

Project: **Majestic Airway**
 Construction Noise Impact on Sensitive Receptors

Parameters

Construction Hours:	Daytime hours (7 am to 7 pm)	8
	Evening hours (7 pm to 10 pm)	0
	Nighttime hours (10 pm to 7 am)	0
Leq to L10 factor		3

	Receptor (Land Use)	Distance (feet)	Shielding	Direction
1	Southwestern College Higher Education Center at Olay Mesa	2,107	0	W
2	-	-	0	-
3	-	-	0	-
4	-	-	0	-
5	-	-	0	-
6	-	-	0	-
7	-	-	0	-

				RECEPTOR 1		
Construction Phase	Equipment Type	No. of Equip.	Acoustical Usage Factor	Reference Noise Level at 50ft per Unit, Lmax	Noise Level at Receptor 1, Lmax	Noise Level at Receptor 1, Leq
Site Preparation	Dozer	3	40%	82	54.0	50.0
	Tractor	4	40%	84	57.5	53.5
	Combined LEQ					55.1
Grading	Graders	1	40%	85	52.5	48.5
	Excavator	2	40%	81	51.2	47.2
	Tractor	2	40%	84	54.5	50.5
	Scraper	2	40%	84	54.1	50.1
	Dozers	1	40%	82	49.2	45.2
Combined LEQ						55.7
Building Construction	Forklifts	3	40%	74	46.6	42.6
	Generator	1	50%	81	48.1	45.1
	Crane	1	16%	81	48.1	40.1
	Welder/Torch	1	40%	74	41.5	37.5
	Tractor	3	40%	84	56.3	52.3
Combined LEQ						53.7
Paving	Pavers	2	50%	77	47.7	44.7
	Paving Equipment	2	50%	77	47.7	44.7
	Rollers	2	20%	80	50.5	43.5
Combined LEQ						49.1
Architectural Coating	Compressor (air)	1	40%	78	45.2	41.2
Combined LEQ						41.2
Infrastructure Improvements	Graders	1	40%	85	52.5	48.5
	Excavator	2	40%	81	51.2	47.2
	Tractor	2	40%	84	54.5	50.5
	Scraper	2	40%	84	54.1	50.1
	Dozer	1	40%	82	49.2	45.2
Combined LEQ						55.7
Infrastructure Improvements/ Building Construction	Graders	1	40%	85	52.5	48.5
	Excavator	2	40%	81	51.2	47.2
	Tractor	5	40%	84	58.5	54.5
	Scraper	2	40%	84	54.1	50.1
	Dozer	1	40%	82	49.2	45.2
	Forklifts	3	40%	74	46.6	42.6
	Generator	1	50%	81	48.1	45.1
	Crane	1	16%	81	48.1	40.1
	Welder/Torch	1	40%	74	41.5	37.5
Combined LEQ						57.9
Paving/ Architectural Coating	Pavers	2	50%	77	47.7	44.7
	Paving Equipment	2	50%	77	47.7	44.7
	Rollers	2	20%	80	50.5	43.5
	Compressor (air)	1	40%	78	45.2	41.2
Combined LEQ						49.8

Source for Ref. Noise Levels: RCNM, 2005

Receptor	Phase	Direction	Distance to Center of Site	Ambient (dBA Leq)	Project Construction Noise Level dBA Leq	Threshold	Exceeds Threshold?
1 Southwestern College Higher Education Center at Olay Mesa	Site Preparation	W	2107		55.1	75.0	No
	Grading				55.7		No
	Building Construction				53.7		No
	Paving				49.1		No
	Architectural Coating				41.2		No
	Infrastructure Improvements				55.7		No
	Infrastructure Improvements/ Building Construction				57.9		No
	Paving/ Architectural Coating				49.8		No

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Majestic Airway
Project Number:
Scenario: Opening Year
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

#	Roadway	Segment	Median Lanes	ADT Volume	Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway				
							Medium Trucks	Heavy Trucks	CNEL at 100 Feet	Distance to Contour			
									70 CNEL	65 CNEL	60 CNEL	55 CNEL	
1	La Media Road	Otay Mesa Rd to SR 905 WB Ramps/St. Andrews Ave	5	26,524	45	0	2.0%	1.0%	67.5	57	179	567	1,793
2	La Media Road	SR 905 WB Ramps/St. Andrews Ave to SR 905 EB Ramps	5	27,698	45	0	2.0%	1.0%	67.7	59	187	592	1,873
3	La Media Road	SR 905 EB Ramps to Airway Road	2	21,419	45	0	2.0%	1.0%	66.4	44	139	440	1,392
4	La Media Road	Airway Road to Siempre Viva Road	2	3,991	35	0	2.0%	1.0%	56.7	-	-	46	147
5	Airway Road	La Media Road to Project Driveway 1	2	11,741	40	0	2.0%	1.0%	62.6	-	58	183	579
6	Airway Road	Project Driveway 1 to Avenida Costa Azul	3	9,549	40	0	2.0%	1.0%	61.8	-	48	151	476
7	Airway Road	Avenida Costa Azul to Harvest Road	2	10,323	40	0	2.0%	1.0%	62.0	-	51	162	512
8	Airway Road	Harvest Road to Sanyo Avenue	2	8,950	35	0	2.0%	1.0%	60.1	-	-	104	330

¹ Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Majestic Airway
Project Number:
Scenario: Opening Year Plus Project
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

#	Roadway	Segment	Median Lanes	ADT Volume	Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway				
							Medium Trucks	Heavy Trucks	CNEL at 100 Feet	Distance to Contour			
									70 CNEL	65 CNEL	60 CNEL	55 CNEL	
1	La Media Road	Otay Mesa Rd to SR 905 WB Ramps/St. Andrews Ave	5	26,933	45	0	2.0%	1.0%	67.6	58	182	576	1,821
2	La Media Road	SR 905 WB Ramps/St. Andrews Ave to SR 905 EB Ramps	5	28,668	45	0	2.0%	1.0%	67.9	61	194	613	1,938
3	La Media Road	SR 905 EB Ramps to Airway Road	2	22,951	45	0	2.0%	1.0%	66.7	47	149	472	1,491
4	La Media Road	Airway Road to Siempre Viva Road	2	4,093	35	0	2.0%	1.0%	56.8	-	-	48	150
5	Airway Road	La Media Road to Project Driveway 1	2	13,478	40	0	2.0%	1.0%	63.2	-	66	210	665
6	Airway Road	Project Driveway 1 to Avenida Costa Azul	3	9,856	40	0	2.0%	1.0%	61.9	-	49	155	491
7	Airway Road	Avenida Costa Azul to Harvest Road	2	10,630	40	0	2.0%	1.0%	62.2	-	53	167	527
8	Airway Road	Harvest Road to Sanyo Avenue	2	9,257	35	0	2.0%	1.0%	60.3	-	-	108	342

¹ Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.