark Consulting	Supplier Number	1751977
Legal Business Name	Landmark Consulting	DBA Business Name	Landmark Consulting
Address	9555 Genesee Avenue #200 SAN DIEGO, CA 92121	Phone	(858) 587-8070
Email	mark@lmco.net	FAX	(858) 587-8750
Web Page	http://www.lmco.net		
Number of Employees	9		
Business Types	Construction Service Non-Manufacturer		
Service Areas	San Diego,		
Keywords	New Single-Family Housing Construction except Operative Builders New Multifamily Housing Construction except Operative Builders New Housing Operative Builders Residential Remodel Water and Sewer Line and Related Structures Construction Engineering Service		
Construction License Types	A - General Engineering		
Classifications	411142 - Land surveying instruments 701715 - Development 721110 - Single family dwelling construction services 721111 - Multiple unit dwelling construction services 721210 - New industrial building and warehouse construction services 721211 - Commercial and office building construction services 721214 - Specialized public building construction services 721215 - Industrial plant construction services 771016 - Environmental planning 811015 - Civil engineering 811516 - Cartography 931420 - Urban development		
View Options	View Application		
Edit Options	Amend Application Register as Disabled Veteran Business Enterprise (DVBE)		

Active Certifications

[Register as Disabled Veteran Business Enterprise \(DVBE\)](#)

TYPE	STATUS	STATUS DATE	FROM	TO	ACTIONS
SB (Micro)	Approved	Apr 11, 2013	Apr 11, 2013	Apr 30, 2015	

Construction History

Certified Small Business Enterprise (SBE)

8/30/2013

Account #: 45401
Mr. Brencick
Landmark Consulting
9555 Genesee Avenue, Ste. 200
San Diego, CA 92121

Dear Mr. Brencick:

Thank you for submitting your Vendor Application seeking Small Business Enterprise (SBE) recognition with *The Network*. Per our evaluation of the information you provided in your application and the North American Industry Classification System (NAICS) codes you identified, your status as a Small Business Enterprise (SBE) has been approved. This certification is recognized by the following agencies:

*The Port of Long Beach**

*San Diego County Water Authority**

** There are currently six agencies participating in The Network; however, at the present time, only the Port of Long Beach and San Diego County Water Authority are administering a Small Business Enterprise (SBE) Program.*

The Port of Long Beach is pleased to issue this SBE Certificate subject to the terms and conditions identified below:

NAICS code(s) for which SBE status is recognized: 541330 541370 541512 541340 221310 237210 531320
SBE Certificate Effective Date: 8/26/2013
SBE Certificate Expiration Date: 8/26/2016

Work performed by your firm that falls within the above-mentioned NAICS code(s) will be counted as SBE participation for work performed on contracts procured by the above agencies.

The agencies reserve the right to withdraw this certification if at any time it is determined that certification was knowingly obtained by false, misleading, or incorrect information. The agencies reserve the right to audit all statements. If any firm attempts to falsify or misrepresent information to obtain certification, the firm may be disqualified from participating in any contracts for a period of up to five years.

SBE Certification is valid for a period of three (3) years. To maintain SBE status, firms must update their existing SBE Vendor Application on or before the expiration date mentioned above. All information is subject to verification.

If there are any changes in your status that may impact your certification, you are required to update your account information online. You may view your SBE qualifying information at any time, by logging into your main menu and selecting the "Small Business Certification Form" link.

Sincerely,



Sashi Muralidharan
SBE Administrator, Port of Long Beach



DEPARTMENT OF VETERANS AFFAIRS
Center for Veterans Enterprise
Washington, DC 20420

APR 06 2012

In Reply Refer To: DOVE

Mr. Mark Brencick
BRNCIC, Inc. dba Landmark Consulting
9555 Genesee Avenue, Suite 200
San Diego, CA 92121

Dear Mr. Brencick:

On behalf of the U.S. Department of Veterans Affairs (VA), the Center for Veterans Enterprise (CVE), I am writing to inform you that your Veteran-owned Small Business (VOSB) has been verified and added to the Veteran business database at www.vip.vetbiz.gov.

Your business will be eligible to participate in Veterans First Contracting Program opportunities with VA. This verification is valid for up to one year from the date of this letter.

To promote your verified status, you may use the following logo link to download the logo for use on your marketing materials and business cards:

http://www.vetbiz.gov/cve_completed_v.jpg

To ensure that you are captured in the Vendor Information Pages, check your profile for the verified logo. Please notify us if the logo is not present within 72 hours of receipt of this letter.

Thank you for your service to our country and for continuing to serve America through small business ownership. It is our honor to support "Veterans in Business *Still* Serving America!"

Sincerely,

A handwritten signature in black ink, appearing to read "Andrea M. Gardner-Ince", is written over a horizontal line.

Andrea M. Gardner-Ince
Director
Center for Veterans Enterprise

Welcome | [Logout](#)Need assistance?
Contact us
or call 800-990-9339

Landmark Consulting - #1787617

Supplier Profile

Legal Business Name Brncic Inc

Doing Business As Landmark Consulting

Address 9555 Genesee Avenue #200 Phone (858) 587-8070
SAN DIEGO, CA 92121 FAX (858) 587-8750

Email mark@lmco.net

Web Page <http://www.lmco.net>

Business Types Service
Non-Manufacturer

Service Areas Imperial, Orange, Riverside, San Diego,

Keywords Civil Engineering Consulting Service AutoCAD Civil 3D Design Service Civil Planning Service Permitting Reports/Studies Site Development Plans Hydrology/Hydraulics Sewer, Water, Street Design Storm Drain Design Roadway Design Site Planning & Ana

Classifications 701715 - Development
721110 - Single family dwelling construction services
771016 - Environmental planning
811015 - Civil engineering
811025 - Permitting services
811516 - Cartography
931420 - Urban development

Active Certifications

TYPE	STATUS	FROM	TO
SB (Micro)	Approved	Apr 11, 2013	Apr 30, 2017

Certification History

TYPE	STATUS	FROM	TO
SB (Micro)	Expired	May 31, 2011	May 31, 2013



Welcome | [Logout](#)
 Need assistance?
Contact us
 or call 800-990-9339

CLAUSS CONSTRUCTION - #3129

Supplier Profile

Legal Business Name	CLAUSS CONSTRUCTION		
Doing Business As	CLAUSS CONSTRUCTION		
Address	8956 WINTER GARDENS BLVD LAKESIDE, CA 92040-4935	Phone	(619) 390-4940
		FAX	(619) 390-4944
Email	pclauss@clausconstruction.com		
Web Page	http://www.claussconstruction.com		
Business Types	Construction		
Service Areas	Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Imperial, Inyo, Kern, Kings, Lake, Lassen, Los Angeles, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Mono, Monterey, Napa, Nevada, Orange, Placer, Plumas, Riverside, Sacramento, San Benito, San Bernardino, San Diego, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Ventura, Yolo, Yuba,		
Keywords	GENERAL ENGINEERING, GENERAL BUILDING CONTRACTOR, BUILDING MOVING, WRECKING, DEMOLITION, ASBESTOS ABATEMENT, LEAD ABATEMENT, HAZARDOUS WASTE REMOVAL, ENVIRONMENTAL REMEDIATION, DECONTAMINATION SERVICES, NUCLEAR WASTE, GRADING, UNDERGROUND STORAGE, SOIL RE		
Construction License Types	A - General Engineering ASB - Asbestos Removal Certification B - General Building Contractor C-21 - Building moving, wrecking HAZ - Hazardous Substance Removal Certification		
Classifications	221020 - Building demolition machinery and equipment 711016 - Mine drilling blasting and construction services 721211 - Commercial and office building construction services 721214 - Specialized public building construction services 721215 - Industrial plant construction services 721411 - Infrastructure building and surfacing and paving services 721412 - Marine construction services 721413 - Athletic and recreational facility construction service 721414 - Detention facility construction and repair services 721415 - Land preparation services 721416 - Mass transit system construction services 721538 - Decontamination services 721540 - Specialty building and trades services 761016 - Hazardous material decontamination 761315 - Nuclear waste treatment		

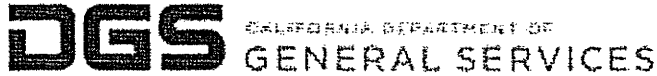
Active Certifications

TYPE	STATUS	FROM	TO
SB	Approved	Nov 6, 2015	Nov 30, 2017
DVBE	Approved	Nov 6, 2015	Nov 30, 2017

Certification History

TYPE	STATUS	FROM	TO
SB	Denied	Oct 6, 2015	Oct 6, 2015
DVBE	Expired	Jul 12, 2012	Oct 31, 2013
DVBE	Expired	Aug 11, 2011	Aug 31, 2012
DVBE	Expired	Jul 14, 2010	Jul 31, 2011
DVBE	Expired	Jul 1, 2009	Jul 31, 2010
DVBE	Expired	Jun 19, 2008	Jun 30, 2009
DVBE	Expired	May 2, 2007	May 31, 2008
SB	Expired	Apr 11, 2001	Mar 31, 2004

RECEIVED
NOV 09 2015
BY: _____



Governor Edmund G. Brown Jr.

Nov 6, 2015

DVBE APP

Supplier #3129
CLAUSS CONSTRUCTION
8956 WINTER GARDENS BLVD
LAKESIDE CA 92040-4935

Dear Business Person:

Congratulations on your Disabled Veteran Business Enterprise (DVBE) certification with the State of California. Your business is now entitled to compete in the State's goal to spend three percent of its annual contracting dollars with DVBE businesses. For more information or to verify certification status, visit www.eprocure.dgs.ca.gov

Certification Period

From Nov 6, 2015 to Nov 30, 2017

Business Types

Construction

Conflict of Interest for Current and Former State Employees

Prior to contract award, agencies will assure the vendor is in compliance with Public Contract Code, Section 10410 et seq. addressing conflict of interest for State employees or former employees.

Annual Submission Requirement

Submit copies of the ENTIRE federal tax return to the Office of Small Business and DVBE Services (OSDS). In addition to the business tax returns, each partner of a partnership business must also submit individual federal tax returns. Businesses that rent equipment to the State must submit individual federal tax returns for each disabled veteran owner within 90 days of the individual's tax return filing due date. If you have been granted a tax filing extension with the Internal Revenue Service, submit a copy of the extension form and annual financial statements; then, submit a copy of the tax return once filed.

Maintaining Your Online Certified Firm Profile

Visit www.eprocure.dgs.ca.gov/default.htm to update your certification profile. You may report changes to the following: mailing and principal office address; contact information; keywords and service areas; United Nations Standard Products and Services Codes, North American Industry Classification System (applicable only to Manufacturers). This certification may be impacted if you update information beyond the aforementioned. To report changes by mail, complete a "Certification Information Change" form located at www.documents.dgs.ca.gov/pd/smallbus/certchange.pdf

Certification Renewal

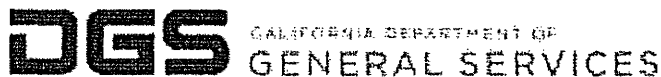
Please complete an online application at www.eprocure.dgs.ca.gov 90 days prior to the expiration date whether or not you receive a renewal notice. If you hold dual certifications, SB and DVBE certifications, you must renew both certifications at the same time. Please contact us at 800.559.5529, 916.375.4940 or by email at OSDSHelp@dgs.ca.gov if you have any questions.

Sincerely,

Office of Small Business and DVBE Services

PROCUREMENT DIVISION - Small Business & DVBE Services | *State of California* | *State Consumer Services Agency*
707 3rd Street, 1st Floor, Room 400 | West Sacramento, CA 95605 | t 916.375.4940 f 916.375.4950

RECEIVED
NOV 09 2015
BY: _____



Governor Edmund G. Brown Jr.

Nov 6, 2015

SB APP

Supplier #3129
CLAUSS CONSTRUCTION
8956 WINTER GARDENS BLVD
LAKESIDE CA 92040-4935

Dear Business Person:

Congratulations on your Small Business (SB) certification with the State of California. Your business is now entitled to compete in the State's goal to spend 25 percent of its annual contracting dollars with small businesses. Each certified SB receives a five percent bid preference on applicable solicitations. This certification also guarantees higher interest penalties for late payment of undisputed invoices. You may purchase a rubber stamp by completing the Prompt Payment Rubber Stamp Order form at www.documents.dgs.ca.gov/pd/smallbus/ppstampreq.pdf. For more information or to verify certification status, visit www.eprocure.dgs.ca.gov.

Certification Period

From Nov 6, 2015 to Nov 30, 2017

Business Types

Construction

Conflict of Interest for Current and Former State Employees

Prior to contract award, agencies will assure the vendor is in compliance with Public Contract Code, Section 10410 et seq. addressing conflict of interest for State employees or former employees.

Annual Submission Requirement

Submit copies of the ENTIRE federal tax return to the Office of Small Business and DVBE Services (OSDS). If you have been granted a tax filing extension with the Internal Revenue Service, submit a copy of the extension form and annual financial statements; then, submit a copy of the tax return once filed. If you have employees, include the California Employment Development Department's "Quarterly Contribution Return and Report of Wages (Continuation)" (Form DE9C). If you have out-of-state employees, submit the employee documentation comparable to Form DE9C. These annual submissions also apply to all affiliated businesses.

Maintaining Your Online Certified Firm Profile

Visit www.eprocure.dgs.ca.gov/default.htm to update your certification profile. You may report changes to the following: mailing and principal office address; contact information; keywords and service areas; United Nations Standard Products and Services Codes, North American Industry Classification System (applicable only to

Manufacturers). This certification may be impacted if you update information beyond the aforementioned.

To report changes by mail, complete a "Certification Information Change" form located at www.documents.dgs.ca.gov/pd/smallbus/certchange.pdf.

Certification Renewal

Please complete an online application at www.eprocure.dgs.ca.gov 90 days prior to the expiration date whether or not you receive a renewal notice. If you hold dual certifications, SB and DVBE certifications, you must renew both certifications at the same time. Please contact us at 800.559.5529, 916.375.4940 or by email at OSDSHelp@dgs.ca.gov if you have any questions.

Sincerely,

Office of Small Business and DVBE Services

PROCUREMENT DIVISION - Small Business & DVBE Services | *State of California* | *State Consumer Services Agency*
707 3rd Street, 1st Floor, Room 400 | West Sacramento, CA 95605 | t 916.375.4940 f 916.375.4950



THE CITY OF SAN DIEGO

December 19, 2014

Single Eagle, Inc.
dba Concrete Contractors Interstate
Russel Baumgartner
12599 Stotler Ct.
Poway, CA 92064

Subject: Small Local Business Enterprise Certification

Dear Russel:

Congratulations! We have reviewed your **renewal application** and you have been approved for re-certification as a City of San Diego Small Local Business Enterprise (SLBE). Your certification number is 12SE0719 and your classification is General Construction. Please reference this certification number when bidding on City projects. For the City's SLBE Program, your certification is effective December 19, 2014. This certification expires on December 19, 2016 at which time you will need to reapply in accordance with the SLBE guidelines.

To receive potential contracting opportunities, please ensure that you register with the City's web-based vendor registration and bid management system, BidsOnline™ hosted by PlanetBids System. For additional information go to:

<http://www.sandiego.gov/purchasing/bids-contracts/vendorreg.shtml>

For questions please call (619) 236-6092 or e-mail KPatton@sandiego.gov.

If there are any changes in your firm's status during this certification period, you are required to notify this office *immediately*.

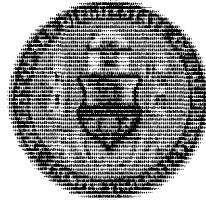
Equal Opportunity Contracting reserves the right to withdraw this certification at any time and request additional information and/or conduct on-site visits for purposes of verification.

Thank you,

Henry Foster III
Program Manager
Equal Opportunity Contracting

Purchasing & Contracting Department
Equal Opportunity Contracting
1200 Third Avenue, Suite 200
San Diego, CA 92101-4195
Tel (619) 236-6058 Fax (619) 236-5904

City of San Diego



Small Local Business Enterprise Certification


Single Eagle, Inc.

dba Concrete Contractors Interstate
Small Local Business Enterprise (SLBE)
General Construction (NAICS: 237310, 238310, 238990)

Certification Number: 12SE0719

Effective Date: 12/19/2014

Expiration Date: 12/19/2016



Henry Foster III
Equal Opportunity Contracting
Program Manager



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 Need assistance?
Contact us
 or call 800-990-9339

San Diego Steel Solutions Inc. - #56871

Supplier Profile

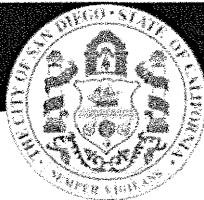
Legal Business Name	San Diego Steel Solutions Inc.		
Doing Business As	San Diego Steel Solutions Inc.		
Address	PO Box 463091 ESCONDIDO, CA 92046	Phone	(760) 489-9990
		FAX	(760) 489-8610
Email	sdsteelsolutions@yahoo.com		
Web Page	http://www.sdsteelsolutions.com		
Business Types	Construction		
Service Areas	Orange, Riverside, San Diego,		
Keywords	Fabrication & Installation of Structural Steel, we also do mobile welding.		
Construction License Types	C-51 - Steel, Structural		
Classifications	721529 - Structural steel erection services		

Active Certifications

TYPE	STATUS	FROM	TO
SB (Micro)	Approved	Apr 24, 2013	Apr 30, 2017

Certification History

TYPE	STATUS	FROM	TO
SB (Micro)	Expired	Jun 2, 2011	Jun 30, 2013
SB (Micro)	Expired	May 22, 2009	May 31, 2011



THE CITY OF SAN DIEGO

November 13, 2015

San Diego Steel Solutions
Ms. Guillermina Summerlin
579 Enterprise
Escondido, CA 92029

Subject: Small Local Business Enterprise Certification

Dear Ms. Summerlin:

Congratulations! We have reviewed your application and you have been approved for certification as a City of San Diego Small Local Business Enterprise (SLBE). Your certification number is 14SD1010 and your classification is Specialty Construction. Please reference this certification number when bidding on City projects. For the City's Small Local Business Enterprise (SLBE) Program, your certification is effective November 13, 2015. This certification expires on November 13, 2017 at which time you will need to reapply in accordance with the SLBE guidelines.

To receive potential contracting opportunities, please ensure that you register with the City's web-based vendor registration and bid management system, BidsOnline™ hosted by PlanetBids System. For additional information go to:

<http://www.sandiego.gov/purchasing/bids-contracts/vendorreg.shtml>

Construction Contractors: Contractors desiring to bid as a prime contractor on City of San Diego public works construction projects must be prequalified in accordance with the San Diego Municipal Code §22.3004(a).

Contractors certified as an emerging or small local business under the City's SLBE program may, **upon submittal of their bond letter**, be prequalified to bid as a prime contractor for projects up to \$1 million or their single-project bond limit, **whichever is less**. To become prequalified, go to the "Prequalification" tab in the vendor profile on PlanetBids, select "Prequalification for City Certified SLBE", and upload a current bond letter, addressed to the City of San Diego, stating single project and aggregate bonding limits.

To become prequalified as a prime contractor and bid on large projects valued at **more than \$1 million**, complete the online Prequalification Program Application found on PlanetBids. Contractors will need to provide references, a complete, current reviewed or audited financial statement and a current bond letter via PlanetBids.

Purchasing & Contracting Department
Equal Opportunity Contracting
1200 Third Avenue, Suite 200
San Diego, CA 92101-4195
Tel (619) 236-6000 Fax (619) 236-5904

Page 2 of 2
Ms. Summerlin
November 13, 2015

To bid on a specific project, the prequalification application must be received at least two weeks **prior** to the bid due date. Upon prequalification approval, an automated email notification will be forwarded from PlanetBids. Please be sure to print your prequalification approval letter for your records.

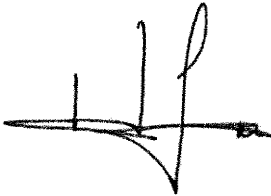
For questions regarding the Prequalification Program, please contact Dave Stucky at (619) 533-3474 or email DStucky@sandiego.gov.

For questions regarding the SLBE Program, please contact Equal Opportunity Contracting at (619) 236-6000 or e-mail ContactEOC@sandiego.gov.

If there are any changes in your firm's status during this certification period, you are required to notify this office *immediately*.

Equal Opportunity Contracting reserves the right to withdraw this certification at any time and request additional information and/or conduct on-site visits for purposes of verification.

Thank you,

A handwritten signature in black ink, appearing to read 'Henry Foster III', written over a horizontal line.

Henry Foster III
Program Manager
Equal Opportunity Contracting

BUSINESS ENTERPRISE CERTIFICATE

SAN DIEGO STEEL SOLUTIONS

579 ENTERPRISE ST
ESCONDIDO, CA 92029

Owner: GUILLERMINA C. SUMMERLIN

Business Structure: CORPORATION

STATE WOMEN BUSINESS ENTERPRISE

This Certification Not Valid For Federal Aid Contracts


This certificate acknowledges that said firm is approved by the California Department of Transportation as a State Minority Business Enterprise or State Women Business Enterprise (or in some cases both) in accordance with Assembly Bill Number 486, Chapter 1329 and the California Public Code, Chapter 2.5 (commencing with Section 2050), for the following NAICS codes:

238190	Other Foundation, Structure, and Building Exterior Contractors
332323	Ornamental and Architectural Metal Work Manufacturing
* 238120	Structural Steel and Precast Concrete Contractors

* Indicates primary NAICS code

CERTIFYING AGENCY:
DEPARTMENT OF TRANSPORTATION
1823 14TH STREET, MS 79
SACRAMENTO, CA 95814 0000
(916) 324-1700

Firm Number : 40362
Renewal Date : August 1, 2016



Janice Salais, CERTIFYING AGENCY REPRESENTATIVE

September 9, 2014

BUSINESS ENTERPRISE CERTIFICATE

SAN DIEGO STEEL SOLUTIONS

579 ENTERPRISE ST
ESCONDIDO, CA 92029

Owner: GUILLERMINA C. SUMMERLIN

Business Structure: CORPORATION

STATE MINORITY BUSINESS ENTERPRISE

This Certification Not Valid For Federal Aid Contracts

This certificate acknowledges that said firm is approved by the California Department of Transportation as a State Minority Business Enterprise or State Women Business Enterprise (or in some cases both) in accordance with Assembly Bill Number 486, Chapter 1329 and the California Public Code, Chapter 2.5 (commencing with Section 2050), for the following NAICS codes:

238190	Other Foundation, Structure, and Building Exterior Contractors
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* 238120	Structural Steel and Precast Concrete Contractors

* Indicates primary NAICS code

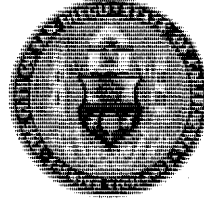
CERTIFYING AGENCY:
DEPARTMENT OF TRANSPORTATION
1823 14TH STREET, MS 79
SACRAMENTO, CA 95814 0000
(916) 324-1700

Firm Number : 40362
Renewal Date : August 1, 2016


Janice Salais, CERTIFYING AGENCY REPRESENTATIVE

September 9, 2014

City of San Diego



**Small Local Business Enterprise (SLBE)
Program Certification**

San Diego Steel Solutions

**Small Local Business Enterprise (SLBE)
*Specialty Construction***

(NAICS: 238120, 332312)

Certification Number: 14SD1010

Effective: 11/13/2015 - 11/13/2017

A handwritten signature in black ink, appearing to read 'H. Foster III', positioned above a horizontal line.

Henry Foster III
Equal Opportunity Contracting
Program Manager

SB APP

Supplier #1740204
ROCKY COAST BUILDERS INC
135 S MARKET PL
ESCONDIDO CA 92029

Dear Business Person:

Congratulations on your Small Business (SB) certification with the State of California. Your business is now entitled to compete in the State's goal to spend 25 percent of its annual contracting dollars with small businesses. Each certified SB receives a five percent bid preference on applicable solicitations. This certification also guarantees higher interest penalties for late payment of undisputed invoices. You may purchase a rubber stamp by completing the Prompt Payment Rubber Stamp Order form at www.documents.dgs.ca.gov/pd/smallbus/ppstampreq.pdf. For more information or to verify certification status, visit www.eprocure.dgs.ca.gov.

Certification Period

From Jan 30, 2014 to Jan 31, 2017

Business Types

Construction

Conflict of Interest for Current and Former State Employees

Prior to contract award, agencies will assure the vendor is in compliance with Public Contract Code, Section 10410 et seq. addressing conflict of interest for State employees or former employees.

Annual Submission Requirement

Submit copies of the ENTIRE federal tax return to the Office of Small Business and DVBE Services (OSDS). If you have been granted a tax filing extension with the Internal Revenue Service, submit a copy of the extension form and annual financial statements; then, submit a copy of the tax return once filed. If you have employees, include the California Employment Development Department's "Quarterly Contribution Return and Report of Wages (Continuation)" (Form DE9C). If you have out-of-state employees, submit the employee documentation comparable to Form DE9C. These annual submissions also apply to all affiliated businesses.

Maintaining Your Online Certified Firm Profile

Visit www.eprocure.dgs.ca.gov/default.htm to update your certification profile. You may report changes to the following: mailing and principal office address; contact information; keywords and service areas; United Nations Standard Products and Services Codes, North American Industry Classification System (applicable only to Manufacturers). This certification may be impacted if you update information beyond the aforementioned. To report changes by mail, complete a "Certification Information Change" form located at www.documents.dgs.ca.gov/pd/smallbus/certchange.pdf.

Certification Renewal

Please complete an online application at www.eprocure.dgs.ca.gov 90 days prior to the expiration date whether or not you receive a renewal notice. If you hold dual certifications, SB and DVBE certifications, you must renew both certifications at the same time. Please contact us at 800.559.5529, 916.375.4940 or by email at OSDSHelp@dgs.ca.gov if you have any questions.

Sincerely,

Office of Small Business and DVBE Services



THE CITY OF SAN DIEGO

May 6, 2015

Applied Restoration, Inc. DBA ARI
Michael Weinert & James Porter
3562 Grove Street
Lemon Grove, CA 91945

Subject: Small Local Business Enterprise Certification

Dear Michael and James:

Congratulations! We have reviewed your **renewal application** and you have been approved for re-certification as a City of San Diego Small Local Business Enterprise (SLBE). Your certification number is 11AR0349 and your classification is General Construction. Please reference this certification number when bidding on City projects. For the City's SLBE Program, your certification is effective April 29, 2015. This certification expires on April 29, 2017 at which time you will need to reapply in accordance with the SLBE guidelines.

To receive potential contracting opportunities, please ensure that you register with the City's web-based vendor registration and bid management system, BidsOnline™ hosted by PlanetBids System. For additional information go to:

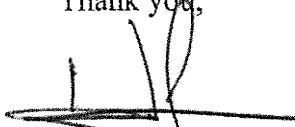
<http://www.sandiego.gov/purchasing/bids-contracts/vendorreg.shtml>

For questions please call (619) 236-6092 or e-mail KPatton@sandiego.gov.

If there are any changes in your firm's status during this certification period, you are required to notify this office *immediately*.

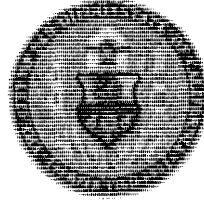
Equal Opportunity Contracting reserves the right to withdraw this certification at any time and request additional information and/or conduct on-site visits for purposes of verification.

Thank you,


Henry Foster III
Program Manager
Equal Opportunity Contracting

Purchasing & Contracting Department
Equal Opportunity Contracting
1200 Third Avenue, Suite 200
San Diego, CA 92101-4195
Tel (619) 236-6000 Fax (619) 236-5904

City of San Diego



Small Local Business Enterprise Certification

Applied Restoration, Inc. DBA ARI

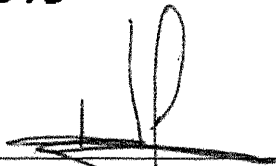
Small Local Business Enterprise (SLBE)

General Construction (NAICS: 238390, 238190, 238990)

Certification Number: 11AR0349

Effective Date: 4/29/2015

Expiration Date: 4/29/2017



Henry Foster III
Equal Opportunity Contracting
Program Manager



Welcome | [Logout](#)
 Need assistance?
Contact us
or call 800-955-1212

Vorwaller& Brooks Inc - #1756292

Supplier Profile

Legal Business Name	Vorwaller& Brooks Inc		
Doing Business As	Vorwaller& Brooks Inc		
Address	72182 CORPORATE WAY THOUSAND PALMS, CA 92276	Phone	(760) 262-6300
		FAX	(760) 262-6493
Email	Sheldon@vbidoor.com		
Web Page	http://www.vbidoor.com		
Business Types	Construction Service		
Service Areas	Los Angeles, Orange, Riverside, San Diego,		
Keywords	Door frame hardware bath accessories millwork lock closer Panic metal wood ADA compliant		
Construction License Types	C-61 - Limited Specialty D-28 - Doors, Gates and Activating Devices		
Classifications	301619 - Molding and millwork 301715 - Doors 301719 - Window frames 311628 - Miscellaneous hardware 422116 - Bathroom and bathing aids for the physically challenged 461715 - Locks and security hardware and accessories 721524 - Window and door installation and erection services		

Active Certifications

TYPE	STATUS	FROM	TO
SB (Micro)	Approved	Jul 23, 2013	Jul 31, 2017

Certification History

TYPE	STATUS	FROM	TO
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- [Bids](#)
- [Orders](#)
- [CRM](#)
- [Agency List](#)
- [Support](#)
- [Logout](#)

CALIFORNIA PROFILE			
BidSync Supplier Name	Centex Glazing, Inc.	Supplier Number	1461420
Legal Business Name	Centex Glazing, Inc.	DBA Business Name	Centex Glazing, Inc.
Address	8260 Commercial Street LA MESA, CA 91942-2938	Phone	(619) 644-1981
		FAX	
Email	mark@centexglazing.com		
Number of Employees	26		
Business Types	Construction		
Service Areas	Alpine, Los Angeles, Riverside, San Diego,		
Keywords	Glass, Glazing, Aluminum Storefront, Curtain wall, Sealants, Windows		
Construction License Types	C-17 - Glazing		
Classifications	721211 - Commercial and office building construction services 721540 - Specialty building and trades services		
View Options	View Application		
Edit Options	Amend Application Register as Disabled Veteran Business Enterprise (DVBE)		

Active Certifications

[Register as Disabled Veteran Business Enterprise \(DVBE\)](#)

TYPE	STATUS	STATUS DATE	FROM	TO	ACTIONS
SB	Approved	May 14, 2014	Sep 30, 2013	Sep 30, 2016	

Certification History

TYPE	STATUS	STATUS DATE	FROM	TO
SB	Expired	Sep 30, 2013	Sep 12, 2012	Sep 30, 2013
SB	Expired	Sep 12, 2012	Sep 26, 2011	Sep 30, 2012
SB	Expired	Sep 26, 2011	Oct 29, 2010	Oct 31, 2011

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Customer Support - vendorsupport@bidsync.com or 800-990-9339

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Department of
General Services
BUILDING GREEN · BUYING GREEN · WORKING GREEN

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Need assistance?
Contact us
or call 800-990-9339

A-1 FIRE PROTECTION INC - #1652

Supplier Profile

Legal Business Name	A-1 FIRE PROTECTION INC		
Doing Business As	A-1 FIRE PROTECTION INC		
Address	8655 MIRAMAR PL SAN DIEGO, CA 92121	Phone	(858) 623-2733
		FAX	(858) 623-2753
Email	jill@a1fpi.com		
Web Page	http://www.a-1fireprotectioninc.com		
Business Types	Construction		
Service Areas	Alpine, Amador, Calaveras, Imperial, Los Angeles, Mariposa, Merced, Riverside, San Bernardino, San Diego, San Joaquin, Stanislaus, Tuolumne, Ventura,		
Keywords	Design and install all types of automatic fire protection systems, including fire pumps, standpipe systems. Inspection and repair services as well.		
Construction License Types	C-16 - Fire Protection Engineering		
Classifications	401515 - Pumps 461915 - Fire prevention 721214 - Specialized public building construction services 721540 - Specialty building and trades services 951217 - Public buildings and structures		

Active Certifications

TYPE	STATUS	FROM	TO
SB (Micro)	Approved	Jul 3, 2013	Jul 31, 2017

Certification History

TYPE	STATUS	FROM	TO
SB (Micro)	Expired	Jul 27, 2011	Jul 31, 2013
SB (Micro)	Expired	Aug 28, 2009	Sep 30, 2011
SB (Micro)	Expired	Oct 12, 2006	Sep 30, 2009
SB	Expired	Nov 7, 2003	Oct 31, 2006
SB	Expired	Nov 1, 2001	Nov 30, 2003



THE CITY OF SAN DIEGO

July 1, 2014

A-1 Fire Protection, Inc.
Jill and John McCarty
8655 Miramar Place
San Diego, CA 92121

Subject: Small Local Business Enterprise Certification

Dear Jill and John:

Congratulations! We have reviewed your **renewal application** and you have been approved for re-certification as a City of San Diego Emerging Local Business Enterprise (ELBE). Your certification number is 10A10004 and your classification is Specialty Construction. Please reference this certification number when bidding on City projects.

For the City's SLBE Program, your certification is effective July 1, 2014. This certification expires on July 1, 2016 at which time you will need to reapply in accordance with the SLBE guidelines.

Special Note:

To ensure the correct information is included in our database, please go to <https://pro.prismcompliance.com>, select City of San Diego under jurisdiction, select go, type in your company name, select go, select your company and review the information. If there is inaccurate/missing information, please e-mail MichelleM@sandiego.gov.

If you have any questions please call 619-236-6058.

Thank you,

Henry Foster III
Program Manager
Equal Opportunity Contracting

Purchasing & Contracting Department
Equal Opportunity Contracting
1200 Third Avenue, Suite 200
San Diego, CA 92101-4195
Tel (619) 236-6058 Fax (619) 236-5904



City of San Diego



Small Local Business Enterprise Certification

A-1 Fire Protection, Inc.


Emerging Local Business Enterprise (ELBE)

Specialty Construction (NAICS: 238220, 238990)

Certification Number: 10A10004

Effective Date: 07/01/2014

Expiration Date: 07/01/2016



Henry Foster III
Equal Opportunity Contracting
Program Manager



hereby grants

National Women's Business Enterprise Certification

to

A-1 Fire Protection Inc.

who has successfully met WBENC's standards as a Women's Business Enterprise (WBE).
This certification affirms the business is woman-owned, operated and controlled; and is valid through the date herein.

WBENC National WBE Certification was processed and validated by Women's Business Enterprise Council - West, a WBENC Regional Partner Organization.

Expiration Date: 04/30/2017
WBENC National Certificate Number: 2005124324

Pamela Williamson, Ph.D.

Authorized by Pamela S. Williamson, Ph.D., President/CEO,
Women's Business Enterprise Council - West

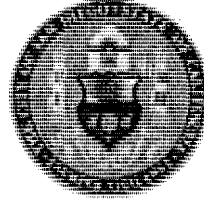


NAICS Codes: 238220

UNSPSC Codes: 40141657, 40151563, 46191606, 46191619, 25201901, 72101509, 46191610, 46191602, 46191614, 46191603, 72151102, 46190000, 46191608, 41112520, 46191615



City of San Diego



**Small Local Business Enterprise (SLBE)
Program Certification**

Scott Michael Inc

Emerging Local Business Enterprise (ELBE)

General Construction

(NAICS: 238220)

Certification Number: 14SM1285

Effective: 10/15/2015 - 10/15/2017

A handwritten signature in black ink, appearing to read "H. Foster III", positioned above a horizontal line.

Henry Foster III
Equal Opportunity Contracting
Program Manager

Certified Small Business Enterprise (SBE)

8/14/2013

Account #: 45386
Mr. Martinak
Associate Mechanical Contractors, Inc.
6387 Nancy Ridge Drive, Suite A
San Diego, CA 92121

Dear Mr. Martinak:

Thank you for submitting your Vendor Application seeking Small Business Enterprise (SBE) recognition with *The Network*. Per our evaluation of the information you provided in your application and the North American Industry Classification System (NAICS) codes you identified, your status as a Small Business Enterprise (SBE) has been approved. This certification is recognized by the following agencies:

*The Port of Long Beach**

*San Diego County Water Authority**

** There are currently six agencies participating in The Network; however, at the present time, only the Port of Long Beach and San Diego County Water Authority are administering a Small Business Enterprise (SBE) Program.*

The Port of Long Beach is pleased to issue this SBE Certificate subject to the terms and conditions identified below:

NAICS code(s) for which SBE status is recognized: 238220

SBE Certificate Effective Date: 8/12/2013

SBE Certificate Expiration Date: 8/12/2016

Work performed by your firm that falls within the above-mentioned NAICS code(s) will be counted as SBE participation for work performed on contracts procured by the above agencies.

The agencies reserve the right to withdraw this certification if at any time it is determined that certification was knowingly obtained by false, misleading, or incorrect information. The agencies reserve the right to audit all statements. If any firm attempts to falsify or misrepresent information to obtain certification, the firm may be disqualified from participating in any contracts for a period of up to five years.

SBE Certification is valid for a period of three (3) years. To maintain SBE status, firms must update their existing SBE Vendor Application on or before the expiration date mentioned above. All information is subject to verification.

If there are any changes in your status that may impact your certification, you are required to update your account information online. You may view your SBE qualifying information at any time, by logging into your main menu and selecting the "Small Business Certification Form" link.

Sincerely,



Sashi Muralidharan
SBE Administrator, Port of Long Beach



***SUPPLIER CLEARINGHOUSE
CERTIFICATE OF ELIGIBILITY***

CERTIFICATION EXPIRATION DATE: **October 7, 2018**

The Supplier Clearinghouse for the Utility Supplier Diversity Program of the California Public Utilities Commission hereby certifies that it has audited and verified the eligibility of:

***Associates Mechanical Contractors, Inc.
Minority Business Enterprise (MBE)***

pursuant to Commission General Order 156, and the terms and conditions stipulated in the Verification Application Package. This Certificate shall be valid only with the Clearinghouse seal affixed hereto.

Eligibility must be maintained at all times, and renewed within 30 days of any changes in ownership or control. Failure to comply may result in a denial of eligibility. The Clearinghouse may reconsider certification if it is determined that such status was obtained by false, misleading or incorrect information. Decertification may occur if any verification criterion under which eligibility was awarded later becomes invalid due to Commission ruling. The Clearinghouse may request additional information or conduct on-site visits during the term of verification to verify eligibility.

This certification is valid only for the period that the above firm remains eligible as determined by the Clearinghouse. Utility companies may direct inquiries concerning this Certificate to the Clearinghouse at (800) 359-7998 in Los Angeles.

VON: 12110090

DETERMINATION DATE: October 7, 2015



SAN DIEGO
HOUSING
COMMISSION

Administrative Services Department

07/02/2015

Associate Mechanical Contractors, Inc.
6387 Nancy Ridge Drive
San Diego, CA 92121

Certification Number: 15S3BC070201
Certification Issue Date: 07/02/2015
Certification Expiration Date: 07/01/2018

Dear Associate Mechanical Contractors, Inc.

I am pleased to inform you that your certification as a Section 3 Business Concern has been approved by the San Diego Housing Commission (SDHC), making your firm eligible for future contracting opportunities.

Two months before your certification expiration date, SDHC will contact you to begin the recertification process. You must respond to the request for recertification to keep your Section 3 Business Concern status; failure to respond can result in decertification. Additionally, we reserve the right to assess your program eligibility and compliance at any time.

Information about SDHC bidding opportunities and tools to download bid documents are provided through Onvia Demandstar, a free online service. If you choose to register, please make sure all information about your company is accurate and up-to-date. Certification does not guarantee any contract award. Your ability to research bid opportunities and demonstrate that you are a qualified, responsive and responsible contractor will be the key to your success in this program. To register on Onvia, please follow these instructions:

1. Go online to www.demandstar.com/register.rsp
2. Check the "**Onvia DemandStar Free Agency**" option (additional options are also available)
3. Fill out the contact information for your business
 - a. Under "Select the agency name that you would like to register for" select **San Diego Housing Commission**

If you have any questions you may contact the Section 3 Program Analyst at (619) 578-7579 or section3@sdhc.org

Sincerely,

Sharon Chambers-Feaster
Section 3, Program Manager

National Minority Supplier Development Council (NMSDC)

Certifies that

Associate Mechanical Contractors, Inc.

is a bona fide Minority Business Enterprise certified by the:
Pacific Southwest Minority Supplier Development Council

NAICS Code(s): 238220

Associate Mechanical Contractors, Inc. has chosen to obtain SUBSCRIPTION SERVICES with the following NMSDC Affiliate(s):

NMSDC
National Minority Supplier
Development Council

02/07/2015

Issued Date

03/31/2016

Expiration Date



Joset B. Wright-Lacy

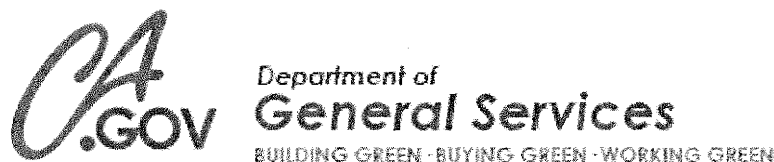
National Minority Supplier Development Council, Inc.
1359 Broadway, 10th Floor, Suite 1000
New York, NY 10018

AZ10244

Certificate Number



President, Pacific Southwest MSDC

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Rowan Electric - #1575240

Supplier Profile

Legal Business Name	Rowan Inc		
Doing Business As	Rowan Electric		
Address	2778 Loker Ave W CARLSBAD, CA 92010	Phone	(760) 692-0700
		FAX	
Email	laura@rowanelectric.com		
Web Page	http://www.rowanelectric.com		
Business Types	Construction Service		
Service Areas	Orange, Riverside, San Diego,		
Keywords	Electrical Contractor. Design and build eletrical. commercial, tenant improvement, and industrial electrical.		
Construction License Types	C-10 - Electrical (general)		
Classifications	251739 - Electrical components 261011 - Electric alternating current AC motors 261012 - Electric direct current DC motors 261116 - Power generators 261215 - Electrical wire 261216 - Electrical cable and accessories 261318 - Power generation control equipment 391210 - Power conditioning equipment 391213 - Electrical boxes and enclosures and fittings and accessories 391214 - Electrical lugs plugs and connectors 391215 - Electrical controls and accessories 391217 - Electrical hardware and supplies 391219 - Electrical safety devices and accessories 391220 - Electrical Variable Speed Drives 391221 - Electrical transmission and distribution equipment 391317 - Wire Raceways Conduit and Busways 411119 - Indicating and recording instruments 411136 - Electrical measuring and testing equipment and accessories 411153 - Light and wave generating and measuring equipment 432336 - Electrical Equipment software 721515 - Electrical system services 811017 - Electrical and electronic engineering 831018 - Electric utilities		

Active Certifications

TYPE	STATUS	FROM	TO
SB	Approved	Apr 1, 2013	Mar 31, 2018

Certification History

TYPE	STATUS	FROM	TO
SB	Expired	Mar 20, 2012	Mar 31, 2013
SB	Expired	Apr 13, 2011	Apr 30, 2012

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Sunterra Solar Inc - #1236680

Supplier Profile

Legal Business Name	Sunterra Solar Inc		
Doing Business As	Sunterra Solar Inc		
Address	35 Pamaron Way, Suite A NOVATO, CA 94949	Phone	(415) 883-6800
		FAX	
Email	cbunas@sunterasolar.com		
Web Page	http://www.sunterasolar.com		
Business Types	Construction		
Service Areas	Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Imperial, Inyo, Kern, Kings, Lake, Lassen, Los Angeles, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Mono, Monterey, Napa, Nevada, Orange, Placer, Plumas, Riverside, Sacramento, San Benito, San Bernardino, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Ventura, Yolo, Yuba,		
Keywords	Solar Power Systems, Photovoltaic, power generation, renewable energy, sunpower, PV, Solar parking canopy		
Construction License Types	B - General Building Contractor C-46 - Solar		
Classifications	261116 - Power generators 261315 - Power plants 321117 - Semiconductor devices 401018 - Heating equipment and parts and accessories 601047 - Energy and power physics materials 721512 - Heating and cooling and air conditioning HVAC construction and maintenance services 831019 - Energy conservation		

Active Certifications

TYPE	STATUS	FROM	TO
SB (Micro)	Approved	Dec 9, 2013	Dec 31, 2017
DVBE	Approved	Jan 7, 2014	Dec 31, 2017

Certification History

TYPE	STATUS	FROM	TO
DVBE	Expired	Feb 15, 2012	Feb 28, 2014
SB (Micro)	Expired	Feb 15, 2012	Feb 28, 2014
DVBE	Expired	Apr 15, 2011	Apr 30, 2012
SB (Micro)	Expired	Feb 18, 2010	Apr 30, 2012
DVBE	Denied		



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QSB CONSTRUCTION - #1347480

Supplier Profile

Legal Business Name	QSB CONSTRUCTION		
Doing Business As	QSB CONSTRUCTION		
Address	365 W 2nd AVE STE 215 ESCONDIDO, CA 92025-4135	Phone	(888) 600-1748
		FAX	(760) 432-0300
Email	alicia.lowery@qsbconstruction.com		
Web Page	http://www.qsbconstruction.com		
Business Types	Construction		
Service Areas	Los Angeles, San Diego,		
Keywords	General Contractor, Commercial, residential/private, tenant improvements, All Trades, Concrete, Framing, Electrical, Plumbing, Painting, HVAC, Flooring, Carpentry, Drywall, Public works, Schools, Government, Federal, State,		
Construction License Types	B - General Building Contractor		
Classifications	221017 - Heavy equipment components 301617 - Flooring 721015 - Building maintenance and repair services 721021 - Pest control 721029 - Facility maintenance and repair services 721031 - Conveyance systems installation and repair 721033 - Infrastructure maintenance and repair services 721415 - Land preparation services 721511 - Plumbing construction services 721512 - Heating and cooling and air conditioning HVAC construction and maintenance services 721523 - Carpentry services 781816 - Panel and paint services 811017 - Electrical and electronic engineering		

Active Certifications

TYPE	STATUS	FROM	TO
SB (Micro)	Approved	Feb 28, 2014	Mar 31, 2018

Certification History

TYPE	STATUS	FROM	TO
SB (Micro)	Expired	Dec 29, 2010	Dec 31, 2012
SB	Denied		
SB	Denied		

Mar 11, 2014

SB AP

Supplier #1347480
QSB CONSTRUCTION
365 W 2nd AVE STE 215
ESCONDIDO CA 92025-4135

Dear Business Person:

Congratulations on your Small Business (SB) certification with the State of California. Your business is now entitled to compete in the State's goal to spend 25 percent of its annual contracting dollars with small businesses. Each certified SB receives a five percent bid preference on applicable solicitations. This certification also guarantees higher interest penalties for late payment of undisputed invoices. You may purchase a rubber stamp by completing the Prompt Payment Rubber Stamp Order form at www.documents.dgs.ca.gov/pd/smallbus/ppstampreq.pdf. For more information or to verify certification status, visit www.eprocure.dgs.ca.gov.

Certification Period

From Feb 28, 2014 to Mar 31, 2016

Business Types

Construction

Conflict of Interest for Current and Former State Employees

Prior to contract award, agencies will assure the vendor is in compliance with Public Contract Code, Section 10410 et seq. addressing conflict of interest for State employees or former employees.

Annual Submission Requirement

Submit copies of the ENTIRE federal tax return to the Office of Small Business and DVBE Services (OSDS). If you have been granted a tax filing extension with the Internal Revenue Service, submit a copy of the extension form and annual financial statements; then, submit a copy of the tax return once filed. If you have employees, include the California Employment Development Department's "Quarterly Contribution Return and Report of Wages (Continuation)" (Form DE9C). If you have out-of-state employees, submit the employee documentation comparable to Form DE9C. These annual submissions also apply to all affiliated businesses.

Maintaining Your Online Certified Firm Profile

Visit www.eprocure.dgs.ca.gov/default.htm to update your certification profile. You may report changes to the following: mailing and principal office address; contact information; keywords and service areas; United Nations Standard Products and Services Codes, North American Industry Classification System (applicable only to Manufacturers). This certification may be impacted if you update information beyond the aforementioned. To report changes by mail, complete a "Certification Information Change" form located at www.documents.dgs.ca.gov/pd/smallbus/certchange.pdf.

Certification Renewal

Please complete an online application at www.eprocure.dgs.ca.gov 90 days prior to the expiration date whether or not you receive a renewal notice. If you hold dual certifications, SB and DVBE certifications, you must renew both certifications at the same time. Please contact us at 800.559.5529, 916.375.4940 or by email at OSDSHelp@dgs.ca.gov if you have any questions.

Sincerely,

Office of Small Business and DVBE Services

PROCUREMENT DIVISION - Small Business & DVBE Services | *State of California* | *State Consumer Services Agency*
707 3rd Street, 1st Floor, Room 400 | West Sacramento, CA 95605 | t 916.375.4940 f 916.375.4950



**SUPPLIER CLEARINGHOUSE
CERTIFICATE OF ELIGIBILITY**

CERTIFICATE EXPIRATION DATE: 09-19-2015

The Supplier Clearinghouse for the Utility Supplier Diversity Program of the California Public Utilities Commission hereby certifies that it has audited and verified the eligibility of:

***Q.S.B. Construction
of Escondido, California as a WMBE***

pursuant to Commission General Order 156, and the terms and conditions stipulated in the Verification Application Package. This Certificate shall be valid only with the Clearinghouse seal affixed hereto.

Eligibility must be maintained at all times, and renewed within 30 days of any changes in ownership or control. Failure to comply may result in a denial of eligibility. The Clearinghouse may reconsider certification if it is determined that such status was obtained by false, misleading or incorrect information. Decertification may occur if any verification criterion under which eligibility was awarded later becomes invalid due to Commission ruling. The Clearinghouse may request additional information or conduct on- site visits during the term of verification to verify eligibility.

This certification is valid only for the period that the above named firm remains eligible as determined by the Clearinghouse. Utility companies may direct inquiries concerning this Certificate to the Clearinghouse at 800-359-7998 in Los Angeles.

VON: 12070077

Determination Date: 09-19-2012



DEPARTMENT OF VETERANS AFFAIRS
Center for Verification and Evaluation
Washington, DC 20420

MAR 18 2014

In Reply Refer To: 00VE

Ms. Alicia Espinal Vasquez
Q.S.B. Construction
DUNS: 962652983
365 W. 2nd Avenue, Suite 215
Escondido, CA 92025

Dear Ms. Vasquez:

On behalf of the U.S. Department of Veterans Affairs (VA), Center for Verification and Evaluation (CVE), I am writing to inform you that Q.S.B. Construction has been verified as a Veteran-owned small business (VOSB) and added to the Veteran business database at www.vip.vetbiz.gov. Q.S.B. Construction will be eligible to participate in Veterans First Contracting Program opportunities with VA. **This verification is valid for two years from the date of this letter.**

To promote Q.S.B. Construction's verified status, you may use the following link to download the logo for use on marketing materials and business cards:

http://www.vetbiz.gov/cve_completed_v.jpg

To ensure that Q.S.B. Construction is correctly listed in the Vendor Information Pages, check Q.S.B. Construction's profile for the verified logo. Please notify us if the logo is not present within 72 hours of receipt of this letter.

While CVE has confirmed that Q.S.B. Construction is in compliance with the regulations, Q.S.B. Construction must inform CVE of any changes or other circumstances that would adversely affect its eligibility. Eligibility changes not reported to CVE within 60 days could result in a referral to Office of Inspector General (OIG), a referral to the Debarment and Suspension Committee and the initiation of cancellation proceedings all of which could result in Q.S.B. Construction being removed from the VIP Verification Program.

Please be advised that this letter and other information pertaining to Q.S.B. Construction's verification application may be subject to Freedom of Information Act (FOIA) requests. In addition, all companies approved for the program may be required to participate in a post verification audit. Please retain a copy of this letter to confirm Q.S.B. Construction's continued program eligibility.

At any time if Q.S.B. Construction discovers one or more NAICS Code(s) that are other than small on its CVE VIP profile, CVE will require all other than small NAICS Codes to be removed within five (5) business days. If these NAICS Codes are not removed within the allotted five (5) business days, CVE may request the U.S. Small Business Administration (SBA) to conduct a formal size determination. In addition, CVE may initiate a

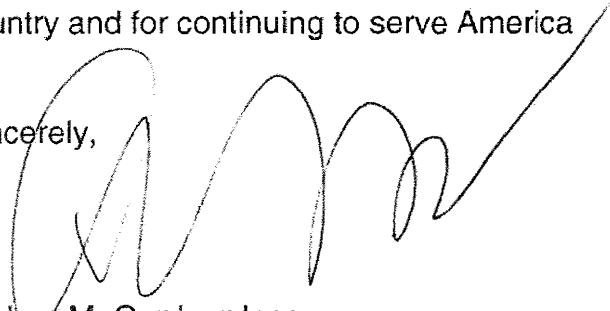
Page 2.

Ms. Alicia Espinal Vasquez

referral to OIG, Debarment and Suspension Committee and or pursue cancellation proceedings. All of the aforementioned referrals and procedures could result in Q.S.B. Construction being removed from the VIP Verification Program.

Thank you for your service to our country and for continuing to serve America through small business ownership.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andrea M. Gardner-Ince', with a long, sweeping flourish extending to the right.

Andrea M. Gardner-Ince
Director

City of San Diego



Small Local Business Enterprise Certification

QSB Construction

***Emerging Local Business Enterprise (ELBE)
Construction***

(NAICS:237310,238110,238990,238190,238120)

Certification Number: 13QCo829

Effective Date: 03/28/14

Expiration Date: 03/28/2016



Henry Foster III
Equal Opportunity Contracting
Program Manager



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MERINO LANDSCAPE INC - #37054

Supplier Profile

Legal Business Name	MERINO LANDSCAPE INC		
Doing Business As	MERINO LANDSCAPE INC		
Address	2556 PALM AVE. SAN DIEGO, CA 92154	Phone	(619) 426-4940
		FAX	(619) 691-1049
Email	support@merinolandscape.com		
Web Page	http://www.merinolandscape.com		
Business Types	Construction Service		
Service Areas	San Diego,		
Keywords	LANDSCAPING IRRIGATION SPRINKLERS LANDSCAPE MAINTENANCE		
Construction License Types	C-27 - Landscaping		
Classifications	701717 - Irrigation		

Active Certifications

TYPE	STATUS	FROM	TO
SB (Micro)	Approved	Oct 8, 2013	Oct 31, 2017
DVBE	Approved	Oct 30, 2013	Oct 31, 2017

Certification History

TYPE	STATUS	FROM	TO
DVBE	Expired	Jan 26, 2012	Dec 31, 2013
SB (Micro)	Expired	Dec 20, 2011	Dec 31, 2013
DVBE	Expired	Feb 4, 2011	Feb 29, 2012
SB (Micro)	Expired	Sep 1, 2009	Feb 29, 2012
DVBE	Expired	Jan 4, 2010	Jan 31, 2011
SB (Micro)	Expired	Sep 11, 2008	Sep 30, 2009
SB	Expired	Nov 3, 2005	Oct 31, 2008
SB	Expired	Apr 22, 2004	Oct 31, 2005



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MANUEL ONCINA ARCHITECTS INC - #9221

Supplier Profile

Legal Business Name MANUEL ONCINA ARCHITECTS INC
 Doing Business As MANUEL ONCINA ARCHITECTS INC
 Address 5711 LAJOLLA BLVD Phone (858) 459-1221
 LAJOLLA, CA 92037-7302 FAX (858) 459-1214
 Email NORMA@ONCINAARC.COM
 Web Page <http://www.uncinaarc.com>
 Business Types Service
 Service Areas Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Ventura,
 Keywords ARCHITECTURAL SERVICES NAICS 541310 SIC 8712 CSI 33-21 11 11 & 33-21 11 21 & 33-21 11 24 & 33-21 11 27
 Classifications 811015 - Civil engineering

Active Certifications

TYPE	STATUS	FROM	TO
SB (Micro)	Approved	Aug 28, 2013	Aug 31, 2017

Certification History

TYPE	STATUS	FROM	TO
SB (Micro)	Expired	Aug 8, 2011	Aug 31, 2013
SB	Expired	Apr 12, 2007	Apr 30, 2008
SB	Expired	Apr 19, 2006	Apr 30, 2007
SB	Expired	Oct 21, 2004	Mar 31, 2006
SB	Expired	Dec 20, 1995	May 31, 1999

[Back To Query Form](#)**Search Returned 1 Records**

Tue Feb 02 15:19:25 PST 2016

Query Criteria

Firm/DBA Name: Manuel Oncina

Firm Type: DBE

Firm ID	12582
Firm/DBA Name	MANUEL ONCINA ARCHITECTS, INC.
Address Line1	5711 LA JOLLA BLVD.
Address Line2	
City	LA JOLLA
State	CA
Zip Code1	92037
Zip Code2	7302
Mailing Address Line1	
Mailing Address Line2	
Mailing City	
Mailing State	
Mailing Zip Code1	
Mailing Zip Code2	
Certification Type	DBE
EMail	moncina@oncinaarc.com
Contact Name	NORMA ONCINA
Area Code	(858)
Phone Number	459-1221
Alt Area Code	()
Alt Phone Number	
Fax Area Code	(858)
Fax Phone Number	459-1214
Agency Name	DEPARTMENT OF TRANSPORTATION
Counties	02; 13; 19; 30; 33; 36; 37; 40; 42;
Districts	05; 07; 08; 10; 11; 12;
DBE NAICS	541310; 541340; 541410; 541490;

ACDBE NAICS

Work Codes	C8704 ARCHITECT; C8705 DESIGN; C8765 DRAFTING;
Licenses	ARC Architect;
Trucks	
Gender	M
Ethnicity	HISPANIC
Firm Type	DBE

[Back To Query Form](#)

Vendor Information

CLOSE WINDOW

[Print](#)**Business & Contact Information**

Business Name **Manuel Oncina Architects**
 Owner **Manuel Oncina**
 Address **5711 La Jolla Blvd**
 > [Map This Address](#) **La Jolla, CA 92037-7302**
 Phone **858-459-1221 Ext. 101**
 Fax **858-459-1214**
 Email **norma@oncinaarc.com**
 Website **<http://www.oncinaarc.com>**
 Ethnicity **Hispanic American**
 Gender **Male**

Certification Information

Certifying Agency **Supplier Clearinghouse**
 Certification Type **MBE - Minority Business Enterprise**
 Expiration Date **12/9/2018**
 Certified Business Description **Professional Architectural services: Design, Construction Documents, Construction Administration, Space Planning, Interiors, Renderings, Graphics, Planning**

Commodity Codes

Code	Description
SIC 7389	Aerosol Packaging
SIC 8712	Architectural Services

Additional Information

VON Number **12060080**



THE CITY OF SAN DIEGO

April 18, 2016

Manuel Oncina Architects, Inc.
Mr. Juan Manuel Oncina
5711 La Jolla Blvd
La Jolla, CA 92037

Subject: Small Local Business Enterprise Certification

Dear Mr. Oncina:

Congratulations! We have reviewed your **renewal application** and you have been approved for re-certification as a City of San Diego Emerging Local Business Enterprise (ELBE). Your certification number is 11MO0384 and your classification is Professional Services. Please reference this certification number when bidding on City projects. For the City's Small Local Business Enterprise (SLBE) Program, your certification is effective March 19, 2015. This certification expires on March 19, 2017 at which time you will need to reapply in accordance with the SLBE guidelines.

To receive potential contracting opportunities, please ensure that you register with the City's web-based vendor registration and bid management system, BidsOnline™ hosted by PlanetBids System. For additional information go to:

<http://www.sandiego.gov/purchasing/bids-contracts/vendorreg.shtml>

Construction Contractors: Contractors desiring to bid as a prime contractor on City of San Diego public works construction projects must be prequalified in accordance with the San Diego Municipal Code §22.3004(a).

Contractors certified as an emerging or small local business under the City's SLBE program may, **upon submittal of their bond letter**, be prequalified to bid as a prime contractor for projects up to \$1 million or their single-project bond limit, **whichever is less**. To become prequalified, go to the "Prequalification" tab in the vendor profile on PlanetBids, select "Prequalification for City Certified SLBE", and upload a current bond letter, addressed to the City of San Diego, stating single project and aggregate bonding limits.

To become prequalified as a prime contractor and bid on large projects valued at **more than \$1 million**, complete the online Prequalification Program Application found on PlanetBids. Contractors will need to provide references, a complete, current reviewed or audited financial statement and a current bond letter via PlanetBids.

Purchasing & Contracting Department
Equal Opportunity Contracting
1200 Third Avenue, Suite 200
San Diego, CA 92101-4195
Tel (619) 236-6000 Fax (619) 236-5904

Page 2 of 2
Mr. Oncina
April 18, 2016

To bid on a specific project, the prequalification application must be received at least two weeks **prior** to the bid due date. Upon prequalification approval, an automated email notification will be forwarded from PlanetBids. Please be sure to print your prequalification approval letter for your records.

For questions regarding the Prequalification Program, please contact Dave Stucky at (619) 533-3474 or email DStucky@sandiego.gov.

For questions regarding the SLBE Program, please contact Equal Opportunity Contracting at (619) 236-6000 or e-mail ContactEOC@sandiego.gov.

If there are any changes in your firm's status during this certification period, you are required to notify this office *immediately*.

Equal Opportunity Contracting reserves the right to withdraw this certification at any time and request additional information and/or conduct on-site visits for purposes of verification.

Thank you,



Henry Foster III
Program Manager
Equal Opportunity Contracting

City of San Diego



**Small Local Business Enterprise (SLBE)
Program Certification**

Manuel Oncina Architects, Inc.

**Emerging Local Business Enterprise (ELBE)
Professional Services**

(NAICS: 541310)

Certification Number: 11MO0384

Effective: 3/19/2015 - 3/19/2017

Henry Foster III
Equal Opportunity Contracting
Program Manager



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PENN AIR - #1021379

Supplier Profile

Legal Business Name PENN AIR CONTROL INC

Doing Business As PENN AIR

Address 5941 Lakeshore Dr Phone (714) 220-9091
 CYPRESS, CA 90630 FAX (714) 220-1390

Email andrew@pennairgroup.com

Web Page <http://www.pennairgroup.com>

Business Types Construction Service

Service Areas Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Imperial, Inyo, Kern, Kings, Lake, Lassen, Los Angeles, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Mono, Monterey, Napa, Nevada, Orange, Placer, Plumas, Riverside, Sacramento, San Benito, San Bernardino, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Ventura, Yolo, Yuba,

Keywords Heating, Ventilation & Air Conditioning, Air and Water Balancing, Air Duct Cleaning, HVAC Commissioning, Filters, Indoor Air Quality

Construction License Types C-20 - Warm air heat, ventilating, Air Conditioning

Classifications 401015 - Ventilation
 401017 - Cooling equipment and parts and accessories
 401615 - Filters
 721512 - Heating and cooling and air conditioning HVAC construction and maintenance services

Active Certifications

TYPE	STATUS	FROM	TO
DVBE	Approved	Apr 8, 2015	Apr 30, 2017
SB	Approved	Jul 12, 2013	Apr 30, 2017

Certification History

TYPE	STATUS	FROM	TO
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DVBE	Expired	Jul 12, 2013	Jul 12, 2013
SB	Denied	Jul 5, 2012	Jul 31, 2013
SB	Expired	Jul 7, 2011	Jul 31, 2012
SB	Denied		
SB	Denied		

07

Project Budget & Schedule



County of San Diego - Fallbrook Library

PROJECT BUDGET & SCHEDULE

DESIGN-BUILD PROJECT SCHEDULE

We understand from Section 4.1 in the RFP that the Mission Hills / Hillcrest Library project shall be completed, including the Plant Establishment Period, within 682 working days from the NTP. Our team's proposed Design-Build schedule duration is 471 working days, starting on Aug 23, 2016 and finishing by July 3, 2018. This proposed schedule allows 211 days (over 6 months) for the Plant Establishment Period. The proposed durations for design and construction include:

- Design/Preconstruction: 08/23/16 - 04/13/17
- Construction: 01/20/17 - 07/03/18

We plan to acquire the demolition/grading permits before finalizing the preconstruction phase so that we can start demolition/grading activities on January 20, 2017. While the team is performing demolition and grading activities, project management will be working to acquire the building permit and preparing for the start of construction. **Please see the following pages for a detailed CPM Design-Build Schedule.**

PROJECT BUDGET

For a complete Project Budget, please refer to our Price Proposal, submitted separately.

Activity ID	Activity Name	DUR	Start	Finish	2016												2017												2018																							
					May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																
2014-0785 - City of San Diego - Mission Hills / Hillcrest Library 2416																																																				
Project Duration																																																				
PD-1000	Project Duration	471	Aug-23-16	Jul-03-18	Project Duration																																															
Project Milestones																																																				
PCM-1000	Selection and Notification	1	Jul-08-16*	Jul-08-16	Selection and Notification																																															
PCM-1040	Design / Build NTP	0	Aug-23-16*		◆ Design / Build NTP																																															
PCM-1140	Demolition Permit Issued	0		Jan-19-17	◆ Demolition Permit Issued																																															
PCM-1090	Start Abatement Removal	0	Jan-20-17		◆ Start Abatement Removal																																															
PCM-1060	Demolition Complete	0		Mar-20-17	◆ Demolition Complete																																															
PCM-1130	Grading Permit Issued	0		Mar-20-17	◆ Grading Permit Issued																																															
PCM-1150	Building Permit Issued	0		Apr-13-17	◆ Building Permit Issued																																															
PCM-1110	Start Building Construction	0	Apr-14-17		◆ Start Building Construction																																															
PCM-1080	Inclement Weather Allowance	10	Jun-20-18	Jul-03-18	■ Inclement Weather Allowance																																															
PCM-1070	C of O	0		Jul-03-18	◆ C of O																																															
PCM-1020	Project Complete	0		Jul-09-18	◆ Project Complete																																															
Pre-Construction Duration																																																				
PRE-1000	Pre-Construction Duration	162	Aug-23-16	Apr-13-17	Pre-Construction Duration																																															
Pre-Construction																																																				
Design Schedule																																																				
DES-1100	Limited NTP	1	Aug-08-16*	Aug-08-16	Limited NTP																																															
DES-1000	60% Design Drawings	48	Aug-23-16	Oct-28-16	■ 60% Design Drawings																																															
DES-1020	60% Design Drawings - City Review	5	Oct-31-16	Nov-04-16	■ 60% Design Drawings - City Review																																															
DES-1050	90% CDs	59	Nov-07-16	Feb-02-17	■ 90% CDs																																															
DES-1070	Building Permit	50	Feb-03-17	Apr-13-17	■ Building Permit																																															
DES-1090	Building CDs IFC	0		Apr-13-17	◆ Building CDs IFC																																															
Demolition																																																				
DES-1040	Prepare Demolition Package	20	Nov-07-16	Dec-07-16	■ Prepare Demolition Package																																															
DES-1060	Demolition Permit	29	Dec-08-16	Jan-19-17	■ Demolition Permit																																															
Grading																																																				
DES-1010	Prepare Grading Design Package	48	Aug-23-16	Oct-28-16	■ Prepare Grading Design Package																																															
DES-1030	Grading Permit	96	Oct-31-16	Mar-20-17	■ Grading Permit																																															
DES-1080	Grading Package IFC	0		Mar-20-17	◆ Grading Package IFC																																															
Construction Duration																																																				
CD-1000	Construction Duration	369	Jan-20-17	Jul-03-18	Construction Duration																																															
Construction																																																				
Mobilization / Abatement																																																				
MA-1010	Review of Environmental Repoert & Recommendation	2	Jan-16-17	Jan-17-17	Review of Environmental Repoert & Recommendation for Contract																																															
MA-1000	Environmental ACM/HazMat Report	15	Jan-16-17	Feb-03-17	■ Environmental ACM/HazMat Report																																															
MA-1020	Contract Environmental ACM/HazMat Abatement Plan	2	Jan-18-17	Jan-19-17	Contract Environmental ACM/HazMat Abatement Plan																																															
MA-1030	Install Construction Fence	2	Jan-20-17	Jan-23-17	■ Install Construction Fence																																															
MA-1040	Set office Trailer / Install Phones Temp Power	3	Jan-20-17	Jan-24-17	■ Set office Trailer / Install Phones Temp Power																																															
MA-1050	APCD 10 Calendar Day Notification	10	Jan-20-17	Feb-02-17	■ APCD 10 Calendar Day Notification																																															
MA-1060	Environmental Prepares and Presents Abatement Plan	2	Jan-23-17	Jan-24-17	Environmental Prepares and Presents Abatement Plan																																															
MA-1070	Install Temporary Signage	1	Jan-24-17	Jan-24-17	Install Temporary Signage																																															
MA-1080	Install SWPPP	1	Jan-25-17	Jan-25-17	Install SWPPP																																															
MA-1090	Soft Demolition and Preparation	3	Jan-25-17	Jan-27-17	■ Soft Demolition and Preparation																																															
MA-1100	Set up for Abatement	3	Jan-25-17	Jan-27-17	■ Set up for Abatement																																															
MA-1110	Removal of ACM	7	Feb-03-17	Feb-13-17	■ Removal of ACM																																															

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■ Remaining Level of Effort ◆ Milestone
■ Actual Level of Effort
■ Actual Work
■ Remaining Work
■ Critical Remaining Work

City of San Diego
Mission Hills / Hillcrest Library
Proposal Schedule Jun-06-16



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