



Arizona Department of Transportation

Environmental Planning

Addendum 1 to Final Noise Report

**State Route 303 Loop (Estrella)
MC 85 – Van Buren Street**

**Project No. 303 MA 100 H6870 01C
Federal No. RARF-303-A(ASO)T**

May 1, 2023

Submittal Number 1

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Project No. 303 MA 100 H6870 01C
Federal No. RARF-303-A(ASO)T

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May 1, 2023

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EXECUTIVE SUMMARY

The *State Route 303 Loop (Estrella) MC 85 – Van Buren Street Final Noise Report*, dated September 1, 2022 recommended the construction of a total of 9 separate noise barriers along the proposed 303 freeway per the ADOT NAR criteria, see Table below.

NOISE BARRIER SUMMARY						
State Route 303 Loop (Estrella), MC 85 – Van Buren Street						
Noise Barrier	Barrier Height Range (ft)	Barrier Length (ft)	Area of Barrier (ft ²)	Total Barrier Cost	Number of Benefited Receptors	Cost-Per-Benefited-Receptor
SB1 (Sta 1281+55 to Sta 1267+45)	14	1,400	19,596	\$809,760	41	\$19,750
SB2 (Sta 1260+50 to Sta 1240+35)	10 – 12	2,033	21,121	\$813,735	39	\$34,871
SB3 (Sta 1242+91 to Sta 1228+43)	10 – 12	1,441	15,607	\$546,245		
SB4 (Sta 1224+07 to Sta 1214+63)	12	944	11,329	\$396,515	128	\$21,018
SB5 (Sta 1216+34 to Sta 1168+39)	12 – 14	4,772	59,265	\$2,214,075		
SB6 (Sta 1169+94 to Sta 1167+50)	12	190	2,279	\$79,765		
NB1 (Sta 1212+94 to Sta 1216+28)	12	334	4,002	\$140,070	97	\$26,361
NB2 (Sta 1214+34 to Sta 1170+90)	10 – 12	4,360	51,219	\$1,909,165		
NB3 (Sta 1170+90 to Sta 1159+54)	12	1,209	14,507	\$507,745		
Total for Recommended Barriers	10 – 14	16,683	198,925	7,417,075	305	\$24,318
Notes:						
[¹] Total cost of the noise barrier is based on the unit cost of \$35 per square foot off-structure and \$85 per square foot on-structure.						
[²] Barrier SB1 includes a length of approximately 177' bridge section. Barrier SB2 includes a length of approximately 149' bridge section. Barrier SB5 includes a length of approximately 233' bridge section. Barrier NB2 includes a length of approximately 233' bridge section.						

Subsequent to the approval of the Final Noise Report during final design, the project construction limits have been extended from Elwood Street to MC 85 north of Buckeye Canal to provide a temporary connection to MC 85 until the full SR 30 interchange is constructed. As a result, the noise models were updated and additional barrier analyses were conducted to reflect the design changes.

A new noise barrier SB7 was incorporated into design because of the freeway extension on the south end. Barriers SB6, NB2, and NB3 were revised accordingly based on design changes. They are shown in Table on next page.

NOISE BARRIER SUMMARY (SB6, SB7, NB2, NB3) State Route 303 Loop (Estrella), MC 85 – Van Buren Street						
Noise Barrier	Barrier Height Range (ft)	Barrier Length (ft)	Area of Barrier (ft ²)	Total Barrier Cost	Number of Benefited Receptors	Cost-Per-Benefited-Receptor
SB6 (Sta 1169+94 to Sta 1150+00)	12	1,456	17,473	\$1,025,555	99	\$33,497
SB7 (Sta 1155+98 to Sta 1102+00)	10 - 12	5,369	59,292	\$2,290,620		
NB1 (Sta 1212+94 to Sta 1216+28)	12	334	4,002	\$140,070	91	\$27,258
NB2 (Sta 1214+34 to Sta 1170+90)	12	4,360	52,318	\$1,831,130		
NB3 (Sta 1170+90 to Sta 1159+35)	12	1,213	14,550	\$509,250		
Notes:						
[1] Total cost of the noise barrier is based on the unit cost of \$35 per square foot off-structure and \$85 per square foot on-structure.						
[2] Barrier SB6 includes a length of approximately 690' bridge section. Barrier SB7 includes a length of approximately 359' bridge section.						
[3] NB1 does not change from the final noise report, it is listed here for CPBR calculation only.						

The following Appendices are included in this Addendum.

Appendix A – Noise Receiver and Recommended Noise Barrier Locations

Appendix B – Additional Noise Monitoring Datasheets

Appendix C – Predicted Noise Levels

Appendix D – Recommended Barrier Dimensions and Coordinates

Appendix E – FHWA Traffic Noise Model (TNM) 2.5 Input Files

APPENDIX A

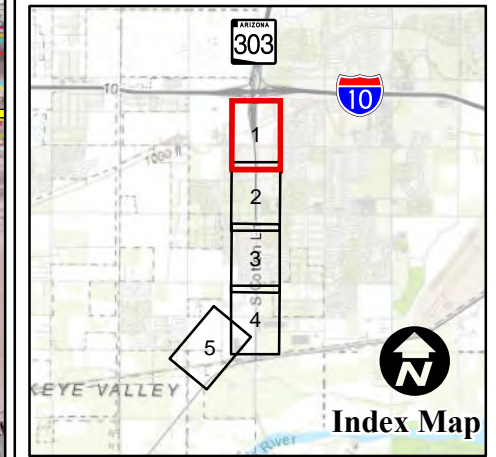
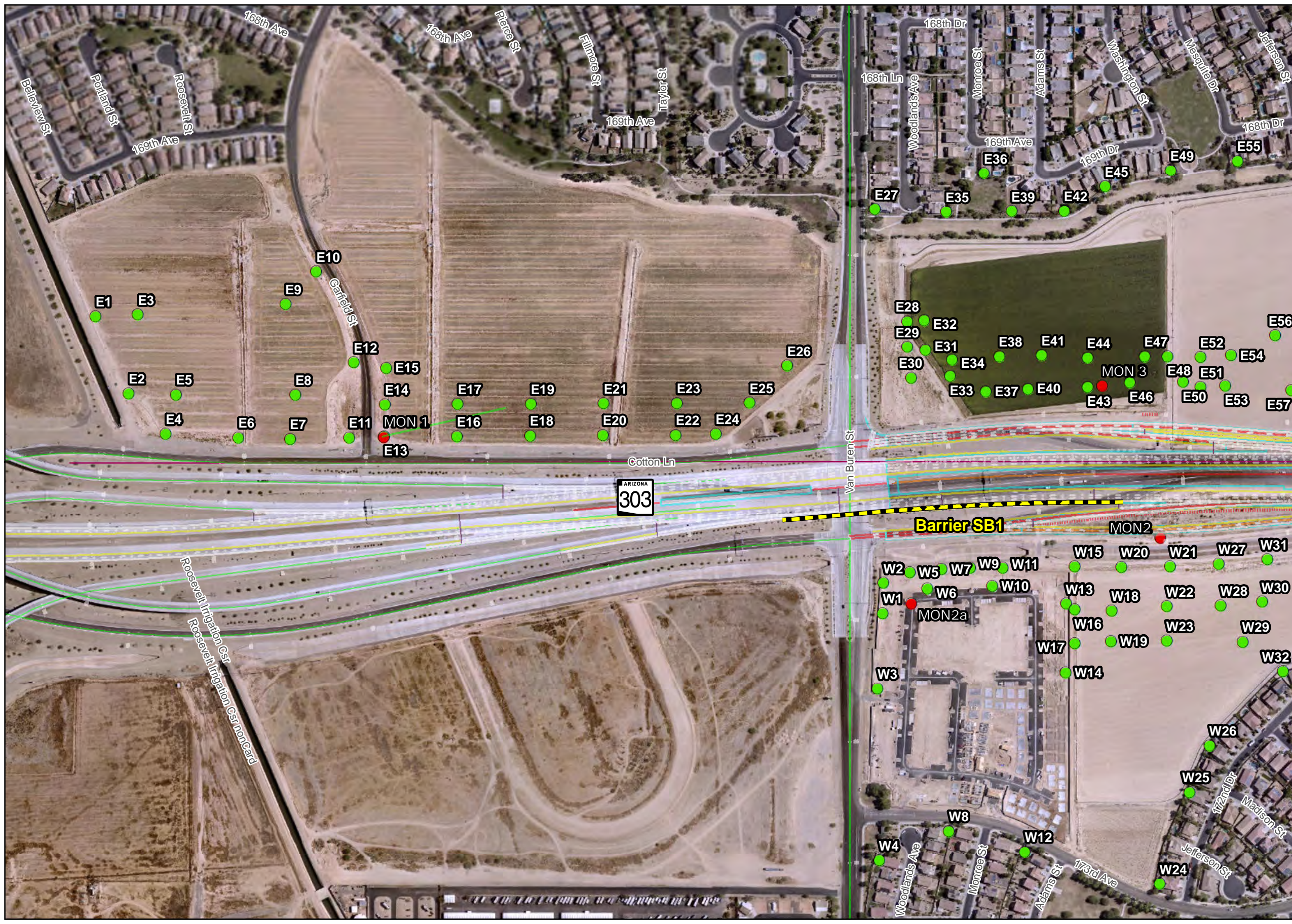
Noise Receiver and Recommended Barrier Locations

State Route 303 Loop (Estrella)
 MC 85 – Van Buren Street
 303L MA 105 H6870 01D
 RARF-303-A(ASO)S

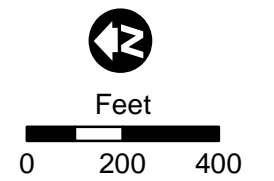


Legend

- Monitoring Sites
- Noise Receivers
- Recommended Noise Barriers



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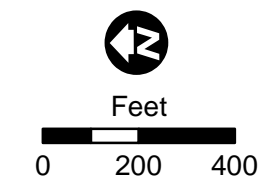
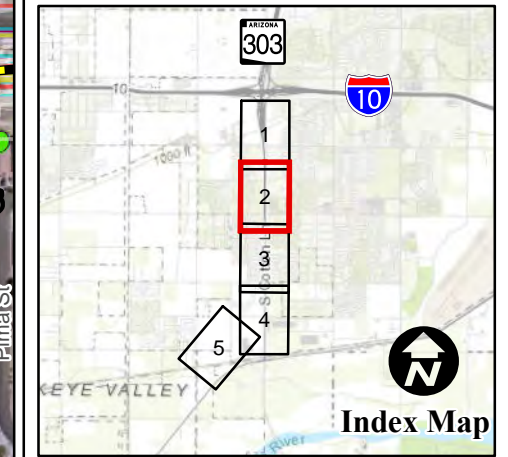
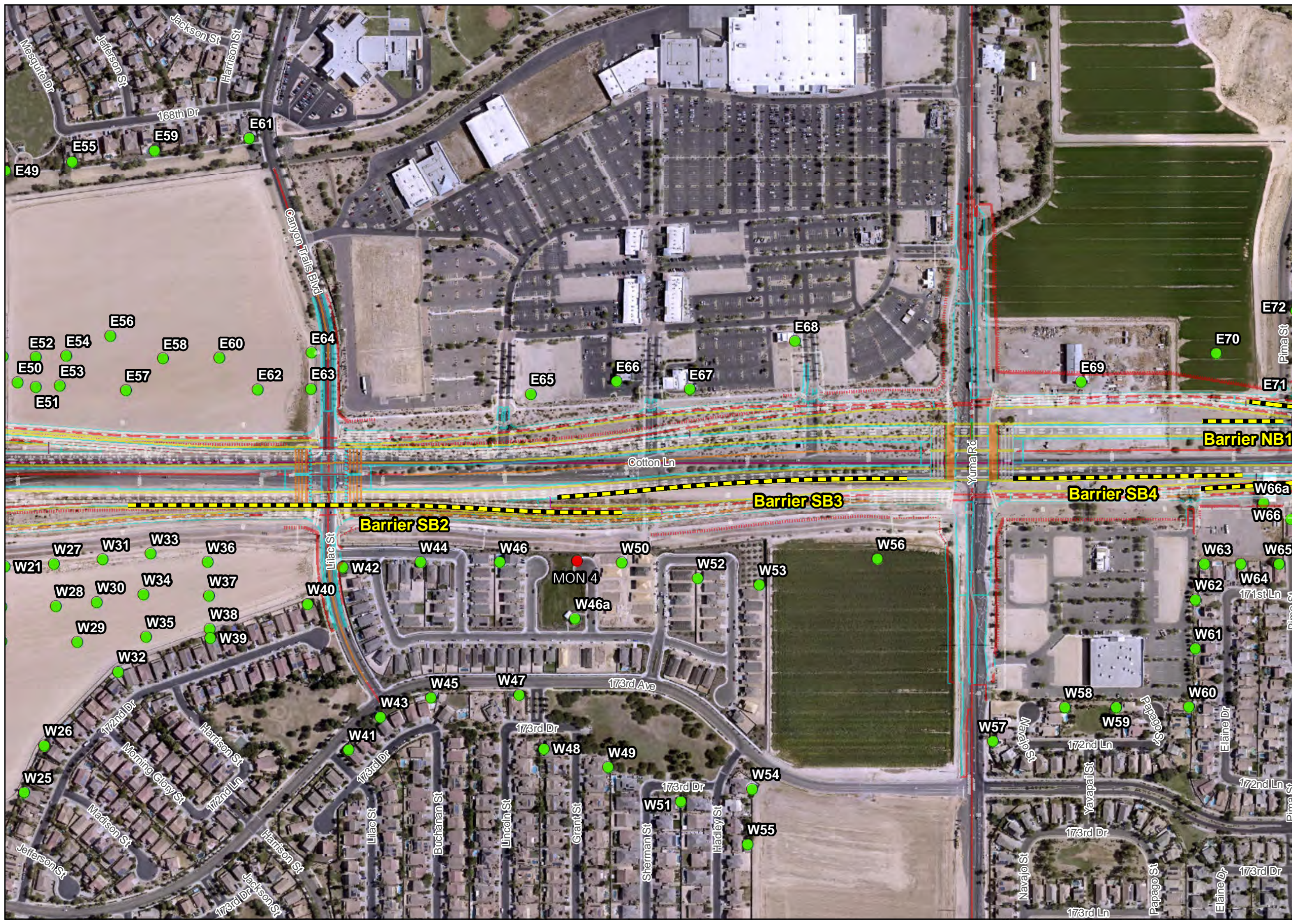
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 ADOT ATIS (2013); AZTEC (2023)
 MAG Aerial photography (accessed in 2023)

Map Disclaimer: This map is intended for general siting purposes only.



Legend

- Monitoring Sites
- Noise Receivers
- Recommended Noise Barriers



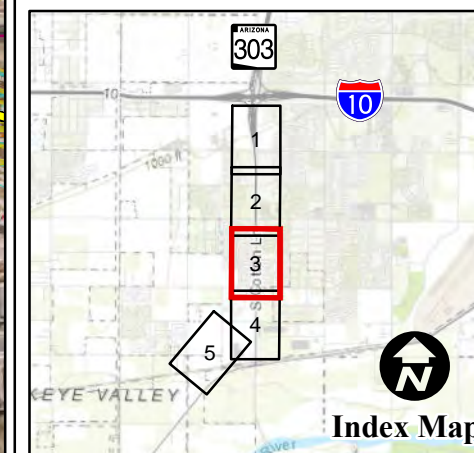
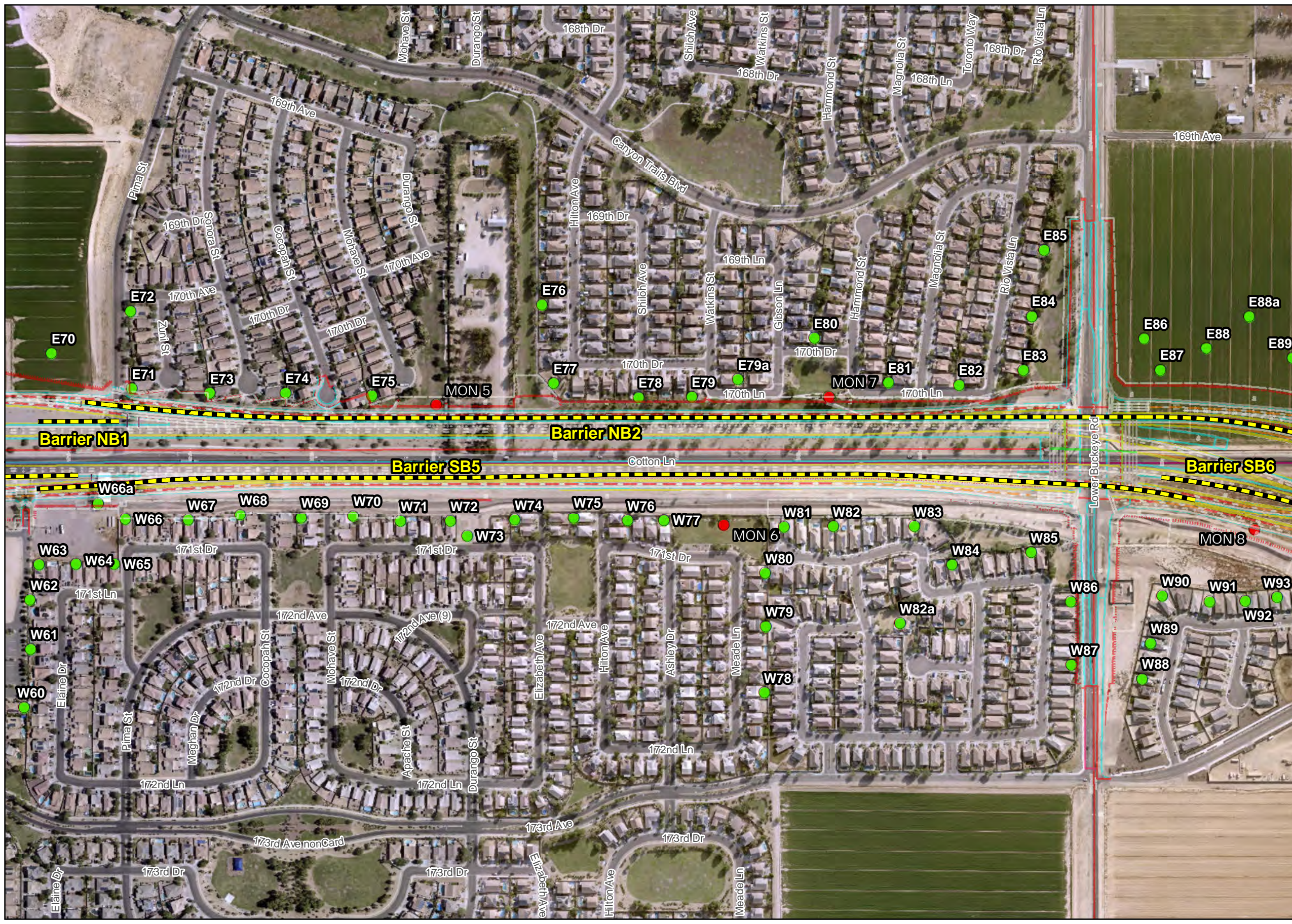
Source:
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 MAG Aerial photography (accessed in 2023)

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Legend

- Monitoring Sites
- Noise Receivers
- Recommended Noise Barriers



Feet



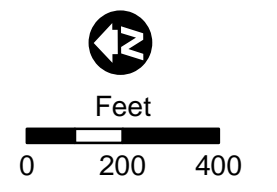
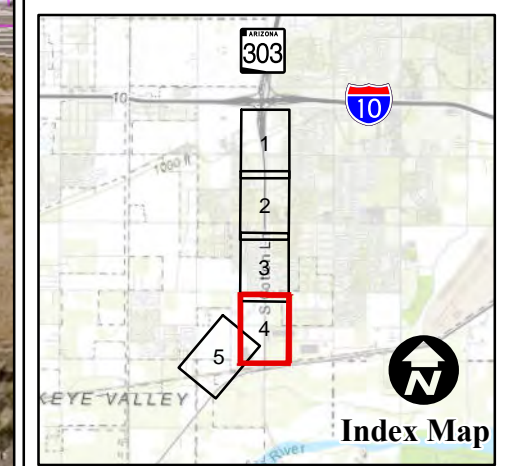
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 MAG Aerial photography (accessed in 2023)

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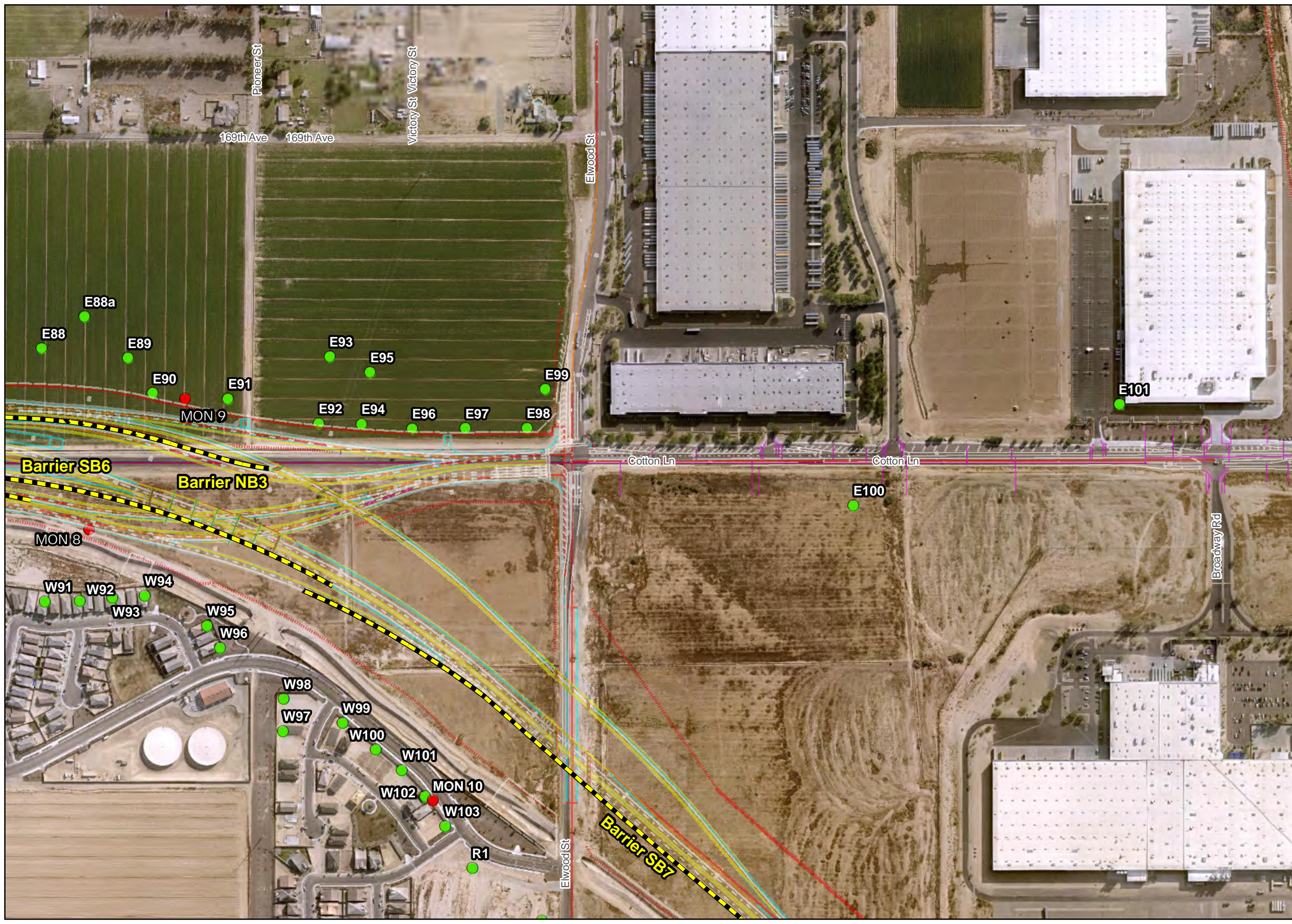
Legend

- Monitoring Sites
- Noise Receivers
- Recommended Noise Barriers



Source:
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 MAG Aerial photography (accessed in 2023)

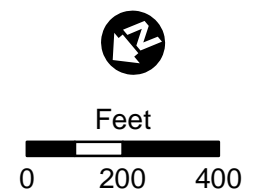
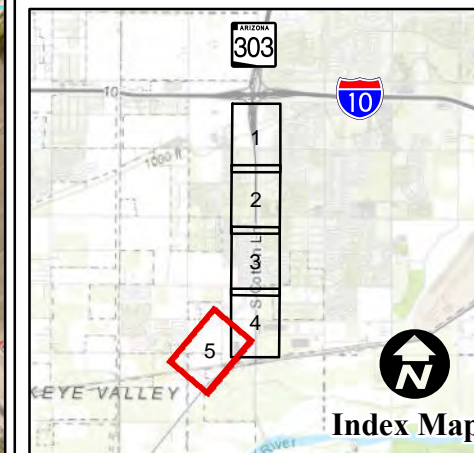
Map Disclaimer: This map is intended for general siting purposes only.





Legend

- Monitoring Sites
- Noise Receivers
- ▬ Recommended Noise Barriers



APPENDIX B

Additional Noise Monitoring Datasheets

**ROADWAY TRAFFIC
NOISE LEVEL MEASUREMENT DATA SHEET**

Project Number/Name: SR 303L: MC 85 – Van Buren Street Date: 03/01/2023

Site Number/Description: MON 10, (Lat/Long: 33.41542, -112.4314), New build residential neighborhood

Adjacent to the El Cidro Subdivision, approximately 25 feet west of 173rd Ave

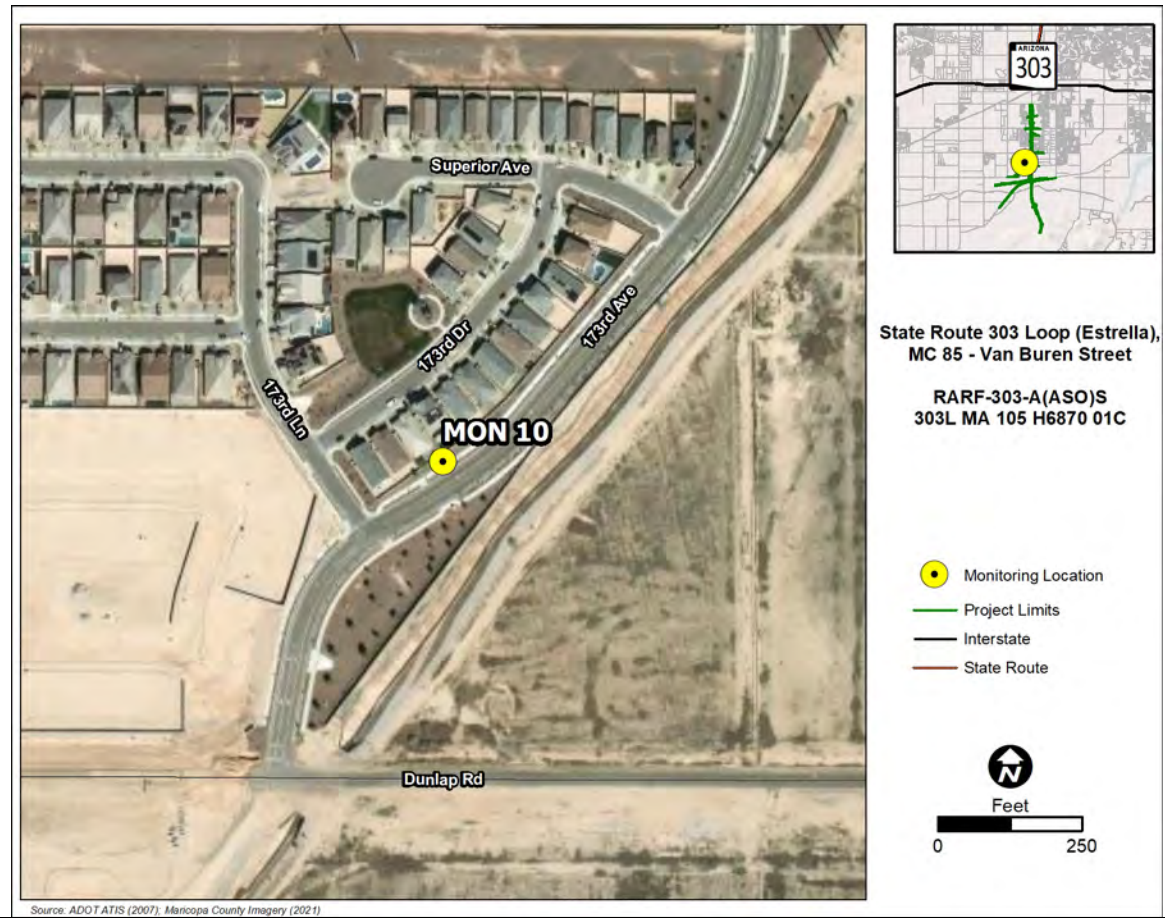
Prepared by/Crew: Homaira Parveen and David Shu

Temperature: 52 °F Relative Humidity: 50 % Wind & Direction: 15 mph/SSE Sky: Mostly Cloudy

SLM Make/Model: LDL 824 Calibration Make/Model: LDL CA 200 @ 114.26 dB

Calibration:

Posted Speed Limit (mph): 25 Observed Speed (mph): 30



Sample	Time		Sound Level, dBA			Traffic Count		
	Start	Duration	L _{MIN}	L _{EQ}	L _{MAX}	Auto	Med. Trk.	Hvy. Trk.
1	9:09 am	10 mins	46.1	54.2	64.1	---	---	---
2	9:19 am	10 mins	47.8	54.3	68.8	---	---	---
3	9:29 am	10 mins	46.7	57.0	67.2	---	---	---



Figure 1. Looking north



Figure 2. Looking west

**ROADWAY TRAFFIC
NOISE LEVEL MEASUREMENT DATA SHEET**

Project Number/Name: SR 303L: MC 85 – Van Buren Street Date: 03/01/2023

Site Number/Description: MON 11, (Lat/Long: 33.41013, -112.4357), Future residential development

Adjacent to Maricopa County Flood Control Facility, approximately 1003 feet west of the 175th Ave alignment

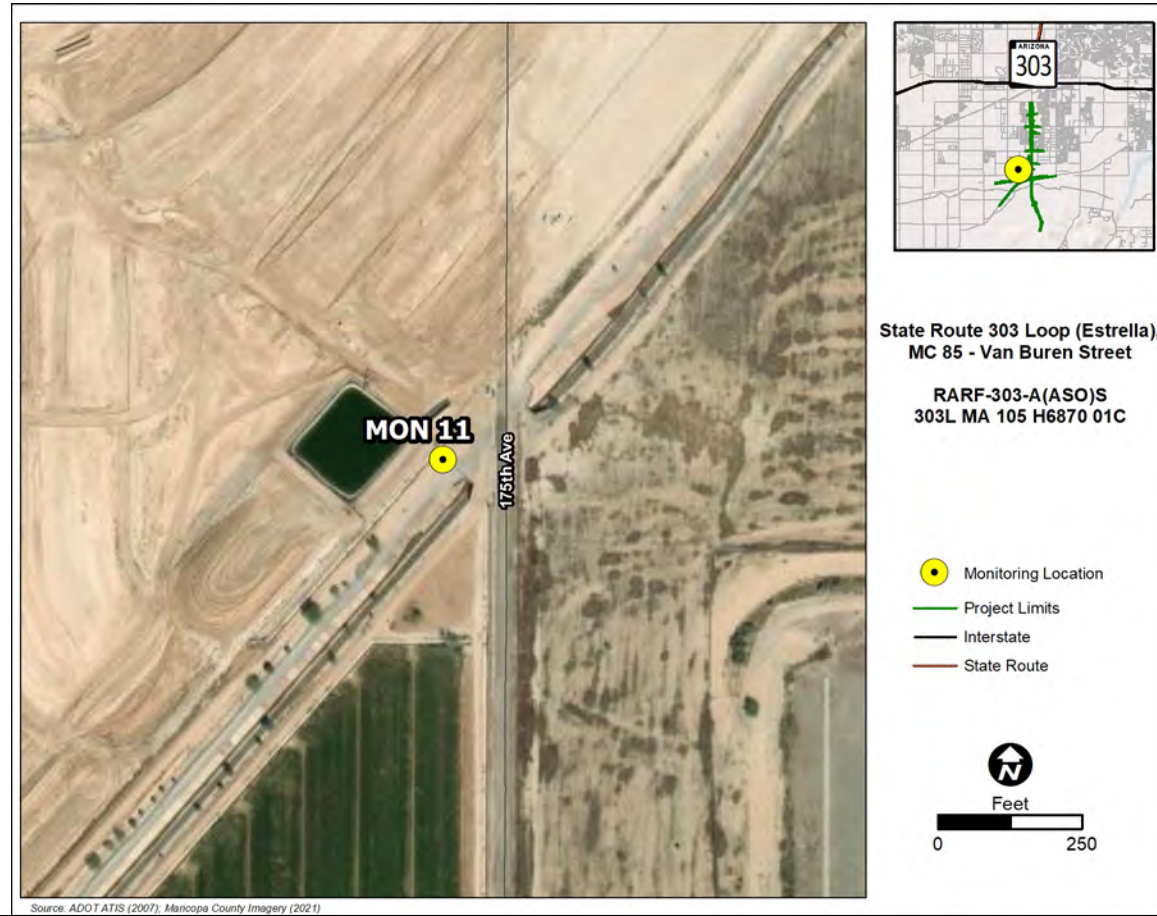
Prepared by/Crew: Homaira Parveen and David Shu

Temperature: 52 °F Relative Humidity: 45 % Wind & Direction: 10 mph/SSE Sky: Mostly Cloudy

SLM Make/Model: LDL 824 Calibration Make/Model: LDL CA 200 @ 114.26 dB

Calibration:

Posted Speed Limit (mph): n/a
Observed Speed (mph): n/a



Sample	Time		Sound Level, dBA			Traffic Count		
	Start	Duration	L _{MIN}	L _{EQ}	L _{MAX}	Auto	Med. Trk.	Hvy. Trk.
1	8:21 am	10 mins	47.1	53.7	62.5	---	---	---
2	8:31 am	10 mins	48.1	52.1	58.4	---	---	---
3	8:42 am	10 mins	47.0	51.4	62.9	---	---	---

Faint noises from nearby construction throughout all samples.



Figure 1. Looking east



Figure 2. Looking west

**ROADWAY TRAFFIC
NOISE LEVEL MEASUREMENT DATA SHEET**

Project Number/Name: SR 303L: MC 85 – Van Buren Street Date: 03/01/2023

Site Number/Description: MON 12, (Lat/Long: 33.40665, -112.445), Future residential development

Vacant lot, approximately 30 feet north of Broadway Road

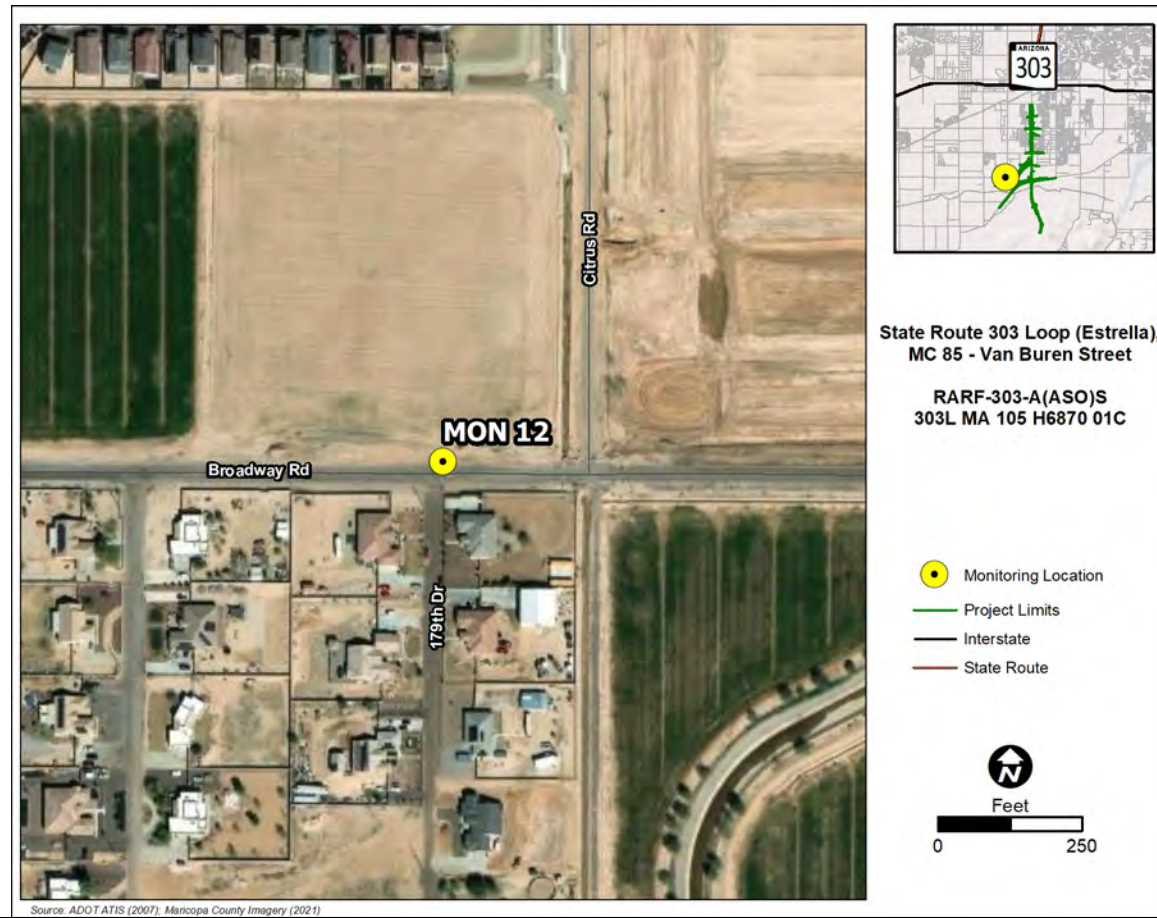
Prepared by/Crew: Homaira Parveen and David Shu

Temperature: 52 °F Relative Humidity: 45 % Wind & Direction: 7 mph/S Sky: Mostly Cloudy

SLM Make/Model: LDL 824 Calibration Make/Model: LDL CA 200 @ 114.26 dB

Calibration:

Posted Speed Limit (mph): 45 Observed Speed (mph): 15



Sample	Time		Sound Level, dBA			Traffic Count		
	Start	Duration	L _{MIN}	L _{EQ}	L _{MAX}	Auto	Med. Trk.	Hvy. Trk.
1	7:36 am	10 mins	49.3	54.7	66.2	---	---	---
2	7:47 am	10 mins	48.8	56.5	72.1	---	---	---
3	7:57 am	10 mins	47.7	53.2	67.6	---	---	---

Paused during sample 1 at approx. 1 min 28 sec mark for loud garbage truck
Loud garbage truck passing by during sample 2 at approx. 1 min 48 sec mark and 3 min 7 sec mark.



Figure 1. Looking east



Figure 2. Looking west

APPENDIX C

Predicted Noise Levels

SR303 Loop Phase 1 MC 85 to Van Buren, H6870 01D

Section 3, Yuma Road to MC 85, SB Extension

Rec ID	NAC Category	No. of Dwelling Units	Rec Description	Monitoring (dBA)	Future Build Unmitigated (dBA)	Future Build Mitigated (dBA)	Insertion Loss (dBA)	Notes
W88	B	3	Single Family Home	---	66	61	5	Noise Barriers SB6 and SB7 are recommended
W89	B	3	Single Family Home	---	67	62	5	
W90	B	2	Single Family Home	---	68	63	5	
W91	B	3	Single Family Home	---	68	63	5	
W92	B	3	Single Family Home	---	68	63	5	
W93	B	3	Single Family Home	---	69	64	5	
W94	B	2	Single Family Home	---	69	65	5	
W95	B	2	Single Family Home	---	68	64	5	
W96	B	1	Single Family Home	---	67	62	5	
W97	B	2	Single Family Home	---	66	60	6	
W98	B	2	Single Family Home	---	67	60	6	
W99	B	2	Single Family Home	---	67	59	7	
W100	B	3	Single Family Home	---	67	59	8	
W101	B	3	Single Family Home	---	67	59	8	
W102	B	3	Single Family Home	---	67	59	8	
W103	B	2	Single Family Home	---	67	59	8	
R1	B	4	Single Family Home	---	66	59	7	
R2	B	4	Single Family Home	---	67	59	7	
R3	B	4	Single Family Home	---	67	60	8	
R4	B	4	Single Family Home	---	69	61	8	
R5	B	4	Single Family Home	---	69	61	8	
R6	B	4	Single Family Home	---	71	62	9	
R7	B	4	Single Family Home	---	71	63	9	
R8	B	4	Single Family Home	---	72	63	8	
R9	B	4	Single Family Home	---	72	64	7	
R10	B	4	Single Family Home	---	72	65	7	
R11	B	4	Single Family Home	---	72	65	7	
R12	B	4	Single Family Home	---	71	64	7	
R13	B	4	Single Family Home	---	69	63	6	
R14	B	4	Single Family Home	---	69	63	6	
R15	B	4	Single Family Home	---	68	63	5	
R16	B	4	Single Family Home	---	67	63	4	
R17	B	4	Single Family Home	---	66	63	3	
R18	B	4	Single Family Home	---	64	62	2	
R19	B	4	Single Family Home	---	63	62	2	
R20	B	4	Single Family Home	---	62	61	1	
R21	B	4	Single Family Home	---	62	61	1	
R22	B	4	Single Family Home	---	63	62	1	
R23	B	4	Single Family Home	---	64	64	0	

Note:

Highlighted cells in red denote impacted receivers.

Cells highlighted in yellow denote first row receivers.

99 out of 107 (93%) impacted receivers can achieve 5 dBA or more noise reduction. Acoustic feasibility is met.

61 out of 99 (62%) first row receptors can achieve 7 dBA or more noise reduction. 7 dBA design goal is met.

SR303 Loop Phase 1 MC 85 to Van Buren, H6870 01D

Section 3, Yuma Road to MC 85, NB

Rec ID	NAC Category	No. of Dwelling Units	Rec Description	Monitoring (dBA)	Future Build Unmitigated (dBA)	Future Build Mitigated (dBA)	Insertion Loss (dBA)	Notes
E69	F	1	Psychic tiffany reader and advisor	---	72	72	0	No noise level threshold for Category F recommended
E70	B	1	Single Family Home (New Development)	---	66	---	---	Noise level is equal to Category B threshold of 66 dBA assuming 10 ft high wall for new development subdivision. Developers are responsible for providing mitigation to attenuate future noise levels in compliance with the City of Goodyear Article 9-1, "Freeway Development Overlay District" (Revised July 26, 2017).
E71	B	3	Single Family Home	---	73	65	8	Noise Barriers NB1, NB2, and NB3 are recommended
E72	B	4	Single Family Home	---	68	62	6	
E73	B	6	Single Family Home	---	67	60	7	
E74	B	6	Single Family Home	---	71	65	6	
E75	B	6	Single Family Home	---	76	66	10	
E76	B	4	Single Family Home	---	67	60	7	
E77	B	5	Single Family Home	---	70	63	7	
E78	B	6	Single Family Home	---	70	62	8	
E79	B	5	Single Family Home	---	68	61	7	
E79a	B	6	Single Family Home	---	71	63	8	
E80	B	6	Single Family Home	---	70	61	9	
E81	B	6	Single Family Home	---	70	63	7	
E82	B	6	Single Family Home	---	69	62	7	
E83	B	3	Single Family Home	---	69	61	8	
E84	B	3	Single Family Home	---	66	60	6	
E85	B	4	Single Family Home	---	65	58	7	
E86	B	3	Single Family Home (New Development)	---	67	61	6	
E87	B	3	Single Family Home (New Development)	---	67	60	7	
E88	B	3	Single Family Home (New Development)	---	65	60	5	
E88a	B	10	Single Family Home (New Development)	---	55	52	3	
E89	B	3	Single Family Home (New Development)	---	65	61	4	
E90	B	3	Single Family Home (New Development)	---	66	61	5	
E91	B	3	Single Family Home (New Development)	---	66	63	3	
E92	B	3	Single Family Home (New Development)	---	68	64	4	
E93	B	3	Single Family Home (New Development)	---	63	61	2	
E95	B	3	Single Family Home (New Development)	---	65	65	0	
E94	B	3	Single Family Home (New Development)	---	62	62	0	
E96	B	3	Single Family Home (New Development)	---	65	65	0	
E97	B	3	Single Family Home (New Development)	---	65	65	0	
E98	B	3	Single Family Home (New Development)	---	65	65	0	
E99	B	3	Single Family Home (New Development)	---	64	64	0	

SR303 Loop Phase 1 MC 85 to Van Buren, H6870 01D

Section 3, Yuma Road to MC 85, NB

Rec ID	NAC Category	No. of Dwelling Units	Rec Description	Monitoring (dBA)	Future Build Unmitigated (dBA)	Future Build Mitigated (dBA)	Insertion Loss (dBA)	Notes
E100	F	1	Industrial building	---	67	---	---	No noise level threshold for Category F
E101	F	1	Industrial building	---	65	---	---	
MON 5	---	---	Monitoring site 5	57	---	---	---	
MON 7	---	---	Monitoring site 7	58	---	---	---	
MON 9	---	---	Monitoring site 9	60	---	---	---	

Note:

Highlighted cells in red denote impacted receivers.

Cells highlighted in yellow denote first row receivers.

84 out of 91 (92%) impacted receivers can achieve 5 dBA or more noise reduction. Acoustic feasibility is met.

27 out of 45 (60%) first row receptors can achieve 7 dBA or more noise reduction. 7 dBA design goal is met.

APPENDIX D

Recommended Barrier Dimensions and Coordinates

Project Name: SR 303 Loop Phase 1 MC 85 to Van Buren Street, H6870 01D

Barrier Name: Barrier SB6

Barrier Segment	Point No.	Stationing ^[1]	Easting (X) (ft)	Northing (Y) (ft)	Bottom Elevation (Z) (ft) ^[2]	Top Elevation (Z) (ft)	Segment Length (ft)	Segment Height (ft)
1	1	1169+94.912	544,366.10	880,990.50	967.46	979.46	200	12
	2	1167+89.569	544,336.30	880,792.70	967.05	979.05		
2	2	1167+89.569	544,336.30	880,792.70	967.05	979.05	200	12
	3	1165+84.225	544,295.90	880,596.80	967.08	979.08		
3	3	1165+84.225	544,295.90	880,596.80	967.08	979.08	200	12
	4	1163+78.880	544,245.10	880,403.40	967.54	979.54		
4	4	1163+78.880	544,245.10	880,403.40	967.54	979.54	200	12
	5	1161+73.536	544,184.00	880,213.00	968.25	980.25		
5	5	1161+73.536	544,184.00	880,213.00	968.25	980.25	200	12
	6	1159+68.191	544,112.70	880,026.10	968.31	980.31		
6	6	1159+68.191	544,112.70	880,026.10	968.31	980.31	200	12
	7	1157+62.843	544,031.40	879,843.40	967.60	979.60		
7	7	1157+62.843	544,031.40	879,843.40	967.60	979.60	200	12
	8	1155+57.495	543,940.50	879,665.20	966.12	978.12		
8	8	1155+57.495	543,940.50	879,665.20	966.12	978.12	56	12
	9	1155+00.000	543,913.40	879,616.20	965.57	977.57		

Notes:

^[1] The noise barrier stationings are relative to the SR303 centerline stationings.

^[2] The noise barrier bottom elevations are relative to the SR303 centerline elevation.

^[3] The noise barrier coordinate points are for noise modeling purposes. Final designers need to refine the wall alignment to match other design features if needed.

Project Name: SR 303 Loop Phase 1 MC 85 to Van Buren Street, H6870 01D

Barrier Name: Barrier SB7

Barrier Segment	Point No.	Stationing ⁽¹⁾	Easting (X) (ft)	Northing (Y) (ft)	Bottom Elevation (Z) (ft) ⁽²⁾	Top Elevation (Z) (ft)	Segment Length (ft)	Segment Height (ft)
1	1	1155+98.780	543,904.10	879,730.00	966.48	978.48	200	12
	2	1153+91.025	543,819.80	879,548.70	964.44	976.44		
2	2	1153+91.025	543,819.80	879,548.70	964.44	976.44	200	12
	3	1151+84.048	543,724.70	879,372.80	962.29	974.29		
3	3	1151+84.048	543,724.70	879,372.80	962.29	974.29	200	12
	4	1149+77.608	543,617.70	879,203.80	960.15	972.15		
4	4	1149+77.608	543,617.70	879,203.80	960.15	972.15	200	12
	5	1147+71.418	543,497.30	879,044.10	958.00	970.00		
5	5	1147+71.418	543,497.30	879,044.10	958.00	970.00	200	12
	6	1145+69.122	543,366.70	878,892.60	955.90	967.90		
6	6	1145+69.122	543,366.70	878,892.60	955.90	967.90	200	12
	7	1143+69.122	543,234.10	878,742.90	953.83	965.83		
7	7	1143+69.122	543,234.10	878,742.90	953.83	965.83	200	12
	8	1141+69.122	543,101.40	878,593.20	951.75	963.75		
8	8	1141+69.122	543,101.40	878,593.20	951.75	963.75	200	12
	9	1139+69.122	542,968.80	878,443.50	949.21	961.21		
9	9	1139+69.122	542,968.80	878,443.50	949.21	961.21	200	12
	10	1137+69.141	542,838.20	878,292.00	945.94	957.94		
10	10	1137+69.141	542,838.20	878,292.00	945.94	957.94	200	12
	11	1135+69.165	542,707.90	878,140.30	941.95	953.95		
11	11	1135+69.165	542,707.90	878,140.30	941.95	953.95	200	12
	12	1133+69.188	542,577.60	877,988.60	937.22	949.22		
12	12	1133+69.188	542,577.60	877,988.60	937.22	949.22	200	12
	13	1131+69.212	542,447.30	877,836.90	932.22	944.22		
13	13	1131+69.212	542,447.30	877,836.90	932.22	944.22	200	12
	14	1129+69.212	542,314.60	877,687.20	927.22	939.22		
14	14	1129+69.212	542,314.60	877,687.20	927.22	939.22	200	12
	15	1127+69.212	542,182.00	877,537.50	922.57	934.57		
15	15	1127+69.212	542,182.00	877,537.50	922.57	934.57	200	10
	16	1125+69.212	542,049.40	877,387.80	919.50	929.50		
16	16	1125+69.212	542,049.40	877,387.80	919.50	929.50	200	10
	17	1123+69.212	541,916.70	877,238.10	918.13	928.13		
17	17	1123+69.212	541,916.70	877,238.10	918.13	928.13	200	10
	18	1121+69.212	541,784.10	877,088.40	918.46	928.46		
18	18	1121+69.212	541,784.10	877,088.40	918.46	928.46	200	10
	19	1119+69.212	541,651.50	876,938.70	920.15	930.15		
19	19	1119+69.212	541,651.50	876,938.70	920.15	930.15	200	10
	20	1117+69.212	541,518.80	876,789.00	921.95	931.95		
20	20	1117+69.212	541,518.80	876,789.00	921.95	931.95	200	10
	21	1115+69.212	541,386.20	876,639.30	923.75	933.75		
21	21	1115+69.212	541,386.20	876,639.30	923.75	933.75	200	10
	22	1113+69.212	541,253.50	876,489.60	925.55	935.55		
22	22	1113+69.212	541,253.50	876,489.60	925.55	935.55	200	10
	23	1111+69.212	541,120.90	876,339.90	927.32	937.32		
23	23	1111+69.212	541,120.90	876,339.90	927.32	937.32	200	10
	24	1109+69.212	540,988.30	876,190.30	928.88	938.88		
24	24	1109+69.212	540,988.30	876,190.30	928.88	938.88	200	10
	25	1107+69.212	540,855.60	876,040.60	930.19	940.19		
25	25	1107+69.212	540,855.60	876,040.60	930.19	940.19	200	10
	26	1105+69.212	540,723.00	875,890.90	931.25	941.25		
26	26	1105+69.212	540,723.00	875,890.90	931.25	941.25	200	10
	27	1103+69.212	540,590.40	875,741.20	932.08	942.08		
27	27	1103+69.212	540,590.40	875,741.20	932.08	942.08	169	10
	28	1102+00.000	540,478.10	875,614.50	932.76	942.76		

Notes:

⁽¹⁾ The noise barrier stationings are relative to the SR303 centerline stationings.

⁽²⁾ The noise barrier bottom elevations are relative to the SR303 centerline elevation.

⁽³⁾ The noise barrier coordinate points are for noise modeling purposes. Final designers need to refine the wall alignment to match other design features if needed.

Project Name: SR 303 Loop Phase 1 MC 85 to Van Buren Street, H6870 01D

Barrier Name: Barrier NB2

Barrier Segment	Point No.	Stationing ⁽¹⁾	Easting (X) (ft)	Northing (Y) (ft)	Bottom Elevation (Z) (ft) ⁽²⁾	Top Elevation (Z) (ft)	Segment Length (ft)	Segment Height (ft)
1	1	1214+34.655	544,698.30	885,416.20	959.06	971.06	150	12
	2	1212+86.079	544,680.50	885,267.70	959.80	971.80		
2	2	1212+86.079	544,680.50	885,267.70	959.80	971.80	200	12
	3	1210+87.103	544,660.10	885,068.80	960.25	972.25		
3	3	1210+87.103	544,660.10	885,068.80	960.25	972.25	200	12
	4	1208+87.645	544,644.20	884,869.40	958.82	970.82		
4	4	1208+87.645	544,644.20	884,869.40	958.82	970.82	200	12
	5	1206+87.904	544,633.00	884,669.70	957.98	969.98		
5	5	1206+87.904	544,633.00	884,669.70	957.98	969.98	200	12
	6	1204+88.083	544,627.20	884,469.90	956.63	968.63		
6	6	1204+88.083	544,627.20	884,469.90	956.63	968.63	200	12
	7	1202+88.082	544,626.40	884,269.90	956.36	968.36		
7	7	1202+88.082	544,626.40	884,269.90	956.36	968.36	200	12
	8	1200+88.081	544,625.70	884,069.90	955.35	967.35		
8	8	1200+88.081	544,625.70	884,069.90	955.35	967.35	200	12
	9	1198+88.079	544,624.90	883,869.90	954.38	966.38		
9	9	1198+88.079	544,624.90	883,869.90	954.38	966.38	200	12
	10	1196+88.078	544,624.20	883,669.90	953.39	965.39		
10	10	1196+88.078	544,624.20	883,669.90	953.39	965.39	200	12
	11	1194+88.076	544,623.40	883,469.90	952.42	964.42		
11	11	1194+88.076	544,623.40	883,469.90	952.42	964.42	200	12
	12	1192+88.075	544,622.70	883,269.90	951.43	963.43		
12	12	1192+88.075	544,622.70	883,269.90	951.43	963.43	200	12
	13	1190+88.073	544,621.90	883,069.90	950.61	962.61		
13	13	1190+88.073	544,621.90	883,069.90	950.61	962.61	200	12
	14	1188+88.072	544,621.20	882,869.90	950.65	962.65		
14	14	1188+88.072	544,621.20	882,869.90	950.65	962.65	200	12
	15	1186+88.071	544,620.40	882,669.90	951.35	963.35		
15	15	1186+88.071	544,620.40	882,669.90	951.35	963.35	215	12
	16	1184+73.069	544,619.70	882,454.90	953.15	965.15		
16	16	1184+73.069	544,619.70	882,454.90	953.15	965.15	200	12
	17	1182+73.068	544,619.00	882,254.90	957.07	969.07		
17	17	1182+73.068	544,619.00	882,254.90	957.07	969.07	200	12
	18	1180+73.067	544,618.20	882,054.90	960.70	972.70		
18	18	1180+73.067	544,618.20	882,054.90	960.70	972.70	200	12
	19	1178+73.065	544,617.50	881,854.90	963.47	975.47		
19	19	1178+73.065	544,617.50	881,854.90	963.47	975.47	200	12
	20	1176+73.064	544,616.70	881,654.90	966.56	978.56		
20	20	1176+73.064	544,616.70	881,654.90	966.56	978.56	200	12
	21	1174+73.063	544,616.00	881,454.90	970.65	982.65		
21	21	1174+73.063	544,616.00	881,454.90	970.65	982.65	200	12
	22	1172+78.644	544,615.20	881,254.90	971.39	983.39		
22	22	1172+78.644	544,615.20	881,254.90	971.39	983.39	195	12
	23	1170+90.283	544,614.50	881,059.50	971.46	983.46		

Notes:

⁽¹⁾ The noise barrier stationings are relative to the SR303 centerline stationings.

⁽²⁾ The noise barrier bottom elevations are derived from proposed DTM.

⁽³⁾ The noise barrier coordinate points are for noise modeling purposes. Final designers need to refine the wall alignment to match other design features if needed.

Project Name: SR 303 Loop Phase 1 MC 85 to Van Buren Street, H6870 01D

Barrier Name: Barrier NB3

Barrier Segment	Point No.	Stationing ^[1]	Easting (X) (ft)	Northing (Y) (ft)	Bottom Elevation (Z) (ft) ^[2]	Top Elevation (Z) (ft)	Segment Length (ft)	Segment Height (ft)
1	1	1170+90.283	544,614.50	881,059.50	971.46	983.46	200	12
	2	1168+98.596	544,608.20	880,859.60	970.64	982.64		
2	2	1168+98.596	544,608.20	880,859.60	970.64	982.64	200	12
	3	1167+07.374	544,587.90	880,660.60	966.33	978.33		
3	3	1167+07.374	544,587.90	880,660.60	966.33	978.33	200	12
	4	1165+16.339	544,551.30	880,464.00	958.80	970.80		
4	4	1165+16.339	544,551.30	880,464.00	958.80	970.80	200	12
	5	1163+25.449	544,500.50	880,270.60	950.85	962.85		
5	5	1163+25.449	544,500.50	880,270.60	950.85	962.85	200	12
	6	1161+34.862	544,443.20	880,078.90	942.85	954.85		
6	6	1161+34.862	544,443.20	880,078.90	942.85	954.85	100	12
	7	1160+40.096	544,416.50	879,982.60	938.94	950.94		
7	7	1160+40.096	544,416.50	879,982.60	938.94	950.94	100	12
	8	1159+47.190	544,398.20	879,884.30	935.85	947.85		
8	8	1159+47.190	544,398.20	879,884.30	935.85	947.85	13	12
	9	1159+35.785	544,396.50	879,871.90	935.52	947.52		

Notes:

^[1] The noise barrier stationings are relative to the SR303 centerline stationings.

^[2] The noise barrier bottom elevations are relative to the ramp centerline elevation.

^[3] The noise barrier coordinate points are for noise modeling purposes. Final designers need to refine the wall alignment to match other design features if needed.

APPENDIX E

**FHWA Traffic Noise Model (TNM) 2.5 Output Tables
(TNM Model to EP)**