



Final Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation

Appendix E8, Technical Memorandum: I-11 Noise Report Addendum

July 2021



Federal Aid No. 999-M(161)S
ADOT Project No. 999 SW 0 M5180 01P



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Memorandum

Date: September 30, 2020

To: Jay Van Echo, ADOT Project Manager
Ivan Racic, ADOT Environmental Planning Noise Specialist

From: Angie Newton, Newton Environmental Consulting (NEC)

Subject: **Technical Memorandum: I-11 Noise Report Addendum**

Attachments: Attachment 1. Figures
Attachment 2. Final Tier 1 EIS Traffic Data
Attachment 3. TNM 2.5 Noise Level Output Tables

1

2 The purpose of this addendum is to provide supplemental detail to Final Tier 1 EIS Section 3.8
3 (Noise) and is prepared as an addendum to Draft Tier 1 EIS Appendix E8.

4 **1 UPDATED TRAFFIC VOLUMES**

5 The TNM 2.5 model runs used to calculate 2040 noise levels at set distances from the right-of-
6 way were revised with updated traffic volumes from the AZTDM. Traffic volumes were provided
7 by Michael Gorton of HDR. Vehicle fleet mixes assigned to the traffic volumes in the model were
8 developed in consultation with Michael Gorton, and they are generally consistent with the travel
9 demand model and with what was used in the Draft Tier 1 EIS. Updated traffic volumes,
10 including vehicle fleet mix for each roadway link, are provided in Attachment 1.

11 **2 ADDITIONAL NOISE RECEIVERS ALONG** 12 **RECOMMENDED AND PREFERRED ALTERNATIVES**

13 The Draft Tier 1 EIS presented information on the Purple, Green, and Orange Alternatives. The
14 detailed analysis in Draft Tier 1 EIS Appendix E8 covered over 1,000 modeled receptors for
15 each noise-sensitive land use within the analysis area. Additional receivers were identified and
16 mapped new analysis areas along the Recommended and Preferred Alternatives that were not
17 covered by the Purple, Green, and Orange Analysis Area or documented in Draft Tier 1 EIS
18 Appendix E8, including the following areas:

- 19 • CAP design option, receptors identified prior to publication of the Draft Tier 1 EIS but not
20 documented in Draft Tier 1 EIS Appendix E8
- 21 • Anamax Park shift
- 22 • Realignment of Option F

23 The additional noise-sensitive receivers and vacant lands are included in Table 1. Locations of
24 these receivers are shown in Attachment 2. Representative noise levels are provided for each
25 new receptor based on modeled noise levels of receptors in the same general area.



Table 1. Additional Noise Sensitive Receivers

New ID ^a	Point ^a	Location	County	NAC Category	Area (acres)	Description	Representative Noise Receptor ^b	Predicted 2040 Noise Level (dBA)
1-D	1a	Green Valley	Pima	B	153	Multiple Homes Area	R_D1	64
5.0 DCAP	–	Tucson	Pima	B	143	Multiple Homes Area	R_D5	64
5.1 DCAP	–	Tucson	Pima	B	72.5	Multiple Homes Area	R_D5	64
5.2 DCAP	–	Tucson	Pima	B	540	Multiple Homes Area	R_D5	64
5.3 DCAP	–	Tucson	Pima	B	1.36	Multiple Homes Area	R_D6	58
1-F	1a	Eloy	Pinal	B	21.2	Home and Pecan Farm	R_F1	81
Vacant Lands								
New ID	Location	County	NAC Category	Description				
221DPIMA	Green Valley	Pima	G	Vacant Land – Rural Homestead				
206bFPINAL	Marana	Pinal	G	Vacant Land – Rural Residential				
206cFPINAL	Marana	Pinal	G	Industrial – Red Rock Feeding Company				
206dFPINAL	Marana	Pinal	G	Park Link Connector – Vacant Land – Rural Residential				
117bLMARICOPA	Maricopa	Maricopa	G	Rural Zoning District – Acre per Dwelling Unit				
202aXMARICOPA	Wickenburg	Maricopa	G	Rural Zoning District – Acre per Dwelling Unit				

NOTE: Bolded values are equal to or greater than ADOT NAR noise impact threshold of 66 dBA.

^a Unique identification names assigned to each modeled receiver in TNM 2.5.

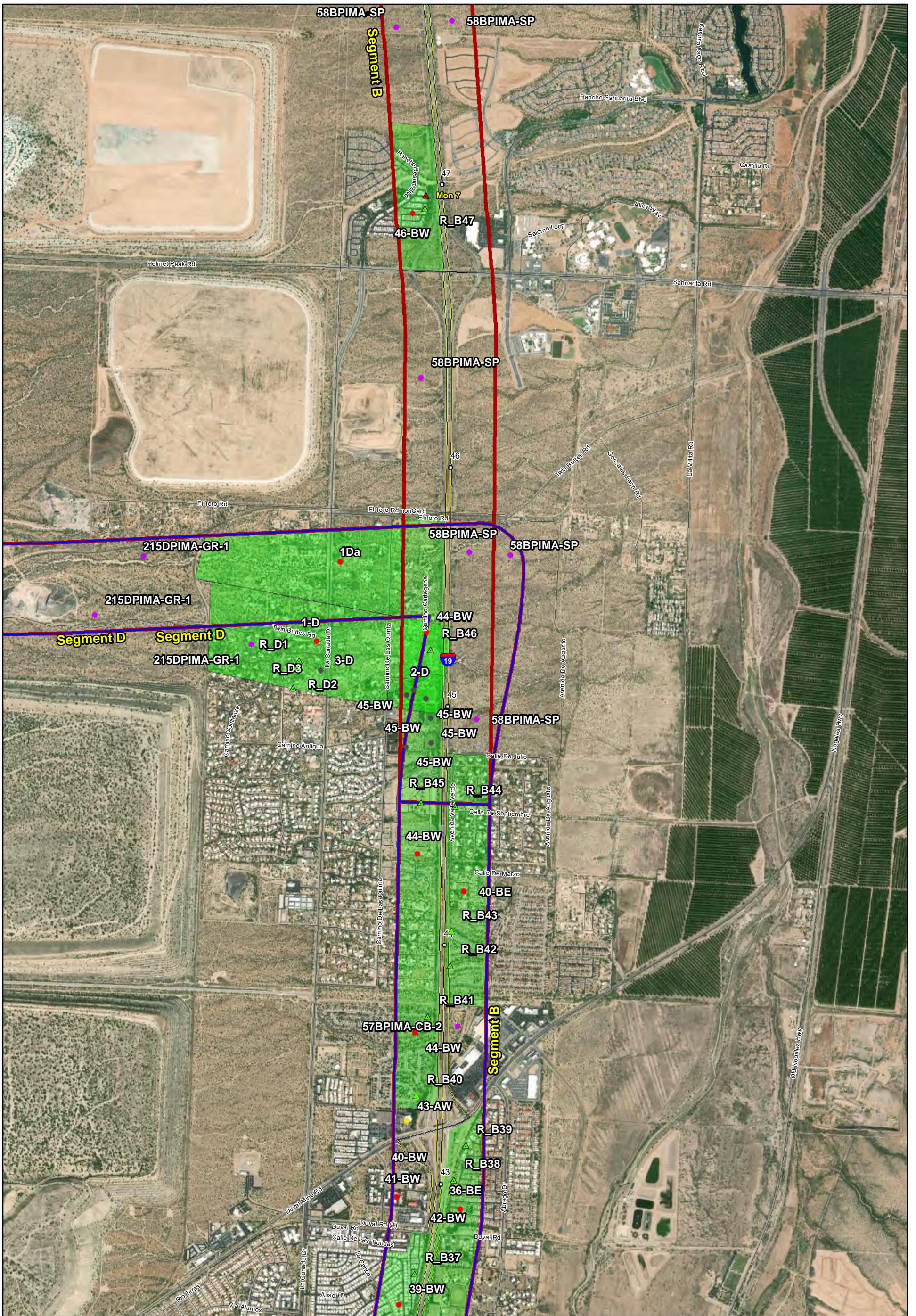
^b More details on each representative noise receptors can be found in Draft Tier 1 EIS Appendix E8.



Attachment 1. Figures



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LEGEND

- Recommended Alternative Study Area
- Preferred Alternative Study Area
- Mileposts
- Category B
- Category C
- Category D
- Category E
- Category G
- ▲ Monitoring Site
- ▲ Noise Receiver

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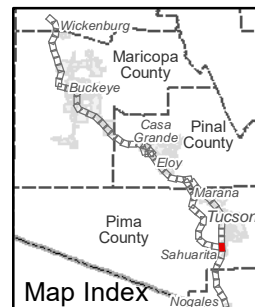
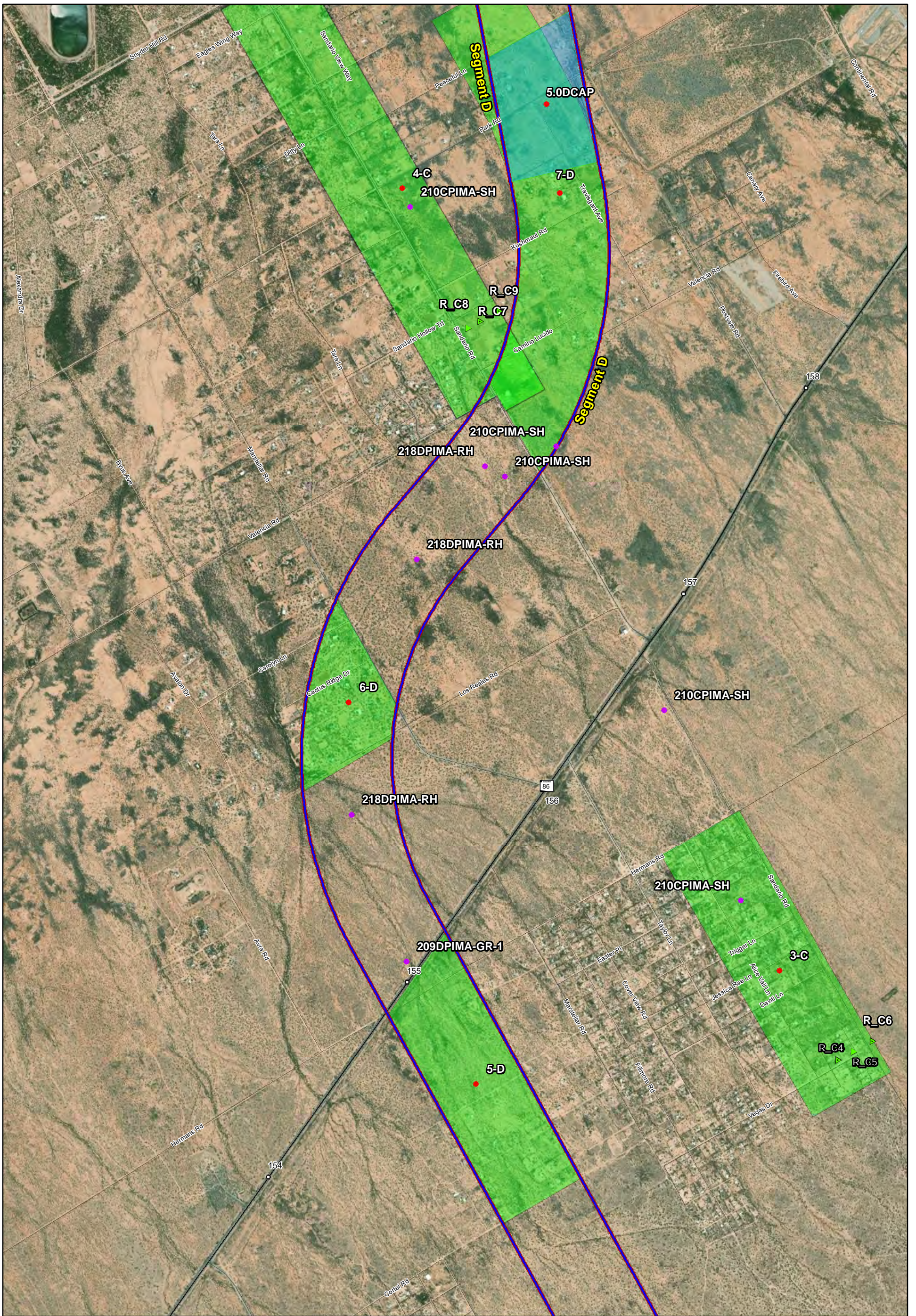












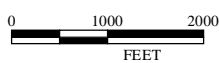
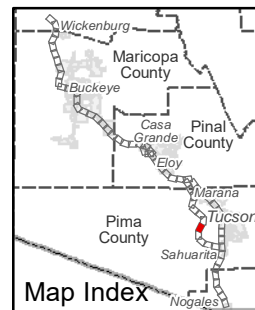
Figure E8-1
I-11 Corridor Project
Preferred and Recommended Alternatives



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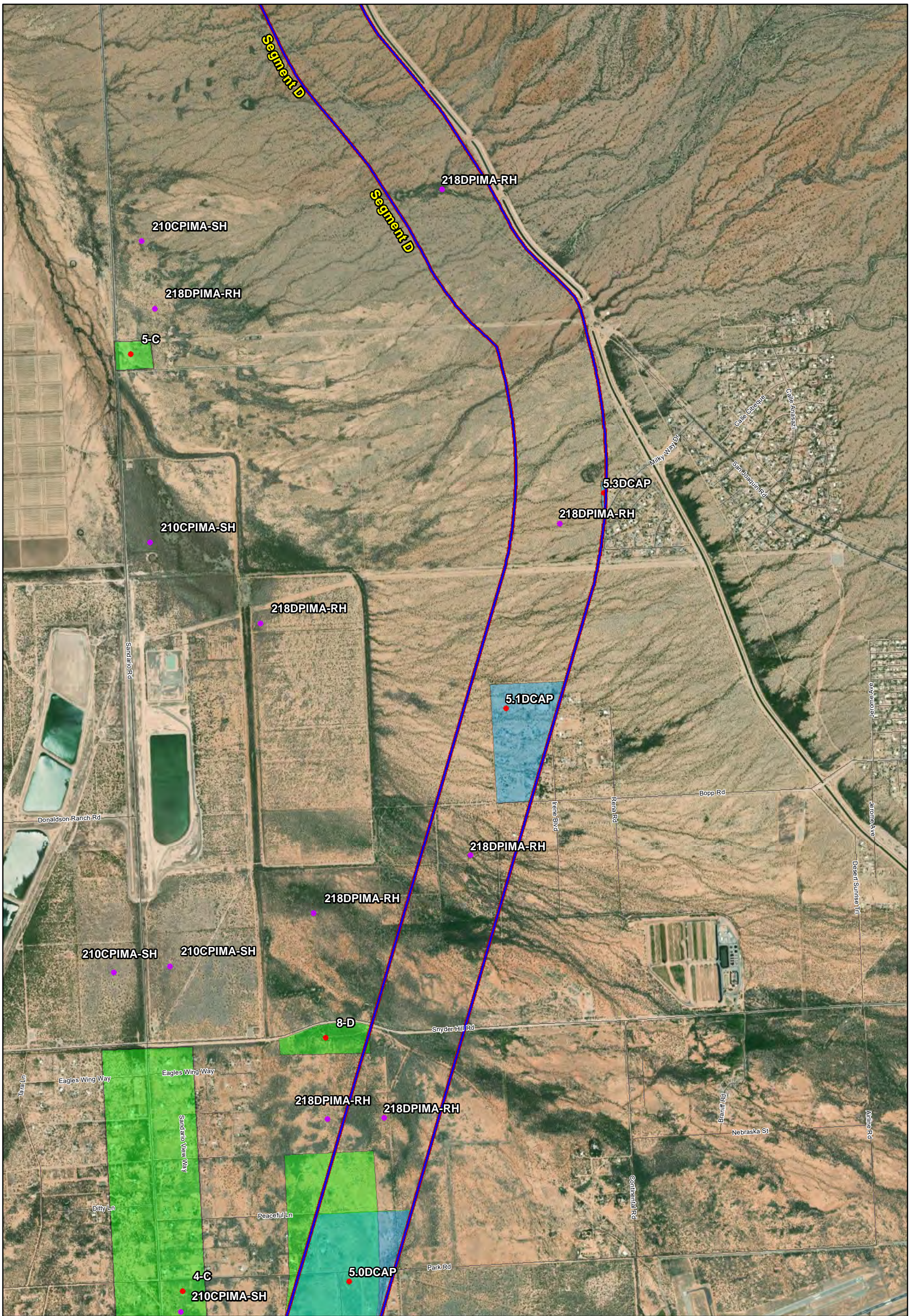
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|---|------------------------------------|---|-----------------|
|  | Recommended Alternative Study Area |  | Category D |
|  | Preferred Alternative Study Area |  | Category E |
|  | Mileposts |  | Category G |
|  | Category B |  | Monitoring Site |
|  | Category C |  | Noise Receiver |

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











Revised: 3/16/2020
SOURCE: ADOT ATIS; AECOM (2020); World Imagery (2020)

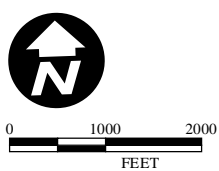
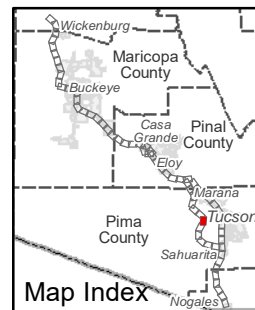
Figure E8-2
I-11 Corridor Project
Preferred and Recommended Alternatives



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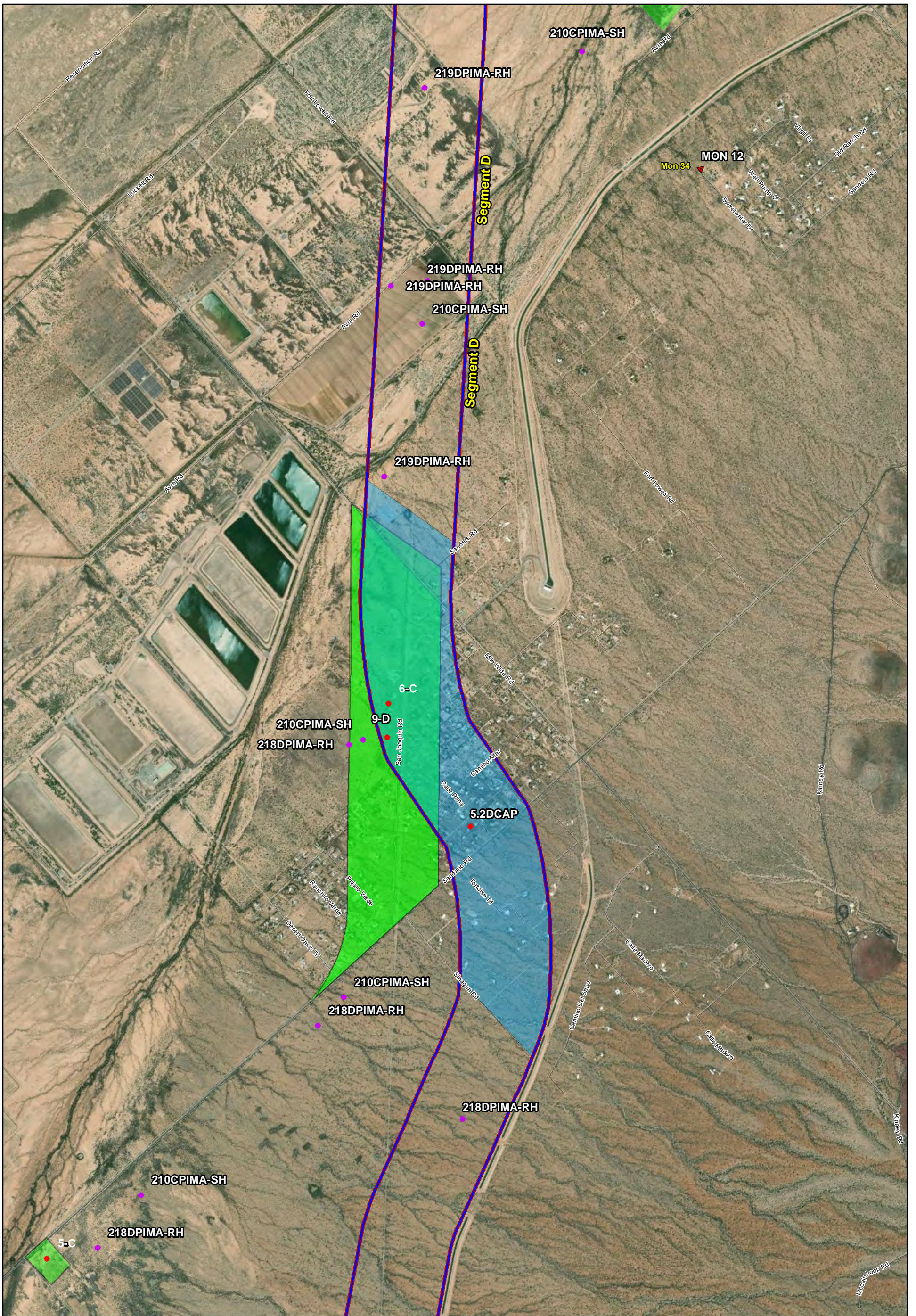
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|  | Recommended Alternative Study Area |  | Category D |
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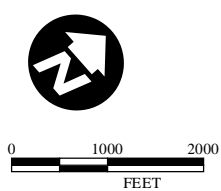
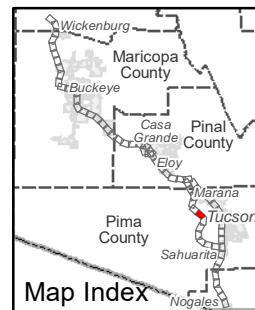
Figure E8-3
I-11 Corridor Project
Preferred and Recommended Alternatives



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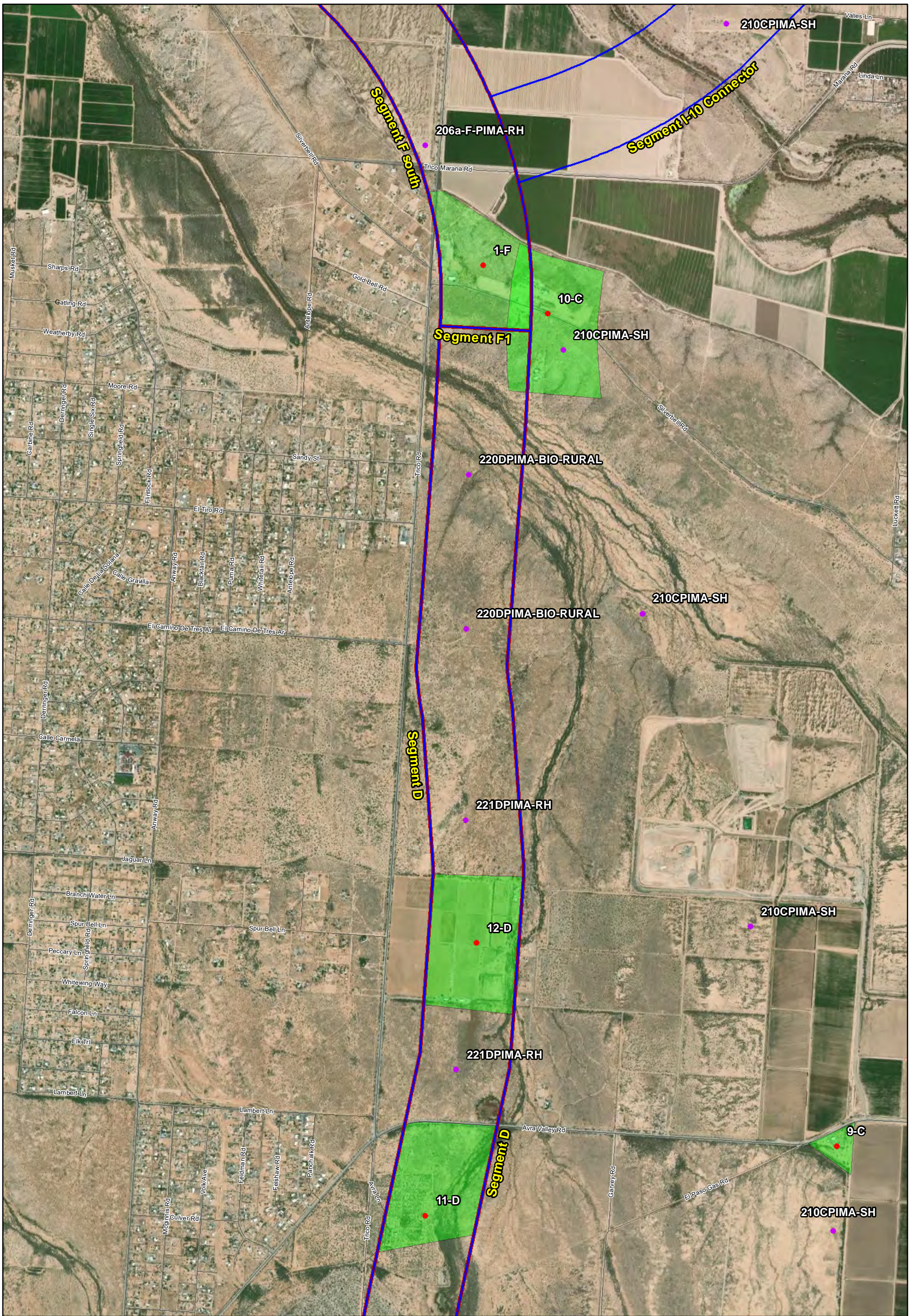
- Recommended Alternative Study Area
- Preferred Alternative Study Area
- Mileposts
- Category B
- Category C
- Category D
- Category E
- Category G
- ▲ Monitoring Site
- ▲ Noise Receiver

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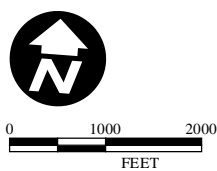
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Figure E8-4
I-11 Corridor Project
Preferred and Recommended Alternatives



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- Recommended Alternative Study Area
- Preferred Alternative Study Area
- Mileposts
- Category B
- Category C
- Category D
- Category E
- Category G
- ▲ Monitoring Site
- ▲ Noise Receiver



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SOURCE: ADOT ATIS; AECOM (2020); World Imagery (2020)

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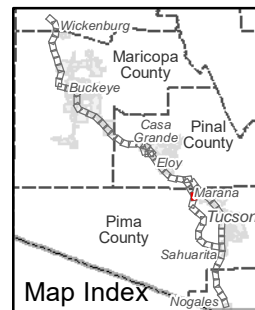
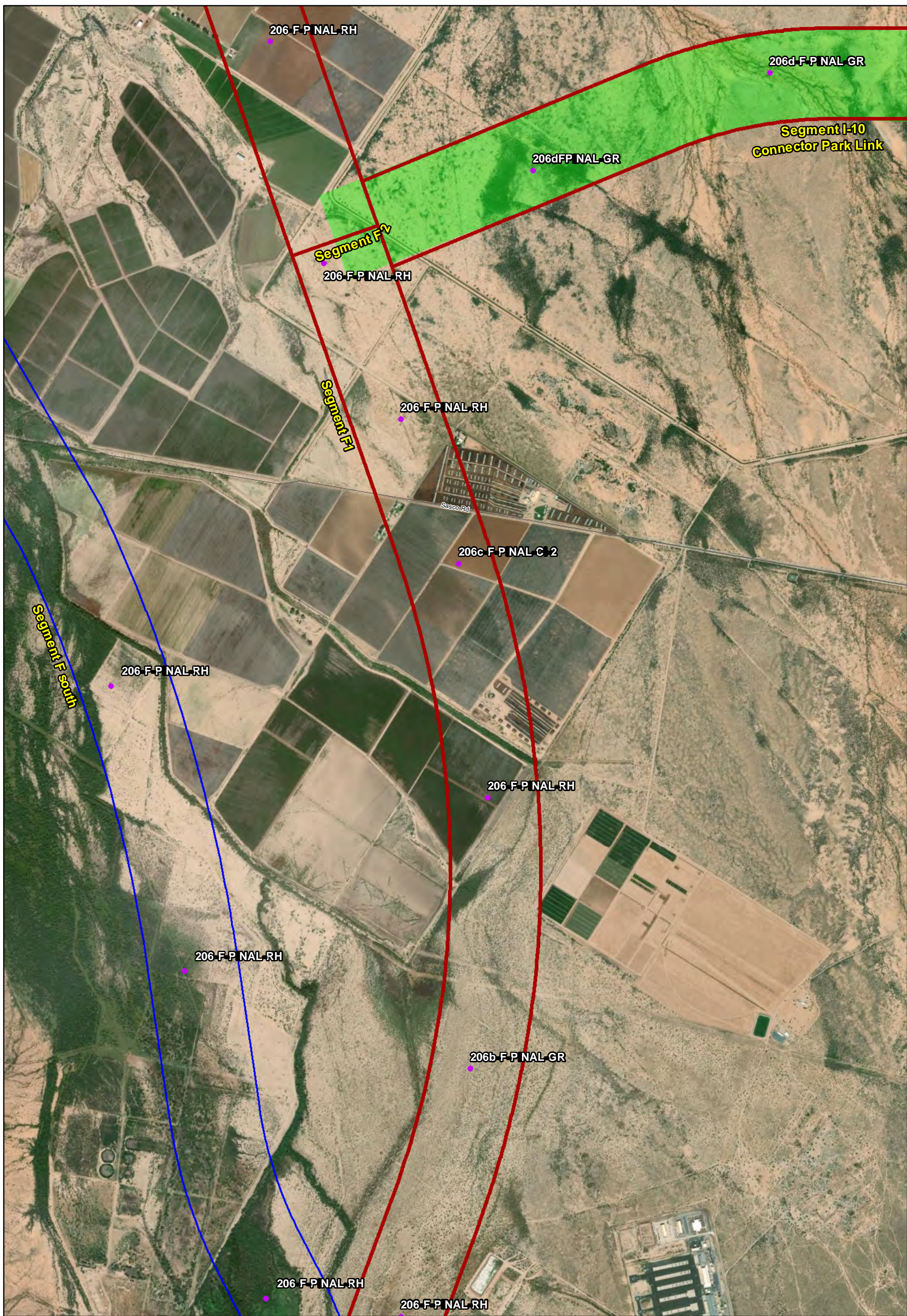












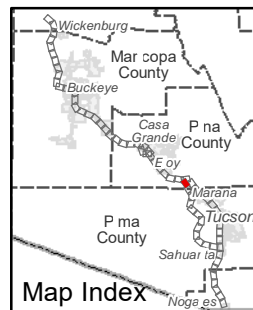
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I-11 Corridor Project
Preferred and Recommended Alternatives



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|  | Mileposts |  | Category G |
|  | Category B |  | Monitoring Site |
|  | Category C |  | Noise Receiver |

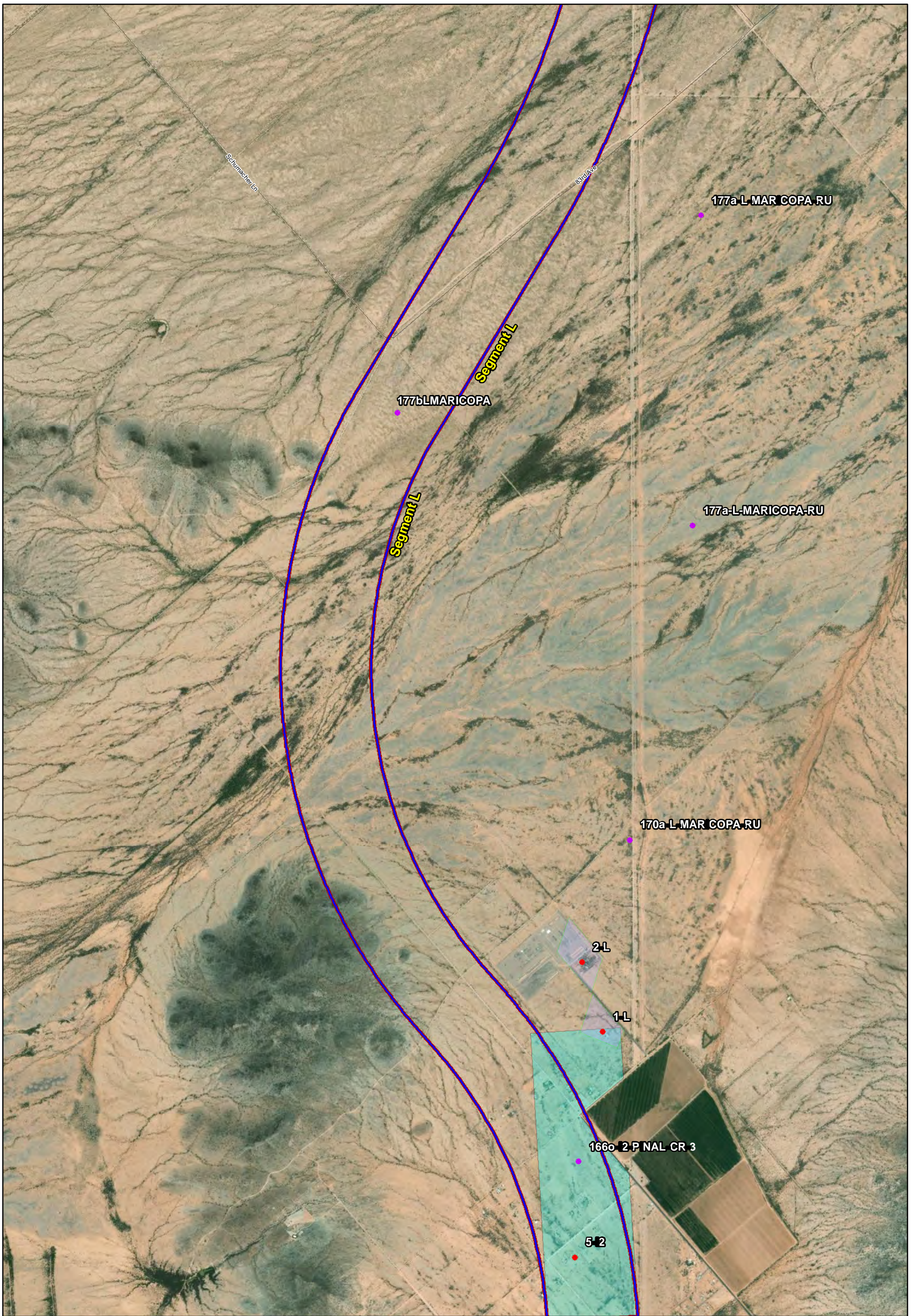
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









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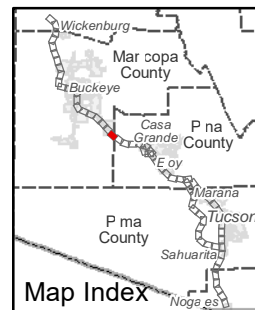
Figure E8- 6
I-11 Corridor Project
Preferred and Recommended Alternatives



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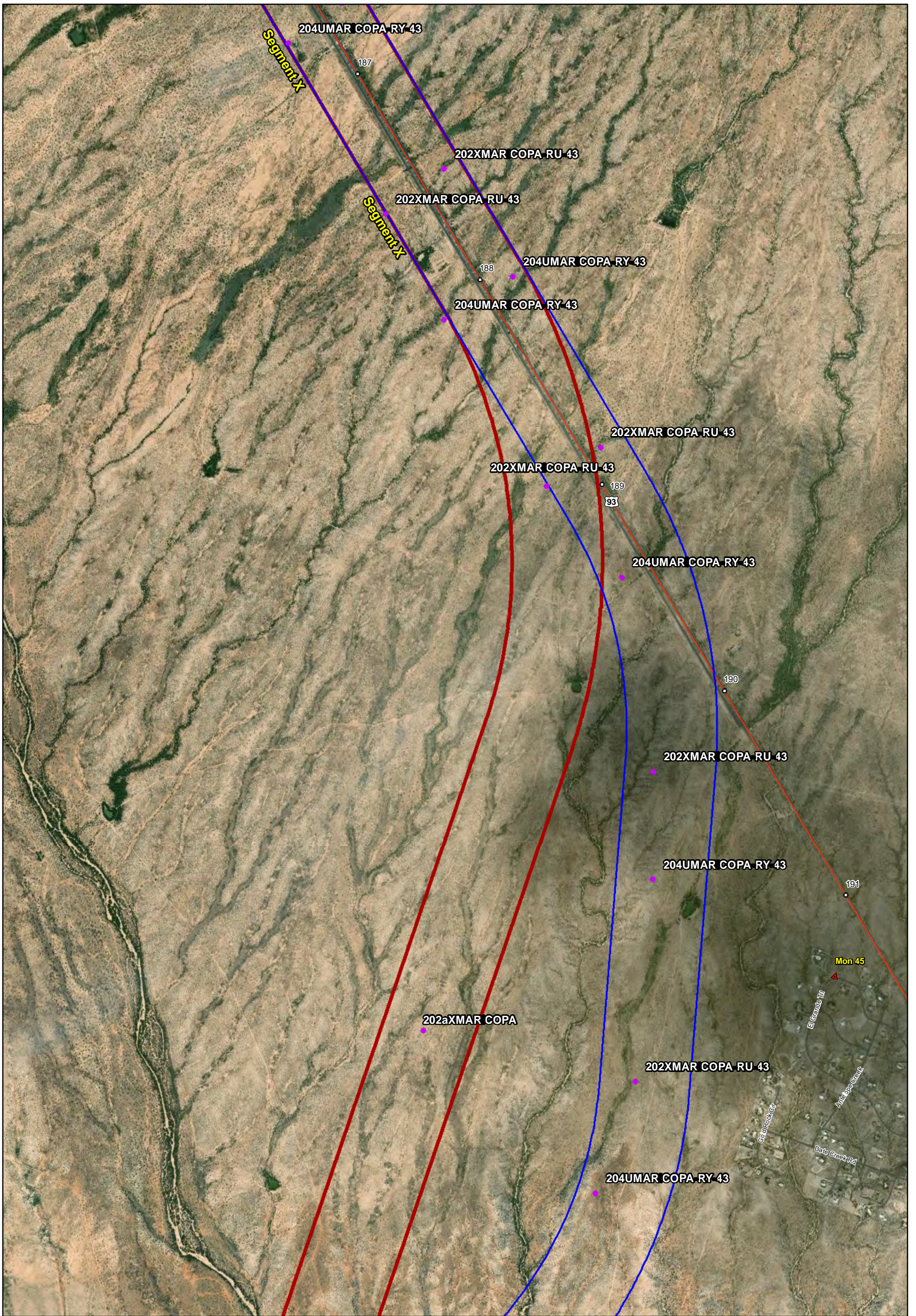
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









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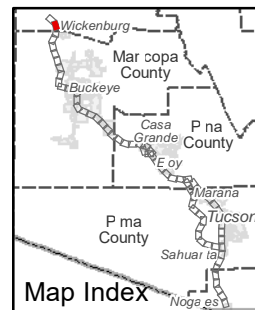
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I-11 Corridor Project
Preferred and Recommended Alternatives



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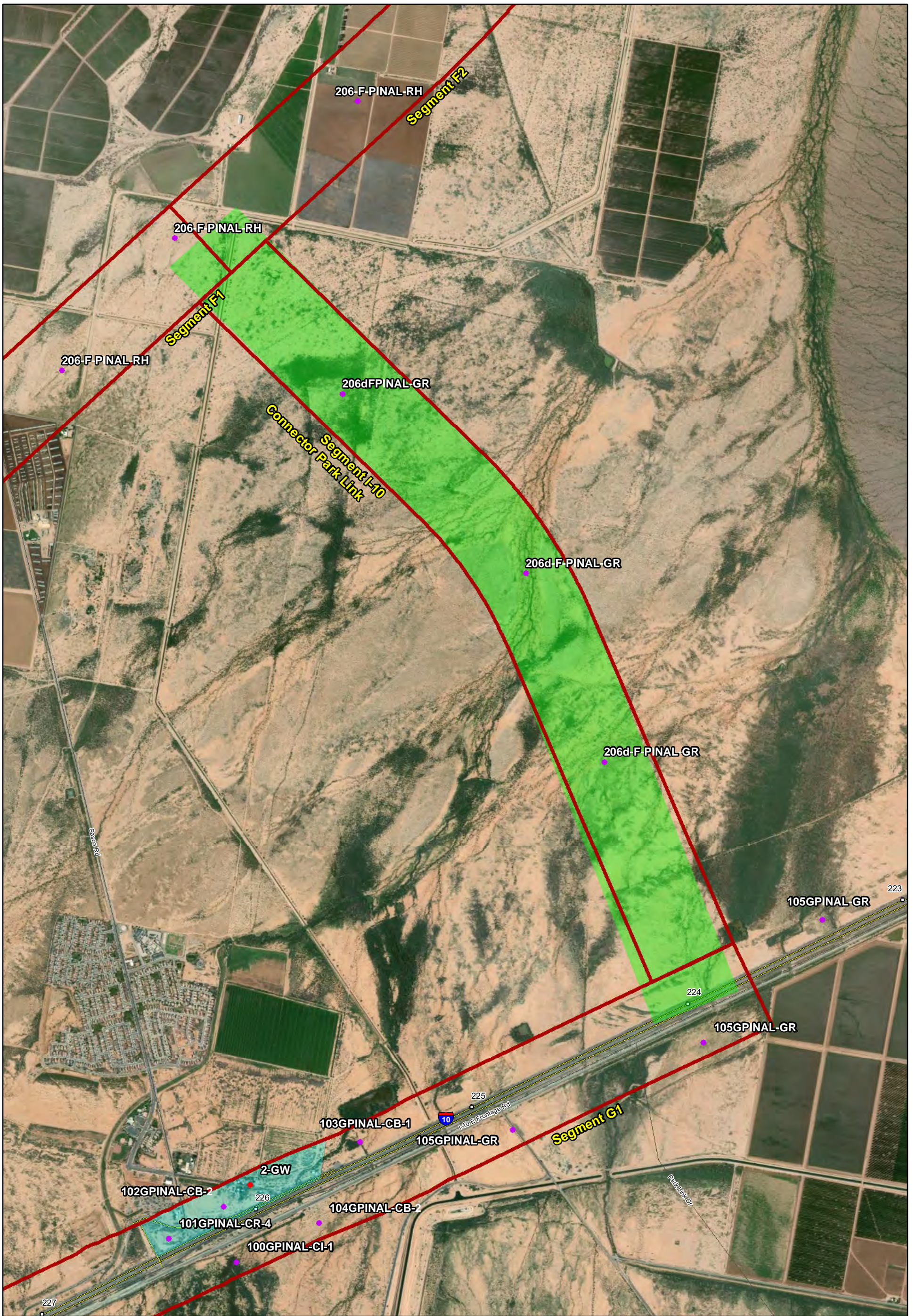
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Figure E8- 0
I-11 Corridor Project
Preferred and Recommended Alternatives



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|  | Recommended Alternative Study Area |  | Category D |
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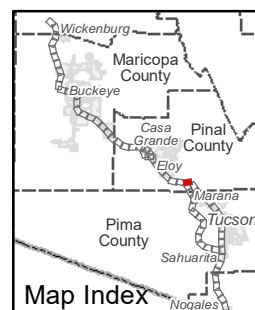


Figure E8-9
I-11 Corridor Project
Preferred and Recommended Alternatives



Attachment 2. Final Tier 1 EIS Traffic Data



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Option	Total ROW Length/ Directional (150, 200, 250)	Range of Predicted 2040 Noise Levels (dBA)					# Directional Lanes/Roadway Width (ft)	DEIS Original Volumes	FEIS Volumes	Traffic Volume							Speed (mph)			
		Distance From Right-Of-Way								FEIS Directional Volumes	Peak Hour Directional Vehicles	Peak Hour Autos	% Autos	Peak Hour Med Trucks	% Medium	Peak Hour Heavy Trucks	% Heavy	Autos	Med Trucks	Heavy Trucks
		50'	100'	250'	500'	1000'														
A No Build	300/150	70	68	63	58	52	2/24'	51,400	41,600	20800	2080	1,548	74.43%	173	8.31%	359	17.26%	80	80	75
B I-19 No Build	300/150	73	71	66	61	55	3/36'	135,400	112,900	56450	5645	4,881	86.47%	207	3.67%	557	9.86%	70	70	65
B J-10 No Build	400/200	76	74	70	65	59	4/48'	254,300	228,100	114050	11405	9,072	79.54%	546	4.79%	1,787	15.67%	70	70	65
G No Build	400/200	72	70	66	61	55	3/36'	85,900	80,100	40050	4005	3,017	75.33%	275	6.87%	713	17.80%	80	80	75
H No Build	300/150	69	67	63	58	52	2/24'	21,800	21,600	10800	1080	620	57.42%	101	9.35%	359	33.23%	80	80	75
K No Build	300/150	70	68	63	58	52	2/24'	14,300	25,100	12550	1255	721	57.42%	117	9.35%	417	33.23%	80	80	75
Q1 No Build	300/150	65	62	57	52	46	2/24'	17,400	17,300	8650	865	775	89.57%	25	2.88%	65	7.55%	80	80	75
Q2 No Build (Green)	300/150	72	70	65	60	54	2/24'	60,900	59,700	29850	2985	2,309	77.34%	136	4.54%	541	18.11%	80	80	75
Q3 No Build	300/150	73	71	66	61	55	2/24'	83,700	90,100	45050	4505	3,597	79.84%	210	4.67%	698	15.49%	80	80	75

ROW	300	TNM 300	400	TNM 400	500	TNM 500
	150		200		250	
Rec 1 (50')	200	700	250	750	300	800
Rec 2 (100')	250	750	300	800	350	850
Rec 3 (250')	400	900	450	950	500	1000
Rec 4 (500')	650	1150	700	1200	750	1250
Rec 5 (1000')	1150	1650	1200	1700	1250	1750

I-11 (Purple Alternative) 2040 Traffic Volumes													
I-11 Alternative Option	From	To	Speed	GP Lanes	Total Vehicles	Total Diirectional Vehicles	Peak Hour Directional Vehicles	Total Autos	% Auto	Total Medium Truck	% Medium Truck	Total Heavy Truck	% Heavy Truck
I-19 Santa Cruz County													
A	Mariposa Rd	Arivaca Rd	75	4	48600	24300	2430	1809	74%	202	8%	419	17%
C (New Road) Pima County													
C	Arivaca Rd	Pinal County Line	75	8				498	54%	119	13%	300	33%
G (New Road & I-8) Pinal County													
G	Pinal County Line	Montgomery Rd	75	6				4046	75%	369	7%	956	18%
I (New Road) Pinal County													
I1	I-8	Indian Valley Rd	75	4				903	48%	204	11%	780	41%
I2	Indian Valley Rd	Maricopa County Line	75	4				368	29%	176	14%	742	58%
L (New Road) Maricopa County													
L	Maricopa County Line	Bulard Ave	75	4				400	45%	102	11%	394	44%
N (New Road) Maricopa County													
N	Komatke Rd	SR 85	75	4				2175	67%	211	7%	844	26%
R (New Road) Maricopa County													
R	SR 85	I-10	75	4				1427	60%	177	7%	780	33%
X (New Road) Maricopa County													
X	I-10	US 60	75	4				540	89%	11	2%	54	9%

Purple A, C, G, I1, I2, L, N, R, X

Truck Percentage Calculations

Preferred						
Segment	Autos	Auto %	Medium	Medium %	Heavy	Heavy %
A	13264	74.43%	1481	8.31%	3076	17.26%

I-11 (Green Alternative) 2040 Traffic Volumes													
I-11 Alternative Option	From	To	Speed	GP Lanes	Total Vehicles	Total Directional Vehicles	Peak Hour Directional Vehicles	Peak Hour Auto	% Auto	Peak Hour Medium Truck	% Medium Truck	Peak Hour Heavy Truck	% Heavy Truck
I-19 Santa Cruz County													
A	Mariposa Rd	Arivaca Rd	75	4	48600	24300	2430	1809	74%	202	8%	419	17%
I-19 to D (New Road) Pima County													
D	Twin Buttes Rd	Silverbell Rd	75	4				664	98%	3	0.4%	9	1%
D CAP	Ajo Way	Manville Rd	75	4				63	84%	3	4.0%	9	12%
F (New Road) Pinal County													
F	Silverbell Rd	Indian Valley Rd	75	4				539	96%	13	2%	12	2%
I2	Indian Valley Rd	Maricopa County Line	75	4				447	32%	184	13%	778	55%
L (New Road) Maricopa County													
L	Maricopa County Line	Bullard Ave	75	4				272	22%	188	15%	768	63%
M	Bullard Ave	Buckeye Hills Dr	75					612	39%	183	12%	791	50%
SR 85 Maricopa County													
Q2	Buckeye Hills Dr	Hazen Rd	75	4	60300	30150	3015	2332	77%	137	5%	546	18%
R (New Road) Maricopa County													
R	Hazen Rd	I-10	75	4				3264	61%	453	8%	1656	31%
U (New Road) Maricopa & Yavapai County													
U	I-10	Sun Valley Parkway	75	4				511	79%	31	5%	105	16%

Green A, D, F, I2, L, M, Q2, R, U

Truck Percentage Calculations

Segment	Preferred					
	Autos	Auto %	Medium	Medium %	Heavy	Heavy %
A	13264	74.43%	1481	8.31%	3076	17.26%
Q2	23401	77.34%	1375	4.54%	5481	18.11%

I-11 (Orange Alternative) 2040 Traffic Volumes													
I-11 Alternative Option	From	To	Speed	GP Lanes	Total Vehicles	Total Directional Vehicles	Peak Hour Directional Vehicles	Peak Hour Autos	% Auto	Peak Hour Medium Truck	% Medium Truck	Peak Hour Heavy Truck	% Heavy Truck
I-19 Santa Cruz County													
A	Mariposa Rd	Arivaca Rd	75	4	48600	24300	2430	1809	74%	202	8%	419	17%
I-19 Pima County													
B	Arivaca Rd	I-10	65	6	127100	63550	6355	5495	86%	233	4%	627	10%
I-10 Pima County													
B	I-19	Pinal Air Park Rd	65	12	255300	127650	12765	10153	80%	611	5%	2000	16%
I-10 Connector													
B,G	Pinal Air Park Rd	Trico Marana Road	75	6				25	86%	3	10%	1	3%
G (New Road & I-8) Pinal County													
G	Pinal County Line	Montgomery Rd	75	6				4046	75%	369	7%	956	18%
I-8 Pinal County													
H,K	Montgomery Rd	SR 84	75	4				387	57%	63	9%	224	33%
SR 85 Maricopa County													
Q1	Fornes Rd	Lewis Prison Rd	75	4				1161	90%	37	3%	98	8%
Q2	Gila River	Hazen Rd	75	6				2046	70%	171	6%	711	24%
Q3	Broadway Rd	I-10	75	6				5163	80%	302	5%	1002	15%
New Road North of I-10 Maricopa County													
S	I-10	US 60	75	4				496	80%	29	5%	98	16%

Orange A, B, G, H, K, Q1, Q2, Q3, S

Preferred						
Segment	Autos	Auto %	Medium	Medium %	Heavy	Heavy %
A	13264	74.43%	1481	8.31%	3076	17.26%
B I-19	58000	86.47%	2460	3.67%	6614	9.86%
B I-10	93135	79.54%	5607	4.79%	18348	15.67%
Q3						



Attachment 3. TNM 2.5 Noise Level Output Tables



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RESULTS: SOUND LEVELS

I_11

NEC										29 September 2020			
MO										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		No-Build_A											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	70.2	66	70.2	10	Snd Lvl	70.2	0.0	8	-8.0	
Receiver2	2	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0	
Receiver3	3	1	0.0	63.4	66	63.4	10	----	63.4	0.0	8	-8.0	
Receiver5	5	1	0.0	58.4	66	58.4	10	----	58.4	0.0	8	-8.0	
Receiver6	6	1	0.0	52.3	66	52.3	10	----	52.3	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		No-Build_B (I-10)											
BARRIER DESIGN:		INPUT HEIGHTS											
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver 50	1	1	0.0	76.3	66	76.3	10	Snd Lvl	76.3	0.0	8	-8.0	
Receiver 100	2	1	0.0	74.2	66	74.2	10	Snd Lvl	74.2	0.0	8	-8.0	
Receiver 250	3	1	0.0	69.7	66	69.7	10	Snd Lvl	69.7	0.0	8	-8.0	
Receiver 500	5	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0	
Receiver 1000	6	1	0.0	58.6	66	58.6	10	----	58.6	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		3	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		No-Build_B (I-19)											
BARRIER DESIGN:		INPUT HEIGHTS								Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver 50	1	1	0.0	73.3	66	73.3	10	Snd Lvl	73.3	0.0	8	-8.0	
Receiver 100	2	1	0.0	70.9	66	70.9	10	Snd Lvl	70.9	0.0	8	-8.0	
Receiver 250	3	1	0.0	65.8	66	65.8	10	----	65.8	0.0	8	-8.0	
Receiver 500	5	1	0.0	60.5	66	60.5	10	----	60.5	0.0	8	-8.0	
Receiver 1000	6	1	0.0	54.5	66	54.5	10	----	54.5	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		No Build_G											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver 50	1	1	0.0	72.4	66	72.4	10	Snd Lvl	72.4	0.0	8	-8.0	
Receiver 100	2	1	0.0	70.4	66	70.4	10	Snd Lvl	70.4	0.0	8	-8.0	
Receiver 250	3	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0	
Receiver 500	5	1	0.0	61.1	66	61.1	10	----	61.1	0.0	8	-8.0	
Receiver 1000	6	1	0.0	55.0	66	55.0	10	----	55.0	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		3	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC														
MO														
										29 September 2020				
										TNM 2.5				
										Calculated with TNM 2.5				
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT:		I_11												
RUN:		No Build_H												
BARRIER DESIGN:		INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.		
ATMOSPHERICS:		68 deg F, 50% RH												
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		With Barrier						
						Calculated	Crit'n	Type Impact	Calculated LAeq1h	Noise Reduction		Calculated minus Goal		
							Sub'l Inc			Calculated	Goal	Calculated minus Goal		
			dB	dB	dB	dB	dB		dB	dB	dB	dB		
Receiver 50	1	1	0.0	69.1	66	69.1	10	Snd Lvl	69.1	0.0	8	-8.0		
Receiver 100	2	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0		
Receiver 250	3	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0		
Receiver 500	5	1	0.0	57.7	66	57.7	10	----	57.7	0.0	8	-8.0		
Receiver 1000	6	1	0.0	51.5	66	51.5	10	----	51.5	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		5	0.0	0.0	0.0									
All Impacted		2	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

RESULTS: SOUND LEVELS

I_11

NEC										29 September 2020			
MO										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		No Build_Q1											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver 50	1	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0	
Receiver 100	2	1	0.0	62.2	66	62.2	10	----	62.2	0.0	8	-8.0	
Receiver 250	3	1	0.0	57.3	66	57.3	10	----	57.3	0.0	8	-8.0	
Receiver 500	5	1	0.0	52.1	66	52.1	10	----	52.1	0.0	8	-8.0	
Receiver 1000	6	1	0.0	46.0	66	46.0	10	----	46.0	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC												
MO												
		29 September 2020										
		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		I_11										
RUN:		No Build_Q2										
BARRIER DESIGN:		INPUT HEIGHTS										
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB
Receiver 50	1	1	0.0	71.8	66	71.8	10	Snd Lvl	71.8	0.0	8	-8.0
Receiver 100	2	1	0.0	69.6	66	69.6	10	Snd Lvl	69.6	0.0	8	-8.0
Receiver 250	3	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0
Receiver 500	5	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0
Receiver 1000	6	1	0.0	53.8	66	53.8	10	----	53.8	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected		5	0.0	0.0	0.0							
All Impacted		2	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020			
MO									TNM 2.5			
									Calculated with TNM 2.5			
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		I_11										
RUN:		No Build_Q3										
BARRIER DESIGN:		INPUT HEIGHTS							Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS:		68 deg F, 50% RH										

Receiver													
Name	No.	#DUs	Existing	No Barrier	Increase over existing			With Barrier					
			LAeq1h	LAeq1h	Crit'n	Calculated	Crit'n	Type	Calculated	Noise Reduction		Calculated	
				Calculated		Calculated		Sub'l Inc	Impact	LAeq1h	Calculated	Goal	Calculated
			dB	dB	dB	dB	dB			dB	dB	dB	Goal
Receiver 50	1	1	0.0	73.2	66	73.2	10	Snd Lvl	73.2	0.0	8	-8.0	
Receiver 100	2	1	0.0	71.0	66	71.0	10	Snd Lvl	71.0	0.0	8	-8.0	
Receiver 250	3	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0	
Receiver 500	5	1	0.0	61.3	66	61.3	10	----	61.3	0.0	8	-8.0	
Receiver 1000	6	1	0.0	55.1	66	55.1	10	----	55.1	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
		dB	dB	dB									
All Selected		5	0.0	0.0	0.0								
All Impacted		3	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option B (I-19)/Orange											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.													
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver 50	1	1	0.0	75.5	66	75.5	10	Snd Lvl	75.5	0.0	8	-8.0	
Receiver 100	2	1	0.0	72.9	66	72.9	10	Snd Lvl	72.9	0.0	8	-8.0	
Receiver 250	3	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0	
Receiver 500	5	1	0.0	61.8	66	61.8	10	----	61.8	0.0	8	-8.0	
Receiver 1000	6	1	0.0	55.4	66	55.4	10	----	55.4	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		3	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC										29 September 2020			
MO										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option B (I-10)/Orange											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	78.3	66	78.3	10	Snd Lvl	78.3	0.0	8	-8.0	
Receiver2	2	1	0.0	77.0	66	77.0	10	Snd Lvl	77.0	0.0	8	-8.0	
Receiver3	3	1	0.0	72.0	66	72.0	10	Snd Lvl	72.0	0.0	8	-8.0	
Receiver5	5	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0	
Receiver6	6	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		4	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option B (I-10 Connector)/Orange											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	45.5	66	45.5	10	----	45.5	0.0	8	-8.0	
Receiver2	2	1	0.0	43.5	66	43.5	10	----	43.5	0.0	8	-8.0	
Receiver3	3	1	0.0	39.4	66	39.4	10	----	39.4	0.0	8	-8.0	
Receiver5	5	1	0.0	34.8	66	34.8	10	----	34.8	0.0	8	-8.0	
Receiver6	6	1	0.0	29.7	66	29.7	10	----	29.7	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option C/Purple											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.													
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0	
Receiver2	2	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0	
Receiver3	3	1	0.0	60.8	66	60.8	10	----	60.8	0.0	8	-8.0	
Receiver5	5	1	0.0	56.2	66	56.2	10	----	56.2	0.0	8	-8.0	
Receiver6	6	1	0.0	50.3	66	50.3	10	----	50.3	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		1	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option D/Green											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.													
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	59.3	66	59.3	10	----	59.3	0.0	8	-8.0	
Receiver2	2	1	0.0	57.2	66	57.2	10	----	57.2	0.0	8	-8.0	
Receiver3	3	1	0.0	52.7	66	52.7	10	----	52.7	0.0	8	-8.0	
Receiver5	5	1	0.0	47.5	66	47.5	10	----	47.5	0.0	8	-8.0	
Receiver6	6	1	0.0	41.9	66	41.9	10	----	41.9	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC										29 September 2020			
MO										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option F/Green											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	59.0	66	59.0	10	----	59.0	0.0	8	-8.0	
Receiver2	2	1	0.0	56.9	66	56.9	10	----	56.9	0.0	8	-8.0	
Receiver3	3	1	0.0	52.4	66	52.4	10	----	52.4	0.0	8	-8.0	
Receiver5	5	1	0.0	47.4	66	47.4	10	----	47.4	0.0	8	-8.0	
Receiver6	6	1	0.0	41.8	66	41.8	10	----	41.8	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option G/Purple & Orange											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	73.6	66	73.6	10	Snd Lvl	73.6	0.0	8	-8.0	
Receiver2	2	1	0.0	71.6	66	71.6	10	Snd Lvl	71.6	0.0	8	-8.0	
Receiver3	3	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0	
Receiver5	5	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0	
Receiver6	6	1	0.0	56.2	66	56.2	10	----	56.2	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		3	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option H/Orange											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.													
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0	
Receiver2	2	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0	
Receiver3	3	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0	
Receiver5	5	1	0.0	55.6	66	55.6	10	----	55.6	0.0	8	-8.0	
Receiver6	6	1	0.0	49.4	66	49.4	10	----	49.4	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		1	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option I1/Purple											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	70.1	66	70.1	10	Snd Lvl	70.1	0.0	8	-8.0	
Receiver2	2	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0	
Receiver3	3	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0	
Receiver5	5	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8	-8.0	
Receiver6	6	1	0.0	54.2	66	54.2	10	----	54.2	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC										29 September 2020			
MO										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		I2/Purple											
BARRIER DESIGN:		INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name		No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
				dB	dB	dB	dB	dB		dB	dB	dB	dB
Receiver1	1	1	0.0	69.7	66	69.7	10	Snd Lvl	69.7	0.0	8	-8.0	
Receiver2	2	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0	
Receiver3	3	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0	
Receiver5	5	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0	
Receiver6	6	1	0.0	54.1	66	54.1	10	----	54.1	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC						29 September 2020							
MO						TNM 2.5							
						Calculated with TNM 2.5							
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option I2/Green											
BARRIER DESIGN:		INPUT HEIGHTS					Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.						
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing	No Barrier	Crit'n	Increase over existing		Type Impact	With Barrier				
			LAeq1h	LAeq1h		Calculated	Crit'n		Calculated	Noise Reduction	Calculated	Goal	Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB	dB
Receiver1	1	1	0.0	69.9	66	69.9	10	Snd Lvl	69.9	0.0	8	-8.0	
Receiver2	2	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0	
Receiver3	3	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0	
Receiver5	5	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0	
Receiver6	6	1	0.0	54.3	66	54.3	10	----	54.3	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC										29 September 2020			
MO										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option K/Orange											
BARRIER DESIGN:		INPUT HEIGHTS								Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0	
Receiver2	2	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0	
Receiver3	3	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0	
Receiver5	5	1	0.0	55.6	66	55.6	10	----	55.6	0.0	8	-8.0	
Receiver6	6	1	0.0	49.4	66	49.4	10	----	49.4	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		1	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option L/Green											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	69.7	66	69.7	10	Snd Lvl	69.7	0.0	8	-8.0	
Receiver2	2	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0	
Receiver3	3	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0	
Receiver5	5	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0	
Receiver6	6	1	0.0	53.9	66	53.9	10	----	53.9	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option L/Purple											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0	
Receiver2	2	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0	
Receiver3	3	1	0.0	61.7	66	61.7	10	----	61.7	0.0	8	-8.0	
Receiver5	5	1	0.0	57.1	66	57.1	10	----	57.1	0.0	8	-8.0	
Receiver6	6	1	0.0	51.2	66	51.2	10	----	51.2	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		1	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option M/Green											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
		Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	70.0	66	70.0	10	Snd Lvl	70.0	0.0	8	-8.0	
Receiver2	2	1	0.0	68.4	66	68.4	10	Snd Lvl	68.4	0.0	8	-8.0	
Receiver3	3	1	0.0	64.6	66	64.6	10	----	64.6	0.0	8	-8.0	
Receiver5	5	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0	
Receiver6	6	1	0.0	54.1	66	54.1	10	----	54.1	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option N/Purple											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.													
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	71.0	66	71.0	10	Snd Lvl	71.0	0.0	8	-8.0	
Receiver2	2	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	8	-8.0	
Receiver3	3	1	0.0	65.4	66	65.4	10	----	65.4	0.0	8	-8.0	
Receiver5	5	1	0.0	60.7	66	60.7	10	----	60.7	0.0	8	-8.0	
Receiver6	6	1	0.0	54.9	66	54.9	10	----	54.9	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option Q1/Orange											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.													
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	64.0	66	64.0	10	----	64.0	0.0	8	-8.0	
Receiver2	2	1	0.0	62.1	66	62.1	10	----	62.1	0.0	8	-8.0	
Receiver3	3	1	0.0	57.9	66	57.9	10	----	57.9	0.0	8	-8.0	
Receiver5	5	1	0.0	53.1	66	53.1	10	----	53.1	0.0	8	-8.0	
Receiver6	6	1	0.0	47.3	66	47.3	10	----	47.3	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option Q2/Green											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	69.1	66	69.1	10	Snd Lvl	69.1	0.0	8	-8.0	
Receiver2	2	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0	
Receiver3	3	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0	
Receiver5	5	1	0.0	59.0	66	59.0	10	----	59.0	0.0	8	-8.0	
Receiver6	6	1	0.0	53.2	66	53.2	10	----	53.2	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC										29 September 2020			
MO										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option Q2/Orange											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.													
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	8	-8.0	
Receiver2	2	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0	
Receiver3	3	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0	
Receiver5	5	1	0.0	59.8	66	59.8	10	----	59.8	0.0	8	-8.0	
Receiver6	6	1	0.0	54.0	66	54.0	10	----	54.0	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option R/Green											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.													
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	73.7	66	73.7	10	Snd Lvl	73.7	0.0	8	-8.0	
Receiver2	2	1	0.0	72.0	66	72.0	10	Snd Lvl	72.0	0.0	8	-8.0	
Receiver3	3	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0	
Receiver5	5	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0	
Receiver6	6	1	0.0	57.7	66	57.7	10	----	57.7	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		3	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
RESULTS: SOUND LEVELS									Calculated with TNM 2.5				
PROJECT/CONTRACT:			I_11										
RUN:			Option R/Purple										
BARRIER DESIGN:			INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
ATMOSPHERICS:			68 deg F, 50% RH										
Receiver													
Name		No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB	dB
Receiver1		1	1	0.0	70.3	66	70.3	10	Snd Lvl	70.3	0.0	8	-8.0
Receiver2		2	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
Receiver3		3	1	0.0	64.8	66	64.8	10	----	64.8	0.0	8	-8.0
Receiver5		5	1	0.0	60.2	66	60.2	10	----	60.2	0.0	8	-8.0
Receiver6		6	1	0.0	54.3	66	54.3	10	----	54.3	0.0	8	-8.0
Dwelling Units			# DUs	Noise Reduction									
			Min	Avg	Max								
			dB	dB	dB								
All Selected			5	0.0	0.0	0.0							
All Impacted			2	0.0	0.0	0.0							
All that meet NR Goal			0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option S/Orange											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0	
Receiver2	2	1	0.0	60.6	66	60.6	10	----	60.6	0.0	8	-8.0	
Receiver3	3	1	0.0	56.6	66	56.6	10	----	56.6	0.0	8	-8.0	
Receiver5	5	1	0.0	51.9	66	51.9	10	----	51.9	0.0	8	-8.0	
Receiver6	6	1	0.0	46.1	66	46.1	10	----	46.1	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Option U/Green											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.													
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	62.6	66	62.6	10	----	62.6	0.0	8	-8.0	
Receiver2	2	1	0.0	60.8	66	60.8	10	----	60.8	0.0	8	-8.0	
Receiver3	3	1	0.0	56.9	66	56.9	10	----	56.9	0.0	8	-8.0	
Receiver5	5	1	0.0	52.2	66	52.2	10	----	52.2	0.0	8	-8.0	
Receiver6	6	1	0.0	46.4	66	46.4	10	----	46.4	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC										29 September 2020			
MO										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Ironwood Forest NM/Purple_C											
BARRIER DESIGN:		INPUT HEIGHTS								Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver 5965	1	1	0.0	39.3	66	39.3	10	----	39.3	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

RESULTS: SOUND LEVELS													
PROJECT/CONTRACT: I_11													
RUN: Ironwood Forest NM/Green_D													
BARRIER DESIGN: INPUT HEIGHTS													
ATMOSPHERICS: 68 deg F, 50% RH													
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.													
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction			Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB	dB
Receiver 5965	1	1	0.0	31.4	66	31.4	10	----	31.4	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC										29 September 2020			
MO										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Ironwood Forest NM/Green_F											
BARRIER DESIGN:		INPUT HEIGHTS								Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		Type Impact	With Barrier				
						Calculated	Crit'n		Calculated LAeq1h	Noise Reduction		Calculated minus Goal	
							Sub'l Inc			Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	49.2	66	49.2	10	----	49.2	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC													
MO													
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		SNP_CAP Option											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.													
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier				
									Calculated LAeq1h	Noise Reduction		Calculated	Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB	dB
Receiver 2058	6	1	0.0	33.8	66	33.8	10	----	33.8	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC		29 September 2020											
MO		TNM 2.5											
		Calculated with TNM 2.5											
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		SNP/Orange_B											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		Type Impact	With Barrier				
						Calculated	Crit'n		Calculated LAeq1h	Noise Reduction		Goal	Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB	dB
Receiver 7884	1	1	0.0	42.7	66	42.7	10	----	42.7	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC												
MO												
		29 September 2020										
		TNM 2.5										
		Calculated with TNM 2.5										
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		I_11										
RUN:		SNP/Purple_C										
BARRIER DESIGN:		INPUT HEIGHTS										
ATMOSPHERICS:		68 deg F, 50% RH										
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB
Receiver 2058	6	1	0.0	45.0	66	45.0	10	----	45.0	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected		1	0.0	0.0	0.0							
All Impacted		0	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Sonoran Desert NM/Orange_H											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.													
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	77.5	66	77.5	10	Snd Lvl	77.5	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min dB	Avg dB	Max dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		1	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Sonoran Desert NM/Purple & Green_I2											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier				
									Calculated LAeq1h	Noise Reduction		Calculated	Goal
										Calculated	Calculated	Goal	Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB	dB
Receiver1	1	1	0.0	38.8	66	38.8	10	----	38.8	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC										29 September 2020			
MO										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Sonoran Desert/Orange_K											
BARRIER DESIGN:		INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.					
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name		No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		Type Impact	With Barrier		Noise Reduction	
							Calculated	Crit'n		Calculated LAeq1h	Calculated	Goal	Calculated minus Goal
				dB	dB	dB	dB	dB		dB	dB	dB	dB
Receiver1		1	1	0.0	77.5	66	77.5	10	Snd Lvl	77.5	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		1	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC										29 September 2020			
MO										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Sonoran Desert NM/Purple_L											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		Type Impact	With Barrier				
						Calculated	Crit'n		Calculated LAeq1h	Noise Reduction		Calculated minus Goal	
							Sub'l Inc			Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver 2310	1	1	0.0	60.7	66	60.7	10	----	60.7	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC										29 September 2020			
MO										TNM 2.5			
										Calculated with TNM 2.5			
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Sonoran Desert NM/Green_M											
BARRIER DESIGN:		INPUT HEIGHTS								Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		Type Impact	With Barrier				
						Calculated	Crit'n		Calculated LAeq1h	Noise Reduction		Calculated minus Goal	
							Sub'l Inc			Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	46.6	66	46.6	10	----	46.6	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

RESULTS: SOUND LEVELS												
PROJECT/CONTRACT: I_11												
RUN: Sonoran Desert NM/Purple_N												
BARRIER DESIGN: INPUT HEIGHTS												
ATMOSPHERICS: 68 deg F, 50% RH												
Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB
Receiver1	1	1	0.0	45.8	66	45.8	10	----	45.8	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected		1	0.0	0.0	0.0							
All Impacted		0	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

I_11

NEC							29 September 2020						
MO							TNM 2.5						
							Calculated with TNM 2.5						
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Sonoran Desert NM/Orange_Q1											
BARRIER DESIGN:		INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.					
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier				
									Calculated LAeq1h	Noise Reduction		Calculated	
										Calculated	Goal	Calculated	minus Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB	dB
Receiver 2310	1	1	0.0	41.3	66	41.3	10	----	41.3	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC														
MO														
										29 September 2020				
										TNM 2.5				
										Calculated with TNM 2.5				
RESULTS: SOUND LEVELS														
PROJECT/CONTRACT:		I_11												
RUN:		TMP/Purple_C												
BARRIER DESIGN:		INPUT HEIGHTS										Average pavement type shall be used unless		
ATMOSPHERICS:		68 deg F, 50% RH										a State highway agency substantiates the use		
ATMOSPHERICS:												of a different type with approval of FHWA.		
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		Type Impact	With Barrier					
						Calculated	Crit'n		Calculated	Noise Reduction		Goal	Calculated minus Goal	
							Sub'l Inc							
			dB	dB	dB	dB	dB		dB	dB	dB	dB	dB	
Receiver 5970	1	1	0.0	39.3	66	39.3	10	----	39.3	0.0	8	-8.0		
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		1	0.0	0.0	0.0									
All Impacted		0	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

RESULTS: SOUND LEVELS

I_11

NEC											29 September 2020		
MO											TNM 2.5		
											Calculated with TNM 2.5		
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		TMP_CAP Option											
BARRIER DESIGN:		INPUT HEIGHTS										Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		Type Impact	With Barrier				
						Calculated	Crit'n		Calculated LAeq1h	Noise Reduction		Goal	Calculated minus Goal
							Sub'l Inc						
			dB	dB	dB	dB	dB		dB	dB	dB	dB	dB
Receiver 5970	1	1	0.0	54.4	66	54.4	10	----	54.4	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Vulture Mtn Rec Area/Orange_S											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		With Barrier					
				Calculated	Crit'n	Calculated	Crit'n	Calculated	Noise Reduction				
							Sub'l Inc	Type Impact	Calculated	Calculated	Goal	Calculated	
												minus	
												Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	75.4	66	75.4	10	Snd Lvl	75.4	0.0	8	-8.0	
Receiver2	2	1	0.0	71.8	66	71.8	10	Snd Lvl	71.8	0.0	8	-8.0	
Receiver3	3	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0	
Receiver5	5	1	0.0	55.6	66	55.6	10	----	55.6	0.0	8	-8.0	
Receiver6	6	1	0.0	48.1	66	48.1	10	----	48.1	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		5	0.0	0.0	0.0								
All Impacted		2	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Vulture Mtn Rec Area/Green_U											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h		Increase over existing		With Barrier					
				Calculated	Crit'n	Calculated	Crit'n	Calculated	Noise Reduction	Goal	Calculated	Calculated	minus
							Sub'l Inc	Type Impact					Goal
			dB	dB	dB	dB	dB		dB	dB	dB	dB	dB
Receiver1	1	1	0.0	75.7	66	75.7	10	Snd Lvl	75.7	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		1	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

I_11

NEC									29 September 2020				
MO									TNM 2.5				
									Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		I_11											
RUN:		Vulture Mtn Rec Area/Purple_X											
BARRIER DESIGN:		INPUT HEIGHTS											
ATMOSPHERICS:		68 deg F, 50% RH											
Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Receiver1	1	1	0.0	74.3	66	74.3	10	Snd Lvl	74.3	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min dB	Avg dB	Max dB								
All Selected		1	0.0	0.0	0.0								
All Impacted		1	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

