

December 27, 2022

Bob Roggenthen P.E.  
Project Manager  
City of Tucson Department of Transportation  
201 N Stone Ave,  
Tucson, AZ 85701

**VIA EMAIL**  
**Bob. Roggenthen@tucsonaz.gov**

Subject: Traffic Noise Assessment for Grant Road Phases 5 & 6 in the City of Tucson, Arizona

Dear Mr. Roggenthen:

This Letter Report presents the results of the traffic noise assessment for Phases 5 and 6 of the Grant Road Improvement Plan in the City of Tucson, Arizona (hereinafter referred to as the “Project”). This traffic noise assessment would determine whether nearby residents and other noise sensitive uses would be exposed to noise levels in excess of the noise mitigation level adopted by Pima County. A noise mitigation level of 66 dBA  $L_{eq}$  noise was developed to protect noise sensitive uses. For noise sensitive uses that were found to meet or exceed the noise limit, noise mitigation was considered based on as established in the Pima County Noise Abatement Procedure (PC NAP, PCDOT 2008).

## PROJECT DESCRIPTION

Phase 5 & 6 of the Grant Road Improvement Plan involves the widening of Grant Road from Fremont Avenue to Sparkman Boulevard. The widening involves widening the roadway from two lanes to three lanes to accommodate traffic growth. The roadway widening involves the demolition of existing residences located along Grant Road. The widening of Grant Road would allow for more signalized crosswalks, improved bicycle lanes, new and wider sidewalks.

The widening of Grant Road and anticipated future traffic growth would result in increases noise levels at the remaining residential uses. This noise assessment evaluates changes to traffic noise at noise sensitive residential, religious, and educational uses resulting from the widening of Grant Road. If changes in traffic noise levels are found to exceed the noise limit, the development of traffic noise barriers would be assessed based on traffic noise abatement procedures established in the PC NAP. Figure 1, Project Location, shows the location of Phases 5 & 6 of the Grant Road Improvement Plan.

## NOISE BASICS AND TERMINOLOGY

“Sound” is a vibratory disturbance created by a moving or vibrating source and is capable of being detected. “Noise” is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance; interference with speech communication; sleep disturbance; and, in the extreme, hearing impairment (Caltrans 2013).

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Sound pressure levels are described in units called the decibel (dB). Decibels are measured on a logarithmic scale. A doubling of the energy of a noise source (such as doubling of traffic volume) would increase the noise level by 3 dB. The human ear is not equally sensitive to all frequencies along the sound spectrum. To accommodate this phenomenon, the A-scale was devised; the A-weighted decibel scale (dBA) approximates the frequency response of the average healthy ear when listening to most ordinary everyday sounds and is used in this analysis.

Human perception of noise has no simple correlation with acoustical energy. Due to subjective thresholds of tolerance, the annoyance of a given noise source is perceived very differently from person to person. The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud) Normal conversation at 3 feet is approximately 60 dBA, while loud jet engine noises at 1,000 feet equate to 100 dBA, which can cause serious discomfort. Table 1 shows the relationship of various noise levels in dBA to commonly experienced noise events.

**TABLE 1  
 NOISE LEVELS FOR COMMON EVENTS**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet fly-over at 300 m (1,000 ft)	100	
Gas lawn mower at 1 m (3 ft)	90	
Diesel truck at 15 m (50 ft) at 80 km/hr (50 mph)	80	Food blender at 1 m (3 ft); garbage disposal at 1 m (3 ft)
Noisy urban area, daytime gas lawn mower at 30 m (100 ft)	70	Vacuum cleaner at 3 m (10 ft)
Commercial area, heavy traffic at 90 m (300 ft)	60	Normal speech at 1 m (3 ft)
Quiet urban daytime	50	Large business office, dishwasher in next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural nighttime	20	Bedroom at night, concert hall (background)
	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing
dBA: A-weighted decibels; m: meter; ft: feet; km/hr: kilometers per hour; mph: miles per hour		
Source: Caltrans 2013.		

Two noise sources do not “sound twice as loud” as one source. As stated above, a doubling of noise sources results in a noise level increase of 3 dBA. It is widely accepted that (1) the average healthy ear can barely perceive changes of a 3 dBA increase or decrease; (2) a change of 5 dBA is readily perceptible; and (3) an increase (decrease) of 10 dBA sounds twice (half) as loud (Caltrans 2013).

From the source to the receiver, noise changes both in the level and frequency spectrum. The most obvious change is the decrease in noise level as the distance from the source increases. Sound from a small, localized source (approximating a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. For point sources, such as heating, ventilation, and air conditioning (HVAC) units or construction equipment, the sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance (i.e., if the noise level is 70 dBA at 25 feet, it is 64 dBA at 50 feet). Vehicle movement on a road makes the source of the sound appear to emanate from a line (line source) rather than

a point when viewed over some time interval. The sound level attenuates or drops off at a rate of 3 dBA per doubling of distance for line sources.

A large object in the path between a noise source and a receiver can significantly attenuate noise levels at that receiver location. The amount of attenuation provided by this “shielding” depends on the size of the object and the frequencies of the noise levels. Natural terrain or landform features as well as man-made features (e.g., buildings and walls) can significantly alter noise exposure levels. For a noise barrier to work, it must be high enough and long enough to block the view from the receiver to a road or to the noise source. Effective noise barriers can reduce outdoor noise levels at the receptor by up to 15 dBA.

**REGULATORY BACKGROUND**

The noise criteria used for evaluation of the feasibility of noise barriers are based on the PC NAP’s noise criteria. The impacts are assessed using the Noise Abatement Criteria (NAC), which is based on the predicted noise levels approaching or exceeding the NAC. The RTA/Pima County’s Traffic Noise Analysis and Mitigation Guidance for Major Roadway Projects was implemented in December 2003, with a revision and amendment published in 2008 (PCDOT 2008). The 2008 revisions and amendments are related to updated mitigation costs and barrier construction costs. The Traffic Noise Analysis and Mitigation Guidance document is applied to this Project, as it is applied to all of the RTA’s major roadway projects.

The PC NAP traffic noise abatement procedure states the following:

Mitigation Levels

For major roadway projects within Pima County, traffic noise mitigation shall be considered if either:

1. The predicted exterior noise level for a sensitive receiver is 66 dBA  $L_{eq}$  [average noise level] or above; or,
2. The predicted exterior noise levels at a sensitive receiver “substantially” increase over existing (pre-project) levels as a result of the major roadway project—“substantial” is defined as 15 dBA or greater.

Traffic noise barriers will be considered when all of the following criteria are met:

- The predicted noise levels at affected receivers shall be reduced by at least 5 decibels with a noise barrier.
- Noise barriers shall not be constructed unless it is benefitting two or more adjacent receivers.
- Noise abatement shall be considered only for the first floor of multi-story residences.
- Noise barriers shall not be higher than 10 feet.
- Noise barriers shall not be constructed unless a majority of the property owners of the benefited receivers approve of the mitigation.
- The cost of the noise abatement shall not exceed 35,000 dollars per benefited sensitive receptor (with a cost of 25 dollars per square foot).

- Noise mitigation for undeveloped lands shall be considered only if a building permit has been issued prior to the date of approval of the final environmental documentation.

**EXISTING CONDITIONS**

**Noise Sources and Noise Levels.** The existing noise environment in the Project area is primarily influenced by traffic noise on nearby roads. Vehicle traffic along Grant Road represent the largest source of noise due to the volume of vehicle traffic and the percentage of trucks which generate more traffic noise than passenger cars.

To determine existing traffic noise at the Project site, Psomas conducted an ambient noise survey on March 3, 2022, and June 1, 2022. Noise level measurements were taken using a Larson Davis Laboratories Model 831 integrating sound level meter (LD 831). The LD 831 sound level meter and microphone was mounted to a tripod, approximately five feet above the ground and equipped with a windscreen. The LD 831 meter was calibrated before and after use with a Larson Davis Model CAL200 acoustical calibrator to ensure that the measurements would be accurate. The sound level meters were programmed to record noise levels in “slow” mode in A-weighted form. Meteorological conditions during all measurement periods were sunny and clear skies. Table 2, Noise Level Measurement Results, provides the measured noise levels at the site. Noise levels at each location is primarily affected by the distance the measurement was taken from Grant Road. Figure 2, Ambient Noise Measurement Locations, shows the locations where noise measurements were taken.

**TABLE 2  
 NOISE LEVEL MEASUREMENT RESULTS**

Measurement Location	Location	Noise Level (dBA)		
		L <sub>min</sub>	L <sub>eq</sub>	L <sub>max</sub>
1	Alley south of Grant Road and east of Santa Rita Avenue	51	59	73
2	Grant Road between Cherry Avenue and Warren Avenue	57	71	87
3	Alley north of Grant Road and west of Warren Avenue	47	53	59
4	Alley north of Grant-Campbell (Triangle) Park	52	64	83
5	Alley north of Grant Road and east of Olsen Avenue	42	53	73
6	Grant Road east of Plumer Avenue	61	74	84
7	Frontage Road south of Grant Road and west of Plumer Avenue	59	69	81
8	Grant Road east of Forgeus Avenue	50	75	87

dBA: A-weighted decibels; L<sub>eq</sub>: average noise level; L<sub>max</sub>: maximum noise level; L<sub>min</sub>: minimum noise level

**NOISE MODELING ASSUMPTIONS AND METHODOLOGY**

According to the PC NAC, the prediction of noise levels should be made with the traffic noise prediction model currently adopted by the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT). The current model that is adopted by the FHWA and ADOT, and is used for this analysis, is the FHWA Traffic Noise Model Version 3.1 (TNM 3.1).

The methods for determining the future noise levels and identifying possible mitigation measures to address future noise levels of this Project involve the steps listed below:

1. Short-term noise measurements along Grant Road at noise-sensitive uses. The measured existing noise levels are used to calibrate modeled noise levels as necessary.
2. Use of the Traffic Noise Model (TNM) to quantify noise levels along Grant Road for existing and future (year 2045) with project conditions.
3. Use of TNM to assess the noise levels with and without noise attenuation provided by the noise barriers.
4. Compare the modeled TNM results with the noise abatement criteria established by the PC NAP.

### **TRAFFIC NOISE MODELING**

Traffic noise exposure levels were assessed along the entirety of the Phases 5 and 6 Roadway Improvement Plan area. Traffic noise levels are shown at specific receptor locations that are representative of anticipated noise exposure for similar distances away from Grant Road. Noise exposure at each location is affected by the distance from Grant Road and any cross-streets as well as any intervening buildings or walls. The FHWA's TNM 3.1 was used to predict traffic noise levels that would occur for existing conditions, as well as future conditions with and without the noise barrier. The following inputs were used in the TNM model.

- Lane geometry for existing and future conditions.
- Topography as flat terrain.
- Use of existing residential structures and walls as sound barriers.
- Roadways were modeled based on speed limits plus 5 miles per hour.
- Percentage of vehicle types based on data collection.
- Existing and future traffic volumes provided for the PM peak hour.
- Modeling of existing and proposed noise barriers.
- Receptor locations were modeled at noise sensitive uses – residences, schools, and religious uses at areas of frequent use. Areas of frequent use do not include driveways where vehicles travel but do include front/back yards and activity areas.
- Receptor heights were modeled at 5 feet and proximate to the nearest property line to Grant Road.
- Noise levels that are reported by TNM were set to one hour consistent with the PC NAP.

### **Existing Conditions**

The existing volume of traffic in the Phases 5 and 6 Grant Road analysis area is approximately 31,000-38,000 ADT (Psomas 2022). Traffic noise modeling using TNM was conducted for existing conditions for the purposes of verifying the actual noise monitoring results. The PC NAP requires that a “reality check” (calibration and verification) of the noise prediction model be conducted by comparing predicted noise levels with measured noise levels. This verification used traffic counts and existing conditions for the calibration of the traffic noise modeling. After calibration of the traffic noise modeling, modeling of future traffic conditions was initiated.

### **Future Conditions**

Traffic growth in future years (year 2045) is projected to be 43,000-50,000 ADT in the Phases 5 and 6 Grant Road analysis area (Psomas 2022). This represents an approximate 28 percent increase in traffic volumes in the year 2045 from existing conditions in 2022. This change in traffic volumes would likewise result in changes in traffic noise levels. A doubling of traffic volumes would be needed to increase traffic noise by 3 dBA over existing conditions. An increase in traffic volumes by approximately 28 percent would in traffic noise increases by approximately 1 decibel. Noise level changes of less than 3 decibels are not generally perceptible in outdoor environments. Placement of travel lanes along Grant Road closer to the analyzed residential uses would likewise increase noise levels at remaining noise sensitive uses. However, the change in location of the proposed roadways would generally not bring the roadway substantially closer to existing residential uses. In addition, the Project would not increase the number of residential uses exposed to traffic noise. There would actually be less residential lots directly abutting Grant Road since a number of properties would be acquired and demolished as part of the Project. As such, the Project would not result in a substantial increase of 15 dBA or greater as described in the PC NAP.

Future traffic noise levels under the Project would require noise abatement if traffic noise levels reach or exceed the 66 dBA  $L_{eq}$  noise mitigation level at noise sensitive uses. Figure 3, Future Unmitigated Traffic Noise Levels provides traffic noise exposure levels at noise sensitive uses within the Project corridor. This Figure shows 27 noise sensitive locations that were evaluated against the noise abatement criteria established by the PC NAC. A number of these locations were found to exceed the noise mitigation level of 66 dBA  $L_{eq}$  and meet the criteria for noise abatement. Other locations exceeded the noise mitigation level but did not meet the other criteria established within the PC NAC and consequently did not qualify for noise abatement. The remaining locations were found to be below the noise mitigation level. Table 3, Unmitigated Future Traffic Noise Levels, provides a list of analyzed locations. A description is also provided as to whether each location meets the criteria required for noise abatement.

**TABLE 3  
 UNMITIGATED FUTURE TRAFFIC NOISE LEVELS**

Receptor Locations	Meets or Exceeds 66 dBA $L_{eq}$ ?	Meets Noise Abatement Criteria?
1	Yes, 69 dBA $L_{eq}$	Yes, meets or exceeds the 66 dBA $L_{eq}$ Criterion
2	Yes, 67 dBA $L_{eq}$	Yes, meets or exceeds the 66 dBA $L_{eq}$ Criterion
3	Yes, 69 dBA $L_{eq}$	Yes, meets or exceeds the 66 dBA $L_{eq}$ Criterion
4	No, 62 dBA $L_{eq}$	No, below the 66 dBA $L_{eq}$ Criterion
5	Yes, 66 dBA $L_{eq}$	Yes, meets or exceeds the 66 dBA $L_{eq}$ Criterion
6	No, 62 dBA $L_{eq}$	No, below the 66 dBA $L_{eq}$ Criterion
7	Yes, 68 dBA $L_{eq}$	Yes, meets or exceeds the 66 dBA $L_{eq}$ Criterion
8	No, 63 dBA $L_{eq}$	No, below the 66 dBA $L_{eq}$ Criterion
9	No, 64 dBA $L_{eq}$	No, below the 66 dBA $L_{eq}$ Criterion
10	Yes, 68 dBA $L_{eq}$	Yes, meets or exceeds the 66 dBA $L_{eq}$ Criterion
11	Yes, 69 dBA $L_{eq}$	No, front of church is not a frequently used outdoor space and driveway limits sound mitigation from wall
12	No, 65 dBA $L_{eq}$	No, below the 66 dBA $L_{eq}$ Criterion
13	Yes, 67 dBA $L_{eq}$	Yes, meets or exceeds the 66 dBA $L_{eq}$ Criterion
14	No, 65 dBA $L_{eq}$	No, below the 66 dBA $L_{eq}$ Criterion
15	Yes, 68 dBA $L_{eq}$	No, 6' Wall needed for apartments, 10' for home. The driveway opening and the different wall heights make these two separate walls, each benefiting a single receiver. Therefore, they do not meet the criteria for more than one benefited receiver.
16	Yes, 67 dBA $L_{eq}$	Yes, meets or exceeds the 66 dBA $L_{eq}$ Criterion
17	Yes, 66 dBA $L_{eq}$	Yes, meets or exceeds the 66 dBA $L_{eq}$ Criterion
18	No, 65 dBA $L_{eq}$	No, below the 66 dBA $L_{eq}$ Criterion
19	No, 60 dBA $L_{eq}$	No, below the 66 dBA $L_{eq}$ Criterion
20	Yes, 70 dBA $L_{eq}$	No, single benefited receiver
21	Yes, 70 dBA $L_{eq}$	No, single benefited receiver
22	Not Applicable	No, non-residential single benefited receiver
23	Not Applicable	No, non-residential single benefited receiver
24	No, 61 dBA $L_{eq}$	No, below the 66 dBA $L_{eq}$ Criterion
25	No, 63 dBA $L_{eq}$	No, below the 66 dBA $L_{eq}$ Criterion
26	No, 62 dBA $L_{eq}$	No, below the 66 dBA $L_{eq}$ Criterion
27	Not Applicable	No, acquired right-of-way for Grant 3 & 4 and paid to reconstruct screen wall

dBA: A-weighted decibels;  $L_{eq}$ : Energy average noise level

**Traffic Noise Abatement**

Traffic noise abatement or noise reduction mitigation is needed if future traffic noise levels at noise sensitive uses exceed the PC NAP noise mitigation level of 66 dBA  $L_{eq}$  in addition to meeting the other criteria previously discussed. As discussed previously, Table 3, Unmitigated Future Traffic Noise Levels, and Figure 3 shows those noise sensitive uses that meet or exceed the PC NAP noise mitigation level of

66 dBA  $L_{eq}$ . For those locations that exceed the noise mitigation levels and meet the PC NAP abatement criteria, noise barriers were modeled. Noise levels with the noise barriers are shown in Figure 4, Future Mitigated Traffic Noise Levels and Table 4, Future Mitigated Traffic Noise Levels. Table 4 only lists those receiver locations that meet the PC NAP criteria. In addition, future noise levels with proposed noise barriers are also analyzed to provide information on the height and extent of sound barriers necessary to meet the PC NAP 66 dBA  $L_{eq}$  noise mitigation level. As shown Figure 4, all locations that meet the noise abatement criteria would result in traffic noise exposure levels of under 66 dBA  $L_{eq}$ .

**TABLE 4  
 FUTURE MITIGATED TRAFFIC NOISE LEVELS**

Receptor Locations	Wall Height Mitigation	Mitigated Below 66 dBA $L_{eq}$ ?
1	7 feet	Yes, 64 dBA $L_{eq}$
2	7 feet	Yes, 62 dBA $L_{eq}$
3	6 feet	Yes, 63 dBA $L_{eq}$
5	6 feet	Yes, 61 dBA $L_{eq}$
7	6 feet	Yes, 63 dBA $L_{eq}$
10	6 feet	Yes, 63 dBA $L_{eq}$
13	6 feet	Yes, 62 dBA $L_{eq}$
16	6 feet	Yes, 62 dBA $L_{eq}$
17	10 feet	Yes, 61 dBA $L_{eq}$

dBA: A-weighted decibels;  $L_{eq}$ : Energy average noise level

**CONCLUSION**

The assessment of existing and future noise levels indicates that noise levels would meet or exceed the PC NAP noise mitigation level of 66 dBA  $L_{eq}$  for the 27 analyzed locations within the Phase 5 and 6 Grant Road Improvement Project. Future noise levels in the year 2045 with calibrated modeling indicates that some noise sensitive uses would be exposed to noise levels in excess of the noise mitigation level. The suitability of noise barriers was assessed for the analyzed locations. For those locations that did not meet all of the noise abatement criteria, no noise barriers are recommended. Those locations that met all the PC NAP noise mitigation criteria were evaluated for noise barriers that would reduce noise exposure to less than the noise mitigation level of 66 dBA  $L_{eq}$ . The development of noise barriers that range from 6 feet to 10 feet were found to sufficiently reduce traffic noise exposure levels at these locations.

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Thank you for the opportunity to assist on this Project. If you have any questions or comments, please contact me at (626) 351-2000.

Sincerely,

**P S O M A S**



Tin Cheung  
Director of Air Quality, Climate Change, and Noise Services

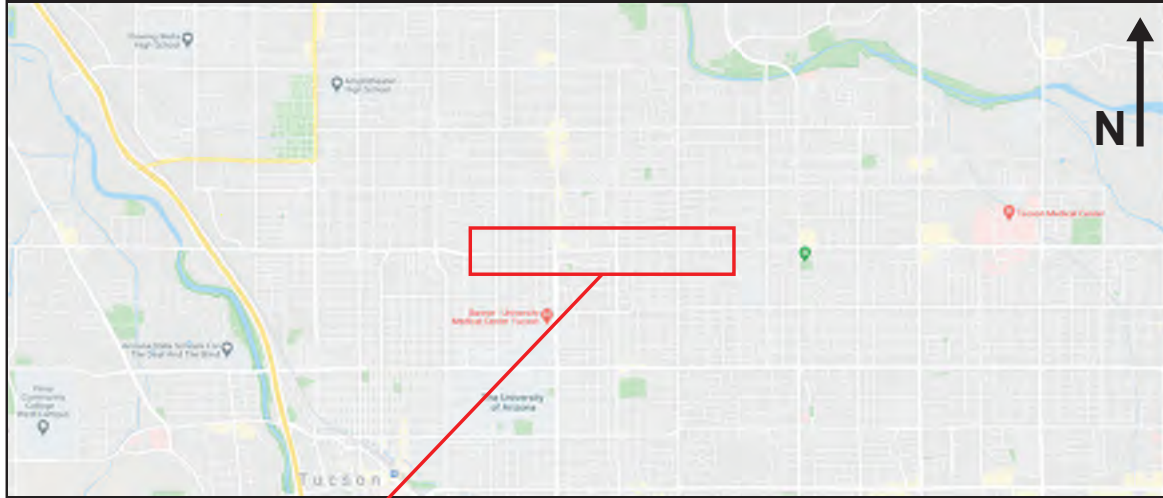
Attachments: Figure 1 – Project Location  
Figure 2 – Ambient Noise Measurement Locations  
Figure 3 – Future Unmitigated Traffic Noise Levels  
Figure 4 – Future Mitigated Traffic Noise Levels  
A – Noise Monitoring Data and TNM Data

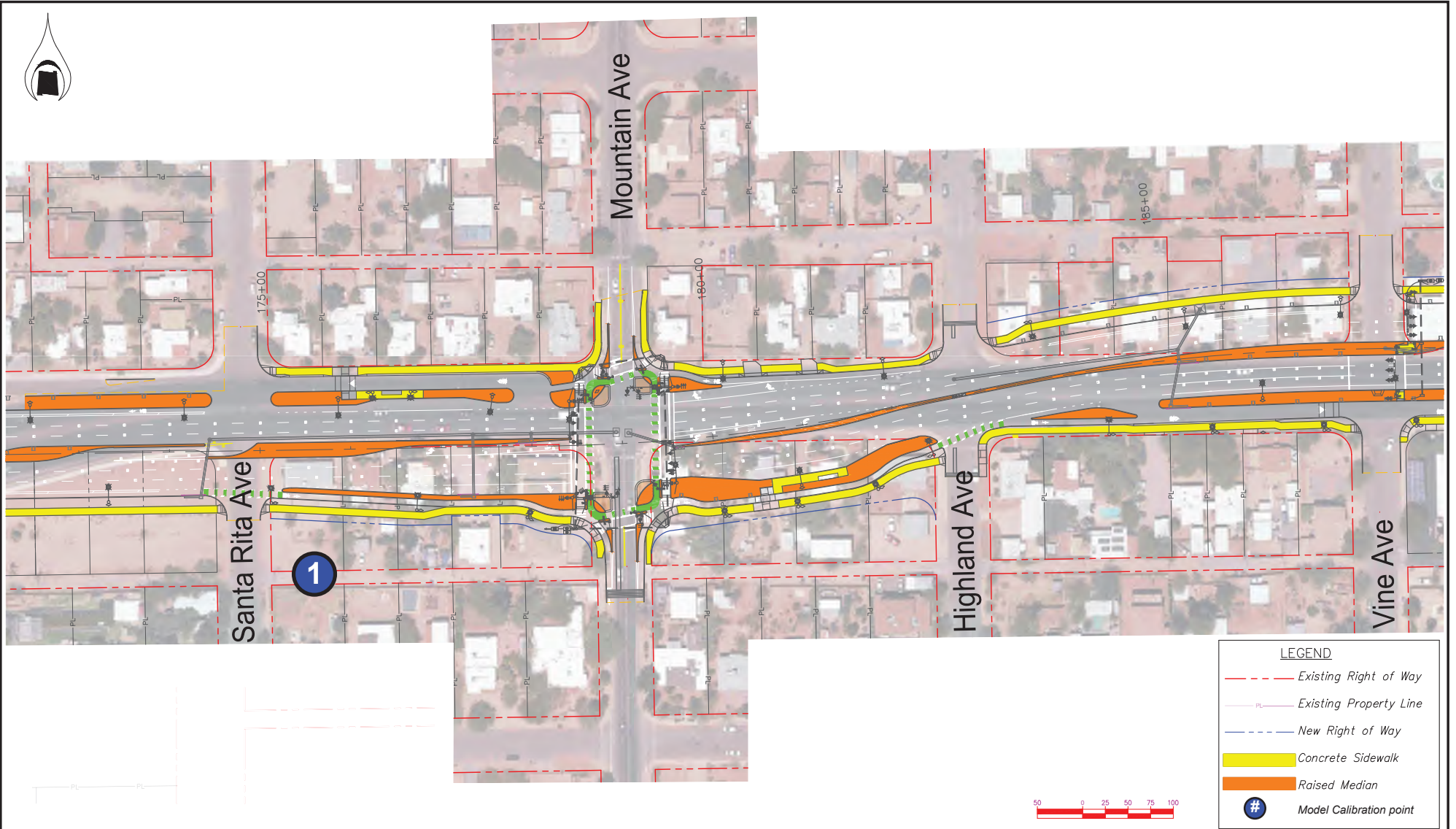
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## REFERENCES

- Arizona Department of Transportation (ADOT). May 2017. *Arizona Department of Transportation Noise Abatement Requirements*. Phoenix, AZ: ADOT. <https://www.azdot.gov/docs/default-source/planning/2017-noise-abatement-requirements.pdf?sfvrsn=2>
- California Department of Transportation (Caltrans). 2013 (September) *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. Sacramento, CA: Caltrans. [http://www.dot.ca.gov/hq/env/noise/pub/TeNS\\_Sept\\_2013A.pdf](http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013A.pdf).
- Federal Highway Administration. December 2021. Federal Highway Administration's Traffic Noise Model (FHWA TNM), version 3.1.
- Pima County Department of Transportation (PCDOT). 2008 (April). Revision of Traffic Noise Analysis and Mitigation Guidance for Major Road Projects, Amendment to Statement of Purpose, and Cost Effective Criteria. Tucson, AZ: PCDOT. [https://www.rosemonteis.us/files/references/pcdot\\_2008.pdf](https://www.rosemonteis.us/files/references/pcdot_2008.pdf)





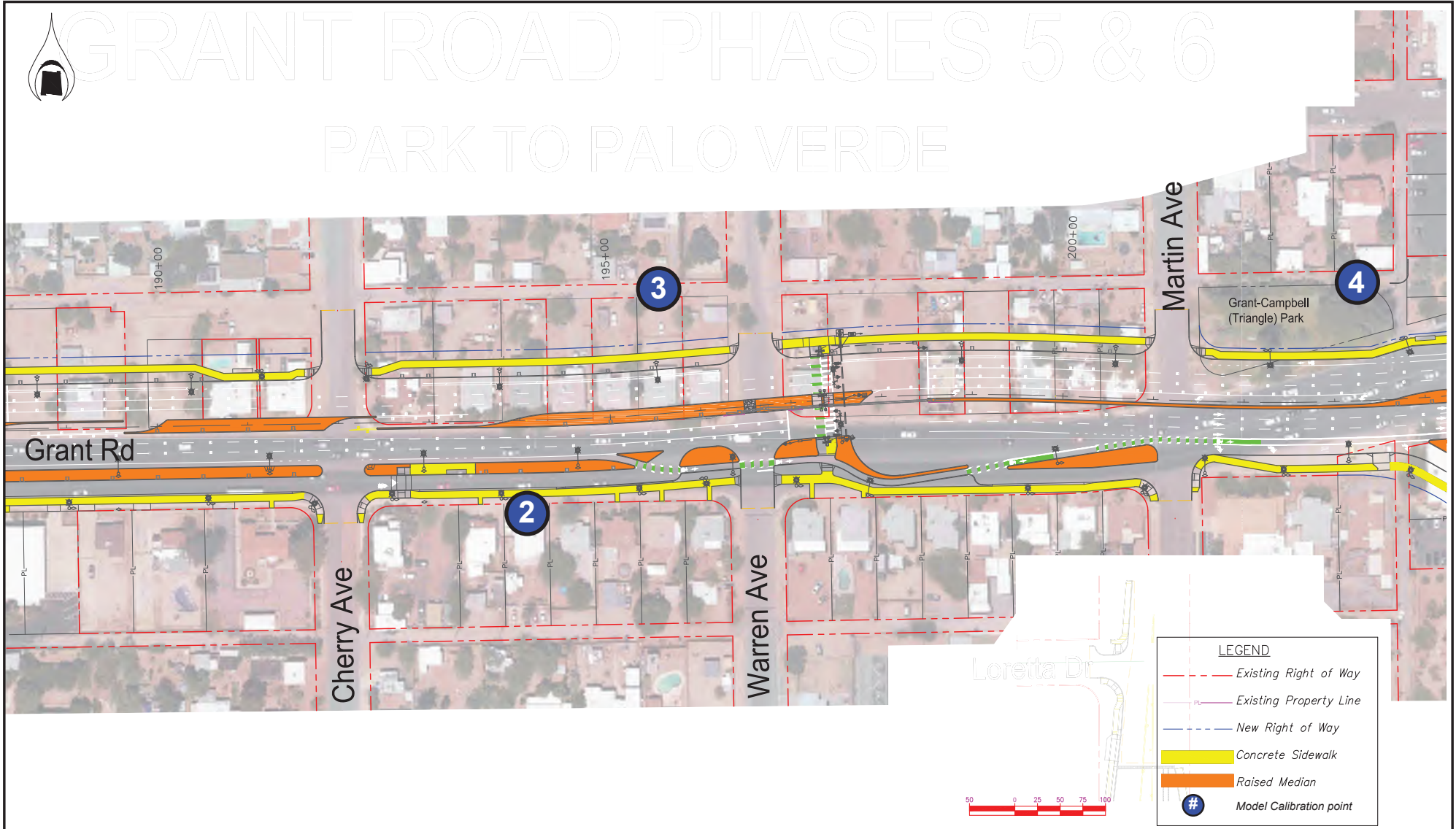


Grant Road Phase 5 & 6  
Noise Study

Figure 2.  
Model Calibration Point Locations (1/4)

# GRANT ROAD PHASES 5 & 6

## PARK TO PALO VERDE



Grant Road Phase 5 & 6  
Noise Study

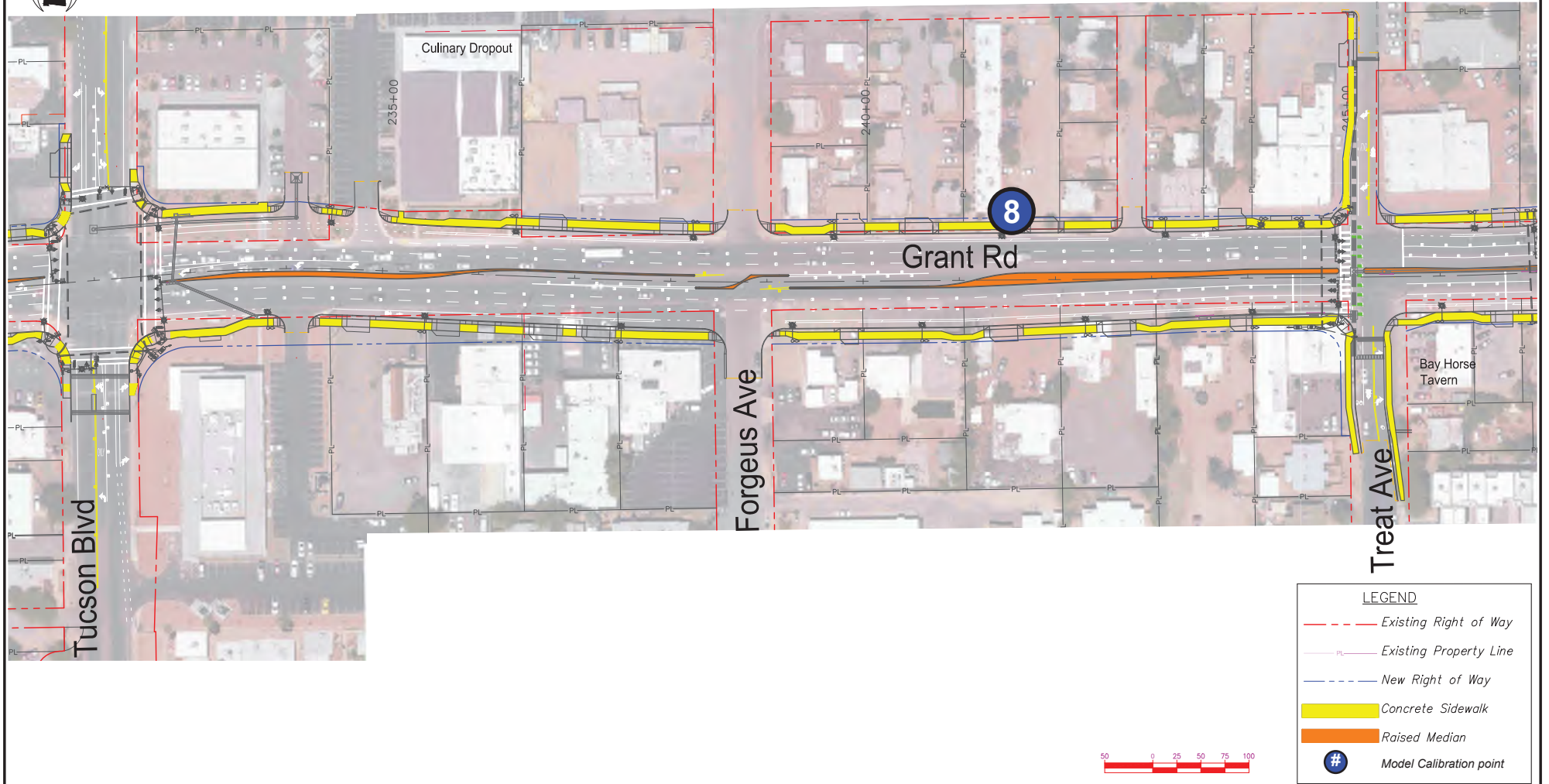
Figure 2.  
Model Calibration Point Locations (2/4)



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Noise Study

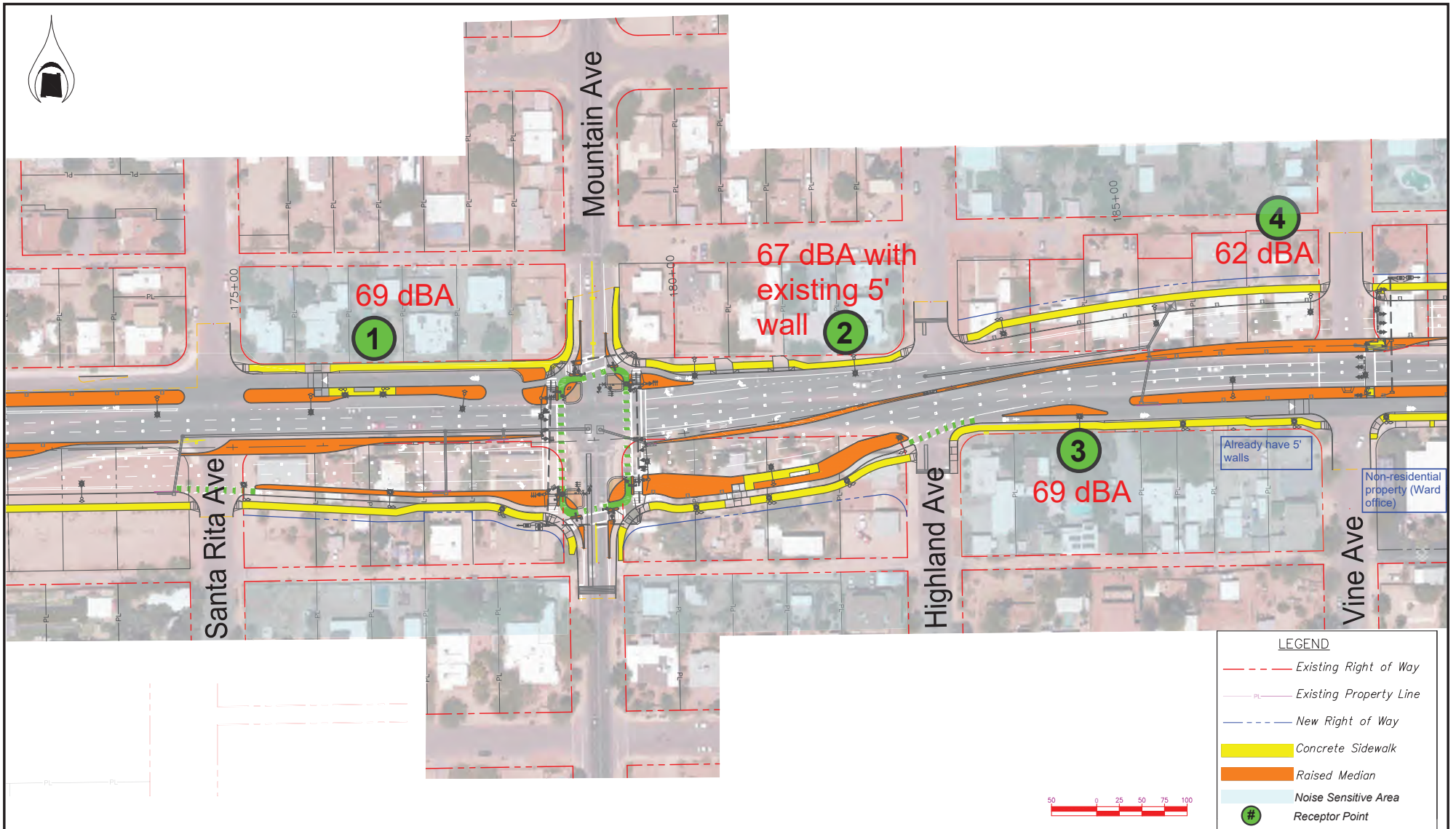
Figure 2.  
Model Calibration Point Locations (3/4)

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Figure 2.  
Model Calibration Point Locations (4/4)



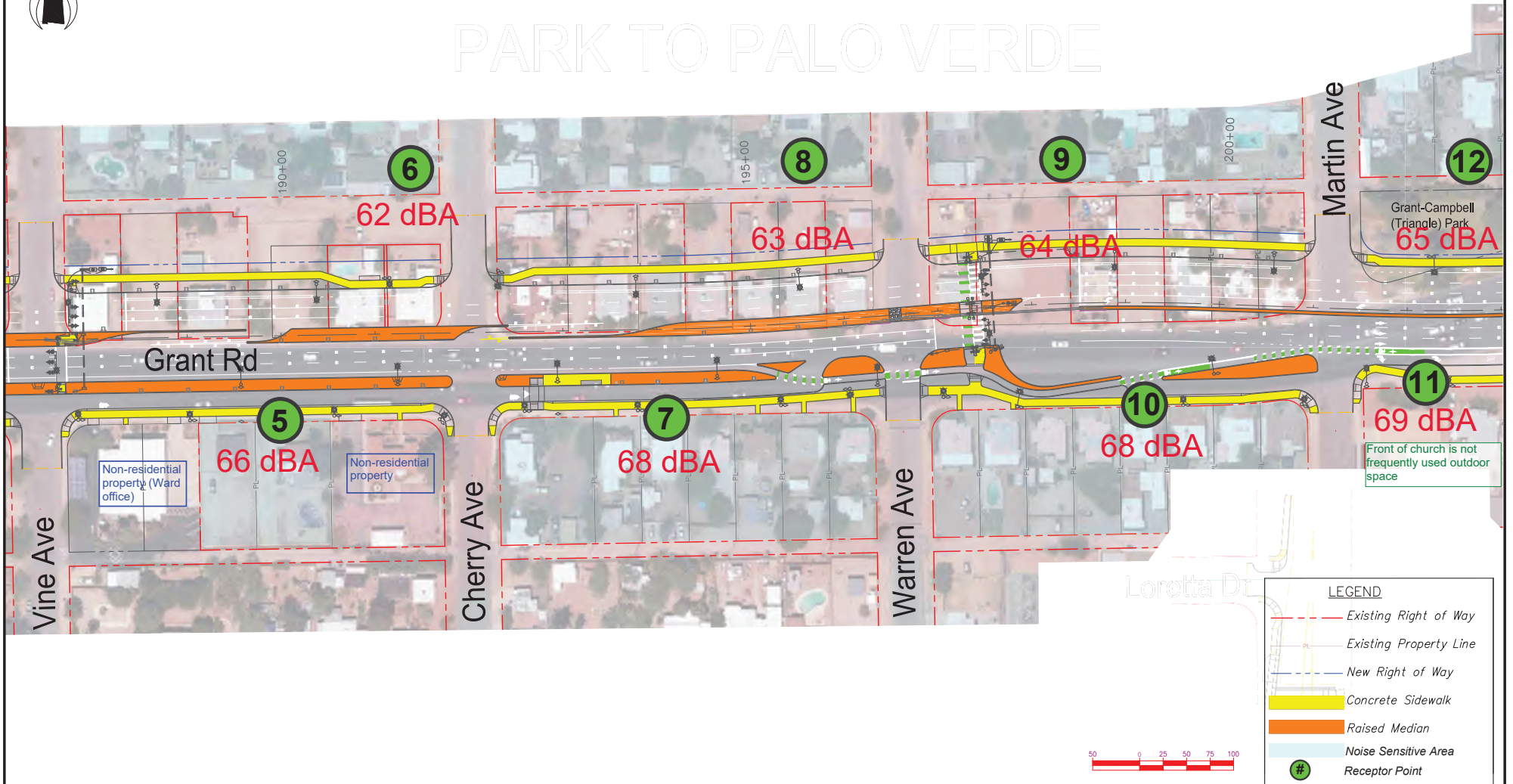
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Figure 3.  
Future Unmitigated Traffic Noise Levels (1/6)

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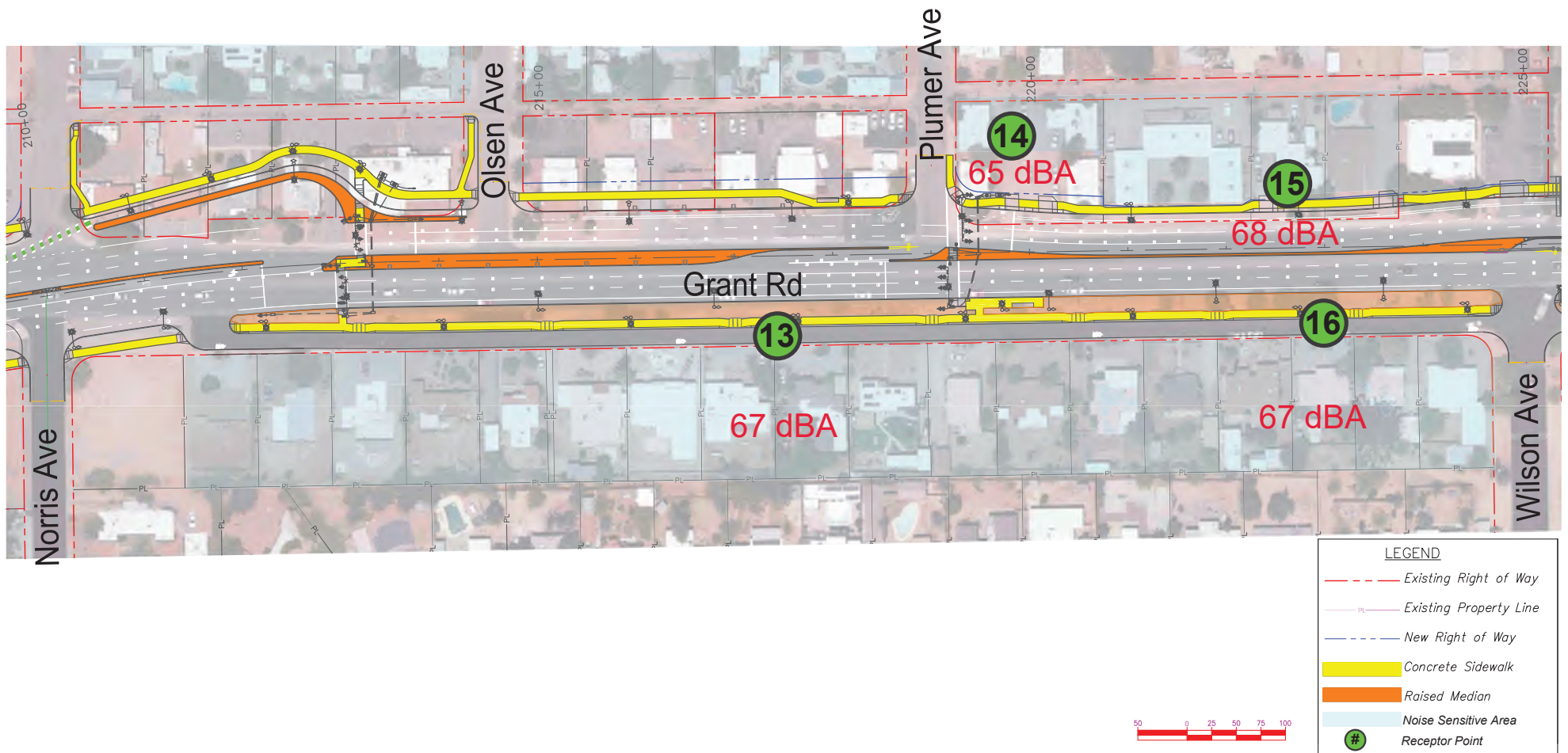
# GIVAN ROAD PROJECTS 5 & 6 PARK TO PALO VERDE



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Figure 3.  
Future Unmitigated Traffic Noise Levels (2/6)

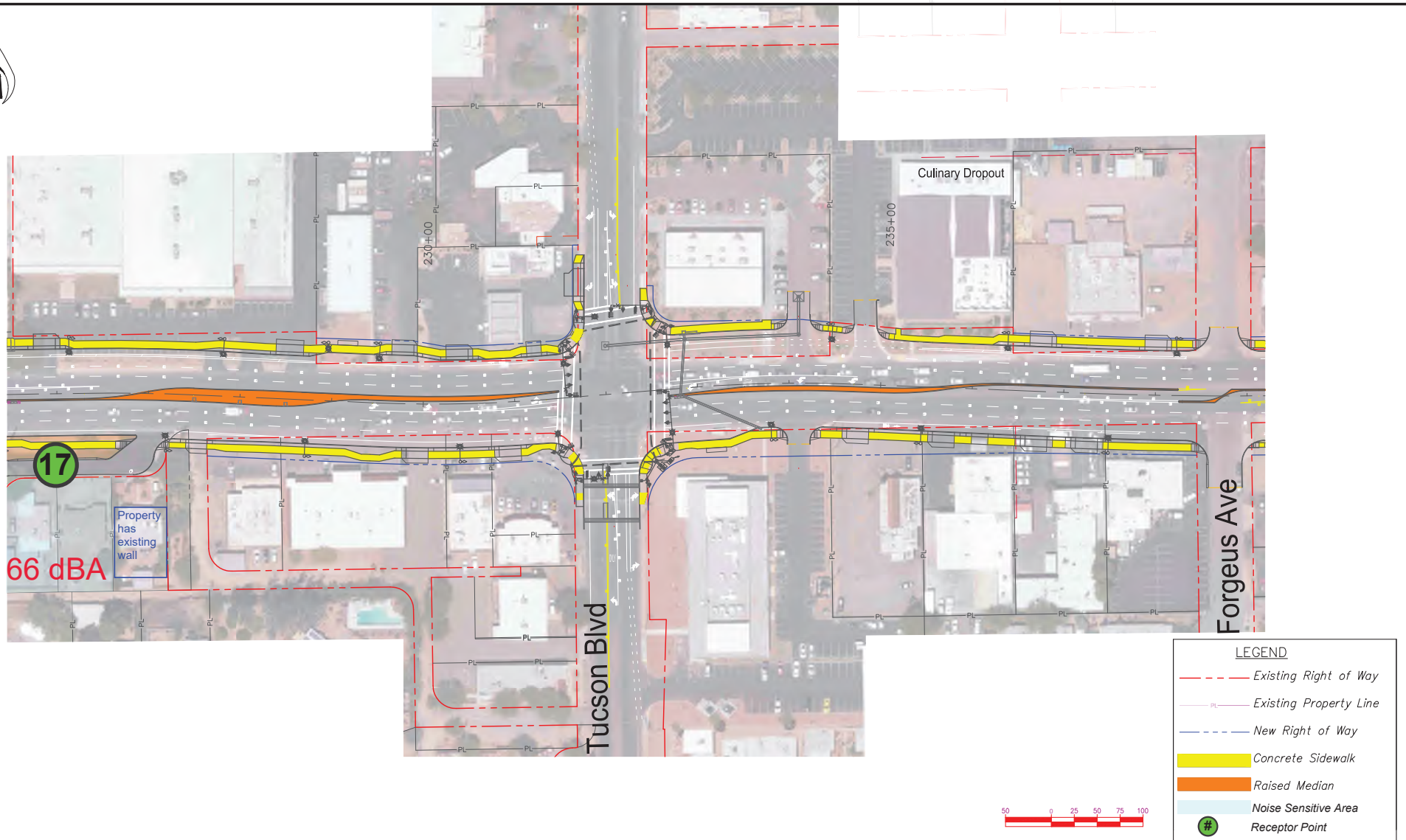
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Figure 3.  
Future Unmitigated Traffic Noise Levels (3/6)

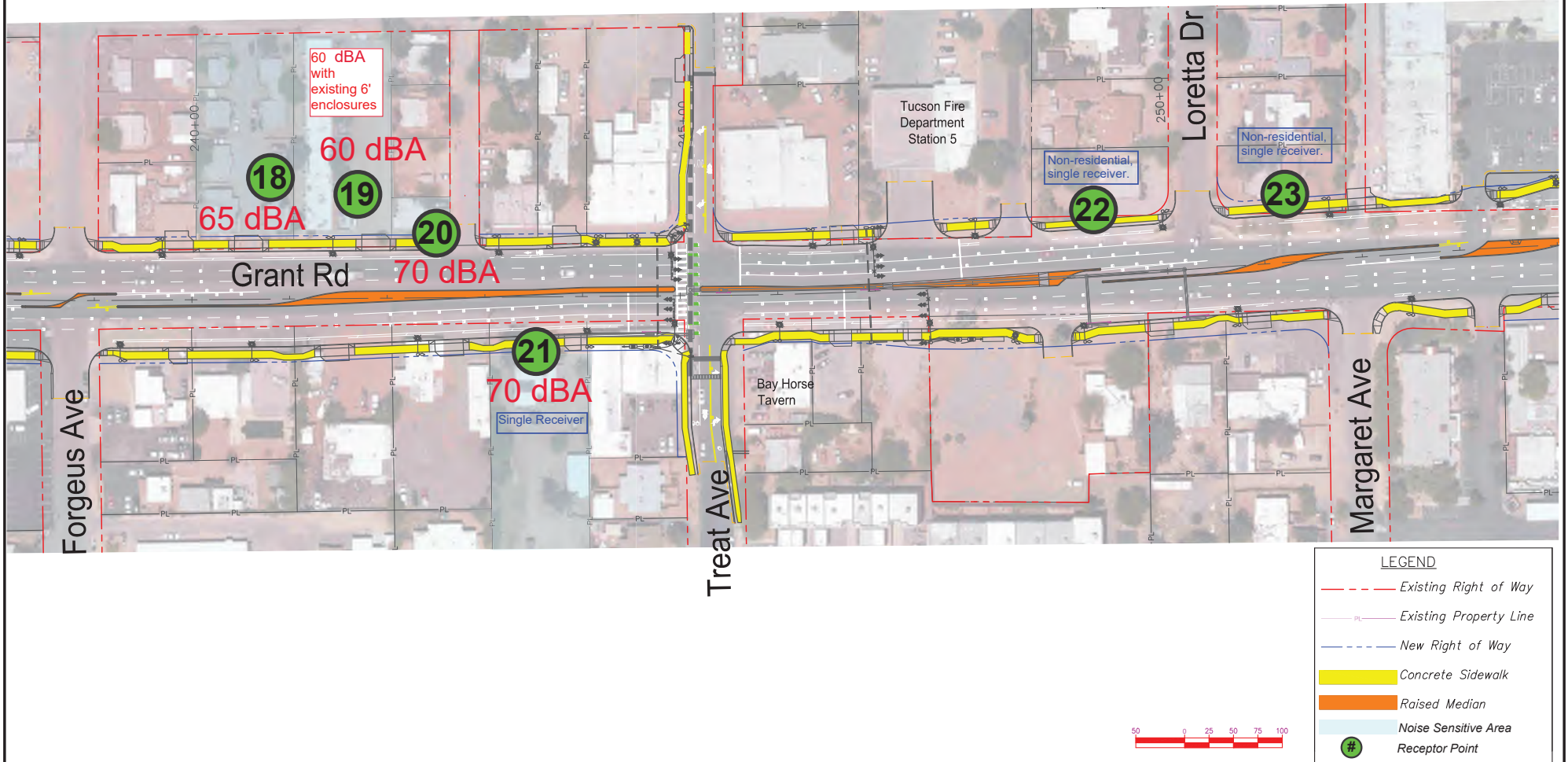
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Figure 3.  
Future Unmitigated Traffic Noise Levels (4/6)

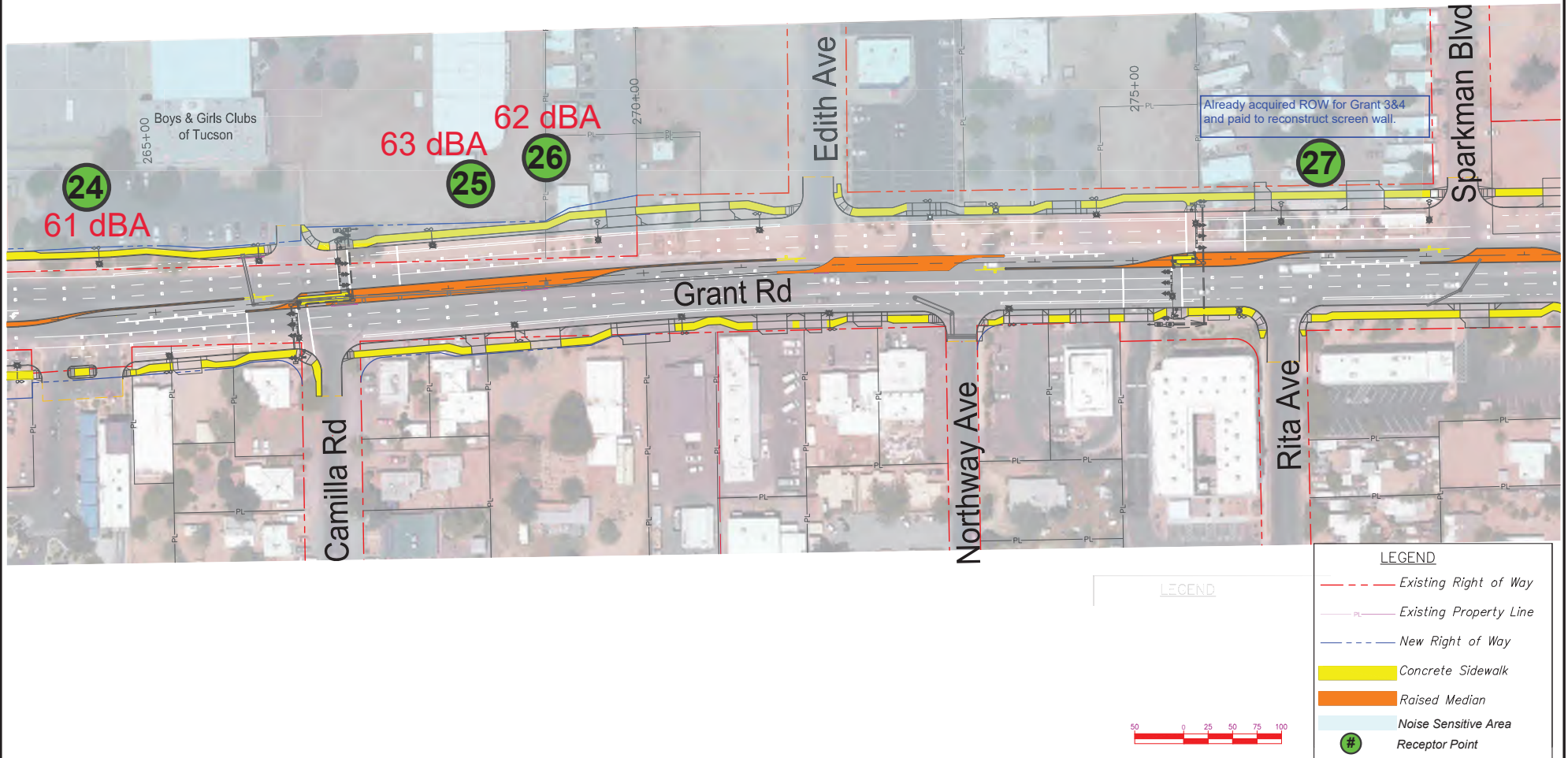
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Figure 3.  
Future Unmitigated Traffic Noise Levels (5/6)

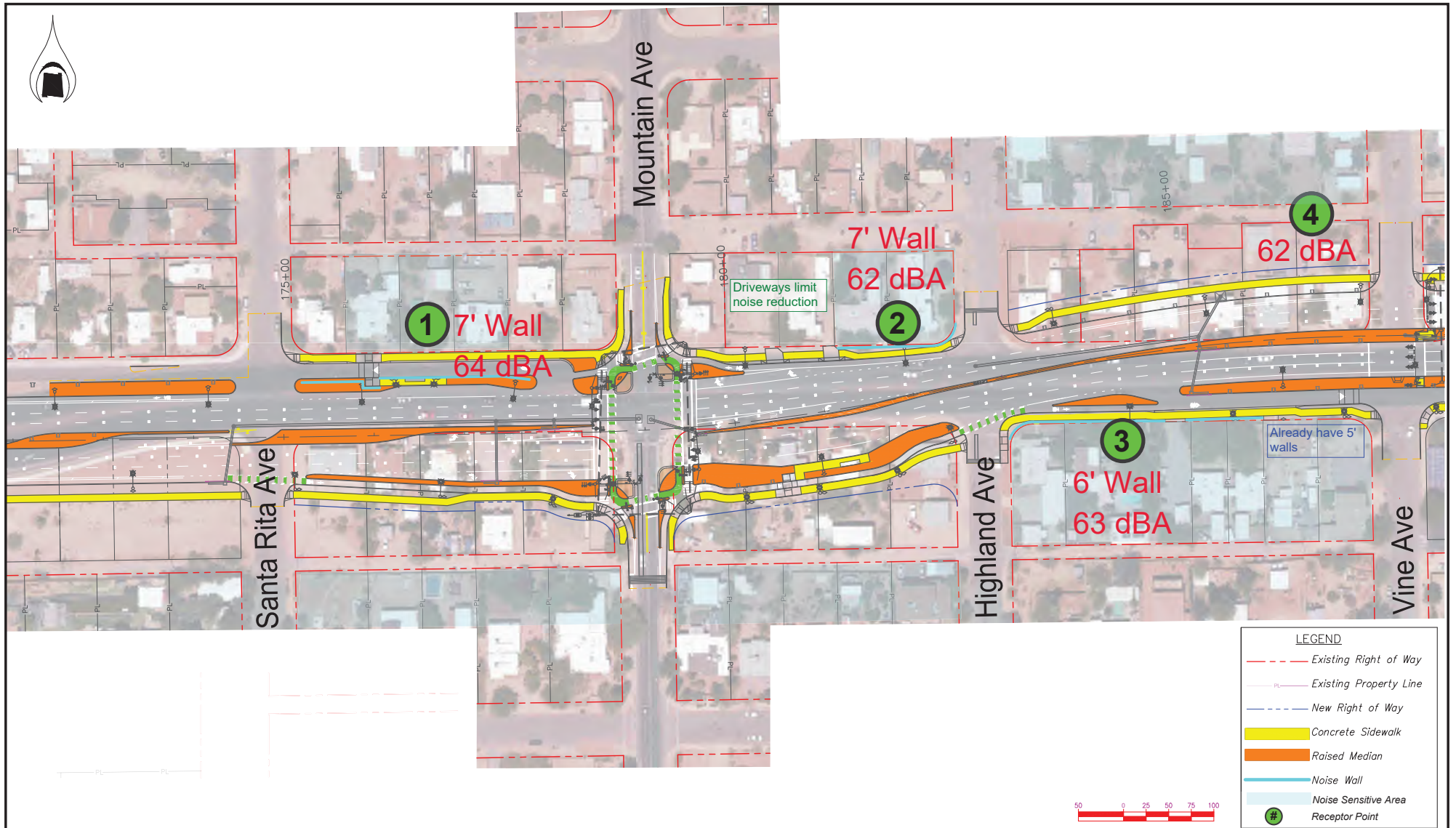
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Figure 3.  
Future Unmitigated Traffic Noise Levels (6/6)

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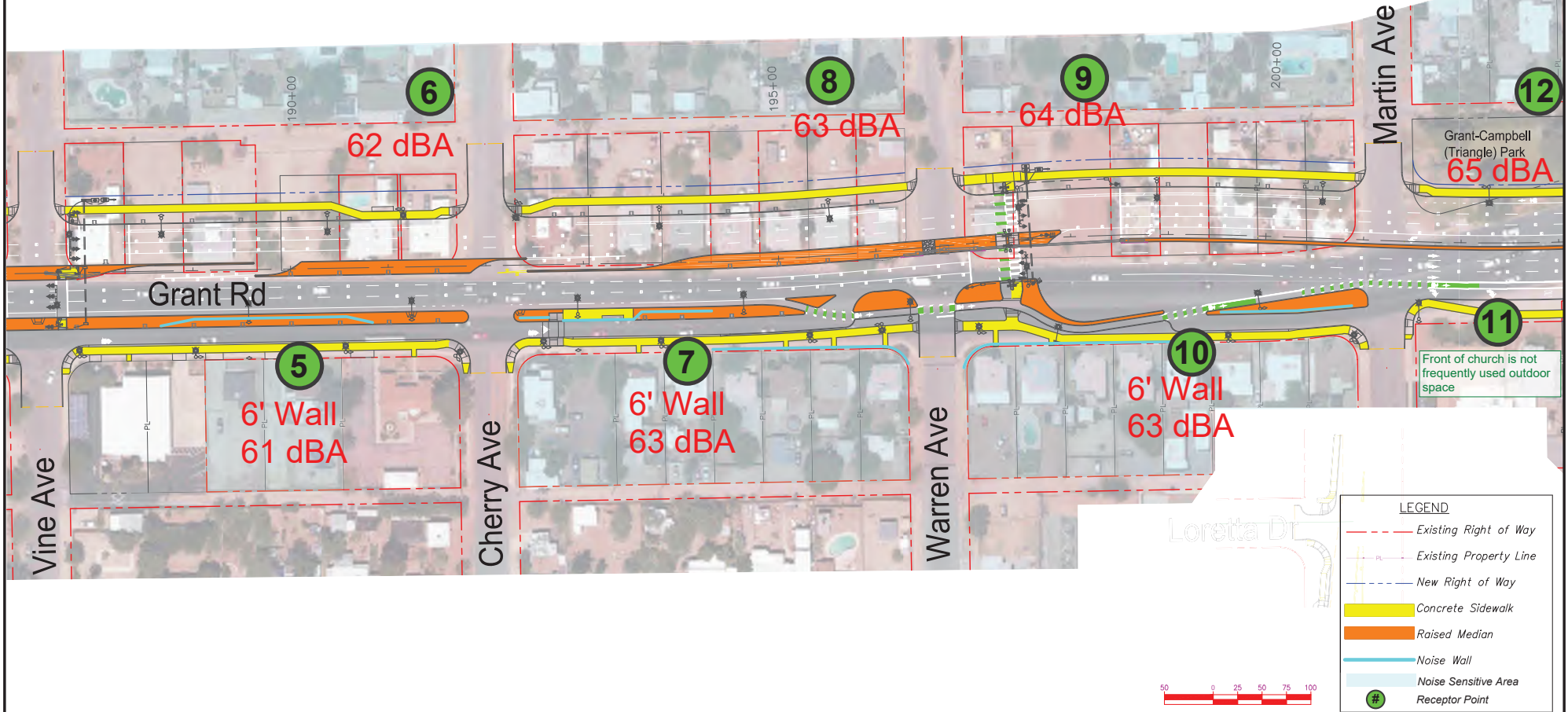
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Figure 4.  
Future Mitigated Traffic Noise Levels (1/6)

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# GRANT ROAD PHASES 5 & 6 PARK TO PALO VERDE



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Noise Study

Figure 4.  
Future Mitigated Traffic Noise Levels (2/6)

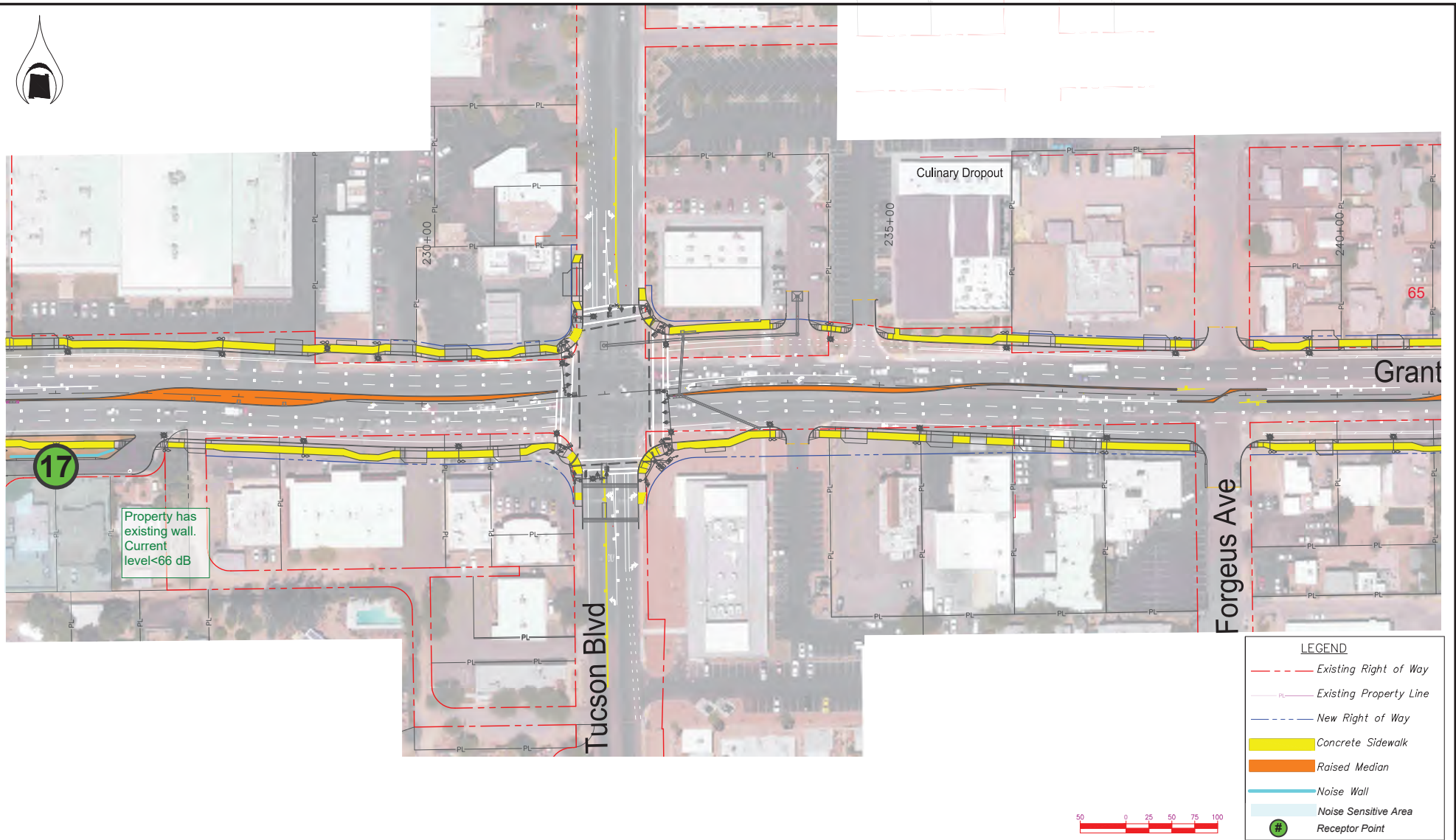
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Figure 4.  
Future Mitigated Traffic Noise Levels (3/6)

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Property has existing wall.  
Current level < 66 dB

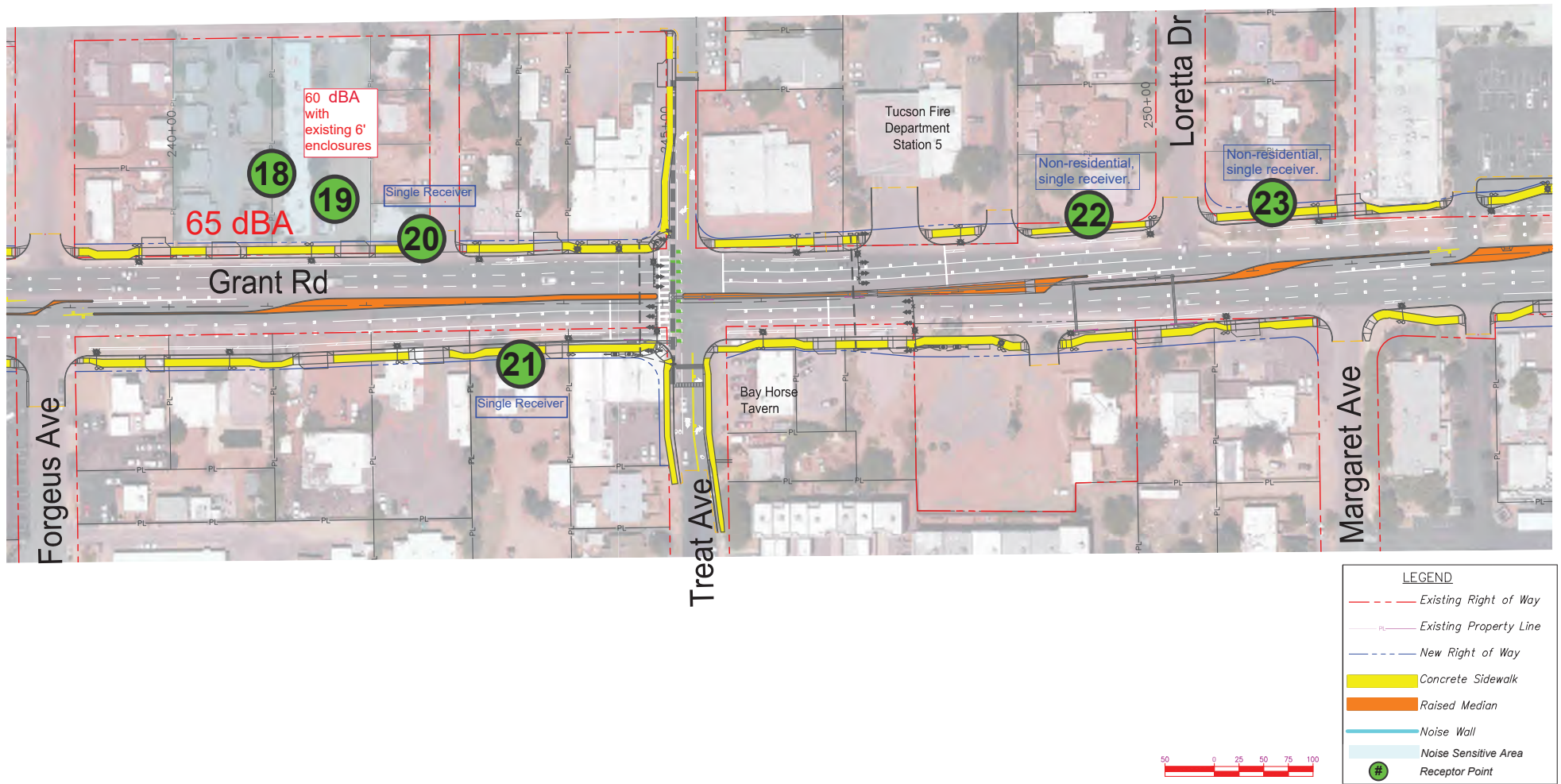
LEGEND	
	Existing Right of Way
	Existing Property Line
	New Right of Way
	Concrete Sidewalk
	Raised Median
	Noise Wall
	Noise Sensitive Area
	Receptor Point



Grant Road Phase 5 & 6  
Noise Study

Figure 4.  
Future Mitigated Traffic Noise Levels (4/6)

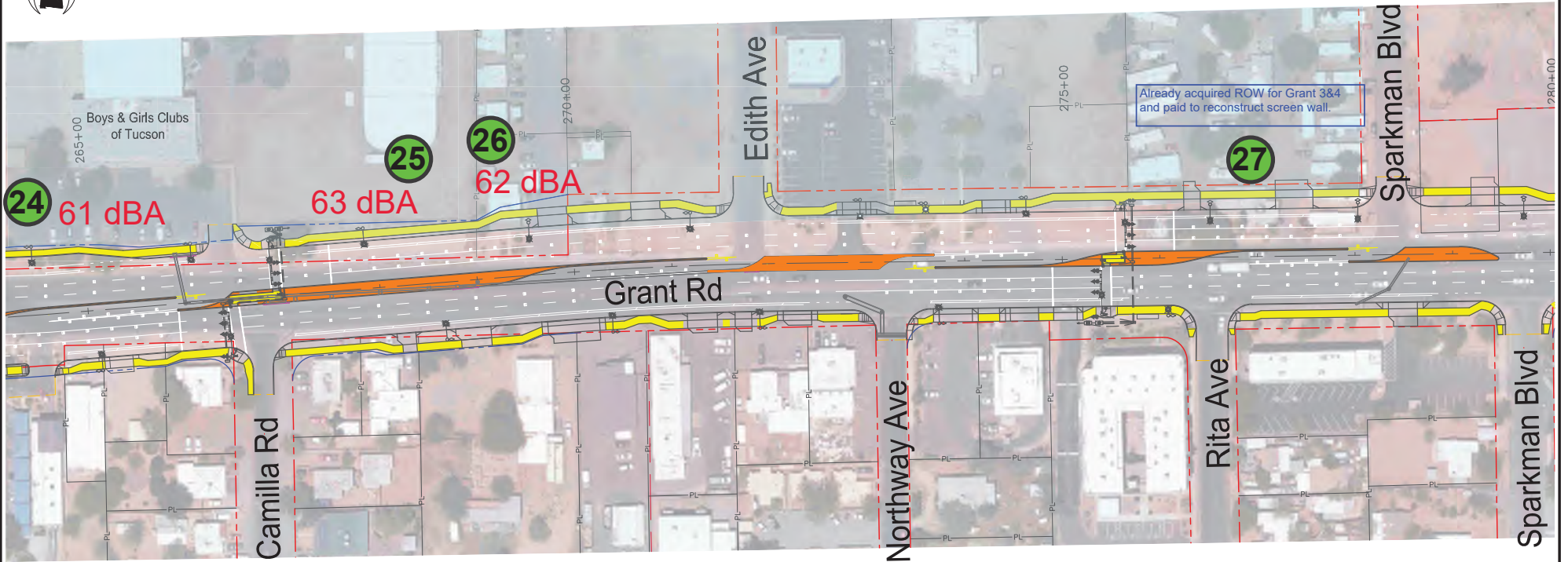
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Figure 4.  
Future Mitigated Traffic Noise Levels (5/6)

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LEGEND

--- Existing Right of Way

LEGEND

- Existing Right of Way
- Existing Property Line
- New Right of Way
- Concrete Sidewalk
- Raised Median
- Noise Wall
- Noise Sensitive Area
- Receptor Point



Grant Road Phase 5 & 6  
Noise Study

Figure 4.  
Future Mitigated Traffic Noise Levels (6/6)

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**ATTACHMENT A**  
**NOISE MONITORING DATA**  
**TNM DATA**





### FIELD NOISE MEASUREMENT DATA

PROJECT: Grant rd. 5 and 6

PROJ.# 2TUS200201

SITE IDENTIFICATION: 3 OBSERVER(S): Alex Pulido  
 START DATE/TIME: 3-1-22 END DATE/TIME: \_\_\_\_\_  
 ADDRESS: 1641 E Grant rd.

**METEOROLOGICAL CONDITIONS:**

TEMP: 29 °F HUMIDITY: 9 %R.H. WIND:  CALM  LIGHT  MODERATE  VARIABLE  
 WINDSPEED: 11 MPH DIR:  N  NE  E  SE  S  W  NW  STEADY  GUSTY  
 SKY:  SUNNY  CLEAR  OVRCAST  PRTLY CLOUDY  FOG  RAIN  OTHER:

**ACOUSTIC INSTRUMENTS:**

INSTRUMENT: \_\_\_\_\_ TYPE:  1  2 SERIAL #: \_\_\_\_\_  
 CALIBRATOR: \_\_\_\_\_ SERIAL #: \_\_\_\_\_  
 CALIBRATION CHECK: PRE-TEST \_\_\_\_\_ dBA SPL POST-TEST \_\_\_\_\_ dBA SPL WINDSCREEN \_\_\_\_\_  
 SETTINGS:  A-WEIGHTED  SLOW  FAST  FRONTAL  RANDOM  ANSI  OTHER: \_\_\_\_\_

REC #	START	END	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>90</sub>	L <sub>50</sub>	L <sub>10</sub>	OTHER: (TYPE?)
	<u>17:00</u>	<u>17:20</u>	<u>60.6</u>	<u>73.7</u>	<u>46.6</u>				

*overall* (with arrow pointing to L<sub>eq</sub> column)

COMMENTS: 150 ft. From roadway, dogs barking for 4 minutes close to beginning

**SOURCE INFO AND TRAFFIC COUNTS:**

PRIMARY NOISE SOURCE:  TRAFFIC  AIRCRAFT  RAIL  INDUSTRIAL  AMBIENT  OTHER: \_\_\_\_\_  
 ROADWAY TYPE: \_\_\_\_\_  
 TRAFFIC COUNT DURATION: \_\_\_\_\_ -MIN SPEED #2 COUNT SPEED  
 NB/ EB  SB/ WB  NB/ EB  SB/ WB  NB/ EB  SB/ WB  NB/ EB  SB/ WB

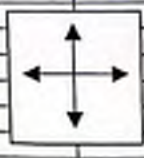
AUTOS: \_\_\_\_\_ MED. TRUCKS: \_\_\_\_\_  
 HVY TRUCKS: \_\_\_\_\_ BUSES: \_\_\_\_\_  
 MOTORCYCLES: \_\_\_\_\_

SPEED ESTIMATED BY:  RADAR  DRIVING  OBSERVER

OTHER SOURCES:  DIST. AIRCRAFT  RUSTLING LEAVES  DIST. BARKING DOGS  BIRDS  DIST. INDUSTRIAL  
 DIST. CHILDREN PLAYING  DIST. TRAFFIC  DIST. LANDSCAPING ACTIVITIES  OTHER: \_\_\_\_\_

**DESCRIPTION/SKETCH:**

TERRAIN:  HARD  SOFT  MIXED  FLAT  OTHER: \_\_\_\_\_  
 PHOTOS: \_\_\_\_\_  
 OTHER COMMENTS/SKETCH: Dogs barking for 4 minutes





**FIELD NOISE MEASUREMENT DATA**

10

PROJECT: Grant rd. 5 and 6

PROJ.# 7Tus200001

SITE IDENTIFICATION: 6 OBSERVER(S): Alex Pulido  
 START DATE/TIME: 3-2-22 END DATE/TIME: \_\_\_\_\_  
 ADDRESS: 2221 E Grant rd.

METEOROLOGICAL CONDITIONS:  
 TEMP: 84 °F HUMIDITY: 8 %R.H. WIND:  CALM  LIGHT  MODERATE  VARIABLE  
 WINDSPEED: 9 MPH DIR:  N  NE  E  SE  S  W  NW  STEADY  GUSTY  
 SKY:  SUNNY  CLEAR  OVRCAST  PRTLY CLOUDY  FOG  RAIN  OTHER:

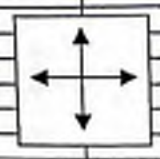
ACOUSTIC INSTRUMENTS:  
 INSTRUMENT: \_\_\_\_\_ TYPE:  1  2 SERIAL #: \_\_\_\_\_  
 CALIBRATOR: \_\_\_\_\_ SERIAL #: \_\_\_\_\_  
 CALIBRATION CHECK: PRE-TEST \_\_\_\_\_ dBA SPL POST-TEST \_\_\_\_\_ dBA SPL WINDSCREEN \_\_\_\_\_  
 SETTINGS:  A-WEIGHTED  SLOW  FAST  FRONTAL  RANDOM  ANSI  OTHER: \_\_\_\_\_  

REC #	START	END	<i>L<sub>eq</sub></i>	<i>L<sub>max</sub></i>	<i>L<sub>min</sub></i>	<i>L<sub>90</sub></i>	<i>L<sub>50</sub></i>	<i>L<sub>10</sub></i>	OTHER: (TYPE?)
	<u>16:31</u>	<u>16:51</u>	<u>77.1</u>	<u>84</u>	<u>68.4</u>				
	<u>16:31</u>	<u>16:51</u>	<u>73.9</u>	<u>84.3</u>	<u>60.6</u>				

COMMENTS: Military helicopter 16 FE from roadway

SOURCE INFO AND TRAFFIC COUNTS:  
 PRIMARY NOISE SOURCE:  TRAFFIC  AIRCRAFT  RAIL  INDUSTRIAL  AMBIENT  OTHER: \_\_\_\_\_  
 ROADWAY TYPE: \_\_\_\_\_  
 TRAFFIC COUNT DURATION: \_\_\_\_\_ -MIN SPEED #2 COUNT SPEED  
 NB/ EB  SB/ WB  NB/ EB  SB/ WB  NB/ EB  SB/ WB  NB/ EB  SB/ WB  
 AUTOS: \_\_\_\_\_  
 MED. TRUCKS: \_\_\_\_\_  
 HVY TRUCKS: \_\_\_\_\_  
 BUSES: \_\_\_\_\_  
 MOTORCYCLES: \_\_\_\_\_  
 SPEED ESTIMATED BY:  RADAR  DRIVING  OBSERVER  
 OTHER SOURCES:  DIST. AIRCRAFT  RUSTLING LEAVES  DIST. BARKING DOGS  BIRDS  DIST. INDUSTRIAL  
 DIST. CHILDREN PLAYING  DIST. TRAFFIC  DIST. LANDSCAPING ACTIVITIES  OTHER: \_\_\_\_\_

DESCRIPTION/SKETCH:  
 TERRAIN:  HARD  SOFT  MIXED  FLAT  OTHER: \_\_\_\_\_  
 PHOTOS: \_\_\_\_\_  
 OTHER COMMENTS/SKETCH:  



# FIELD NOISE MEASUREMENT DATA

PROJECT: Grant rd. 5 and 6 PROJ. # 2T45200201

SITE IDENTIFICATION: 8 OBSERVER(S): Alex Pulido  
 START DATE/TIME: 3-2-22 END DATE/TIME: \_\_\_\_\_  
 ADDRESS: 2627 E Grant rd.

METEOROLOGICAL CONDITIONS:  
 TEMP: 83 °F HUMIDITY: 9 %R.H. WIND:  CALM  LIGHT  MODERATE  VARIABLE  
 WINDSPEED: 8 MPH DIR:  N  NE  E  SE  S  W  NW  STEADY  GUSTY  
 SKY:  SUNNY  CLEAR  OVRCAST  PARTLY CLOUDY  FOG  RAIN  OTHER:

ACOUSTIC INSTRUMENTS:  
 INSTRUMENT: \_\_\_\_\_ TYPE:  1  2 SERIAL #: \_\_\_\_\_  
 CALIBRATOR: \_\_\_\_\_ SERIAL #: \_\_\_\_\_  
 CALIBRATION CHECK: PRE-TEST \_\_\_\_\_ dBA SPL POST-TEST \_\_\_\_\_ dBA SPL WINDSCREEN \_\_\_\_\_  
 SETTINGS:  A-WEIGHTED  SLOW  FAST  FRONTAL  RANDOM  ANSI  OTHER: \_\_\_\_\_

REC #	START	END	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>90</sub>	L <sub>50</sub>	L <sub>10</sub>	OTHER: (TYPE?)
	<u>17:30</u>	<u>17:50</u>	<u>72.9</u>	<u>87.4</u>	<u>71.6</u>				
	<u>17:30</u>	<u>17:50</u>	<u>75.1</u>	<u>87.4</u>	<u>50</u>				

↙ current  
↘ overall

COMMENTS: Bus stop close by so loud bus accelerations (1 near end)  
13 ft from roadway

SOURCE INFO AND TRAFFIC COUNTS:  
 PRIMARY NOISE SOURCE:  TRAFFIC  AIRCRAFT  RAIL  INDUSTRIAL  AMBIENT  OTHER: \_\_\_\_\_  
 ROADWAY TYPE: \_\_\_\_\_  
 TRAFFIC COUNT DURATION: \_\_\_\_\_ -MIN \_\_\_\_\_ SPEED \_\_\_\_\_ #2 COUNT \_\_\_\_\_ SPEED \_\_\_\_\_  
 NB/ EB  SB/ WB  NB/ EB  SB/ WB  NB/ EB  SB/ WB  NB/ EB  SB/ WB  
 AUTOS: \_\_\_\_\_  
 MED. TRUCKS: \_\_\_\_\_  
 HVY TRUCKS: \_\_\_\_\_  
 BUSES: \_\_\_\_\_  
 MOTORCYCLES: \_\_\_\_\_  
 SPEED ESTIMATED BY:  RADAR  DRIVING  OBSERVER  
 OTHER SOURCES:  DIST. AIRCRAFT  RUSTLING LEAVES  DIST. BARKING DOGS  BIRDS  DIST. INDUSTRIAL  
 DIST. CHILDREN PLAYING  DIST. TRAFFIC  DIST. LANDSCAPING ACTIVITIES  OTHER: \_\_\_\_\_

DESCRIPTION/SKETCH:  
 TERRAIN:  HARD  SOFT  MIXED  FLAT  OTHER: \_\_\_\_\_  
 PHOTOS: \_\_\_\_\_  
 OTHER COMMENTS/SKETCH:


↑  
 ↓  
 ←  
 →

**REPORT:** Results: Sound Levels - Input Heights  
**TNM VERSION:** 3.1.7970.37608 **REPORT DATE:** 27 December 2022  
**CALCULATED WITH:** 3.1.7970.37608 **CALCULATION DATE:** 12/27/2022 11:20:21 AM  
**CASE:** Project Lane Configurations **ORGANIZATION:** Pima County Department of Transportation  
**ANALYSIS BY:** Tin Cheung **PROJECT/CONTRACT:** Grant Road Phases 5 & 6  
**DEFAULT GROUND TYPE:** LooseSoil  
**ATMOSPHERICS:** 68°F, 25% Average pavement type shall be used unless a state highway agency  
**PAVEMENT TYPE(S) USED:** Average substantiates the use of a different type with approval of FHWA.

Results for:	DUs	Noise Reduction			Barrier Cost				
		Min	Avg	Max	Area / Volume	Lineal	Total	Total/DUs	
		dB	dB	dB	\$	\$	\$	\$	
Receivers in the Barrier Design:	All	0	0.0	3.2	7.3	0	0	0	NaN
	All Impacted	0	---	---	---	0	0	0	---
Meeting Noise Reduction Goal:	All	0	---	---	---	0	0	0	---
	All Impacted	0	---	---	---	0	0	0	---

Receiver				Modeled Traffic Noise Levels									
Name	No.	DUs	Existing LAeq dBA	All Abatement Barriers at Zero Height				Type of Impact	With Abatement Barriers				
				LAeq		Increase over Existing			Calc. LAeq dBA	Noise Reduction		Calc. Minus Goal dBA	
				Calc.	Absolute Criterion	Calc.	Relative Criterion			Calc.	Goal		
				dBA	dBA	dBA	dBA		dBA	dBA	dBA	dBA	
Receiver-7	0	0	---	67.5	0.0	---	---	Sound Level	63.0	4.6	8.0	-3.4	
Receiver-8	0	0	---	63.2	0.0	---	---	Sound Level	63.2	0.0	8.0	-8.0	
Receiver-13	0	0	---	66.9	0.0	---	---	Sound Level	62.0	4.9	8.0	-3.1	
Receiver-4	0	0	---	61.5	0.0	---	---	Sound Level	61.5	0.1	8.0	-7.9	
Receiver-6	0	0	---	62.1	0.0	---	---	Sound Level	62.1	0.0	8.0	-8.0	
Receiver-9	0	0	---	64.3	0.0	---	---	Sound Level	64.2	0.1	8.0	-7.9	
Receiver-16	0	0	---	66.5	0.0	---	---	Sound Level	61.7	4.8	8.0	-3.2	
Receiver-18	0	0	---	64.5	0.0	---	---	Sound Level	58.2	6.4	8.0	-1.6	
Receiver-5	0	0	---	66.1	0.0	---	---	Sound Level	61.7	4.5	8.0	-3.5	
Receiver-21	0	0	---	70.6	0.0	---	---	Sound Level	70.2	0.4	8.0	-7.6	
Receiver-24	0	0	---	61.2	0.0	---	---	Sound Level	57.8	3.3	8.0	-4.7	
Receiver-25	0	0	---	62.6	0.0	---	---	Sound Level	62.6	0.1	8.0	-7.9	
Receiver-12	0	0	---	64.5	0.0	---	---	Sound Level	60.0	4.5	8.0	-3.5	
Receiver-26	0	0	---	61.7	0.0	---	---	Sound Level	61.7	0.1	8.0	-7.9	
Receiver-3	0	0	---	69.2	0.0	---	---	Sound Level	63.0	6.2	8.0	-1.8	

REPORT:	<b>Results: Sound Levels - Input Heights</b>			REPORT DATE:	27 December 2022
TNM VERSION:	3.1.7970.37608			CALCULATION DATE:	12/27/2022 11:20:21 AM
CALCULATED WITH:	3.1.7970.37608			ORGANIZATION:	Pima County Department of Transportation
CASE:	Project Lane Configurations			PROJECT/CONTRACT:	Grant Road Phases 5 & 6
ANALYSIS BY:	Tin Cheung				
DEFAULT GROUND TYPE:	LooseSoil				
ATMOSPHERICS:	68°F, 25%			Average pavement type shall be used unless a state highway agency substantiates the use of a different type with approval of FHWA.	
PAVEMENT TYPE(S) USED:	Average				

Results for:	DUs	Noise Reduction			Barrier Cost				
		Min	Avg	Max	Area / Volume	Lineal	Total	Total/DUs	
		dB	dB	dB	\$	\$	\$	\$	
Receivers in the Barrier Design:	All	0	0.0	3.2	7.3	0	0	0	NaN
	All Impacted	0	---	---	---	0	0	0	---
Meeting Noise Reduction Goal:	All	0	---	---	---	0	0	0	---
	All Impacted	0	---	---	---	0	0	0	---

Receiver				Modeled Traffic Noise Levels									
Name	No.	DUs	Existing LAeq dBA	All Abatement Barriers at Zero Height				Type of Impact	With Abatement Barriers				
				LAeq		Increase over Existing			Calc. LAeq dBA	Noise Reduction		Calc. Minus Goal dBA	
				Calc.	Absolute Criterion	Calc.	Relative Criterion			Calc.	Goal		
				dBA	dBA	dBA	dBA		dBA	dBA	dBA		
Receiver-14	0	0	---	65.4	0.0	---	---	Sound Level	65.1	0.3	8.0	-7.7	
Receiver-19	0	0	---	67.6	0.0	---	---	Sound Level	60.3	7.3	8.0	-0.7	
Receiver-2	0	0	---	72.0	0.0	---	---	Sound Level	66.9	5.1	8.0	-2.9	
Receiver-1	0	0	---	68.8	0.0	---	---	Sound Level	62.9	6.0	8.0	-2.0	
Receiver-10	0	0	---	67.8	0.0	---	---	Sound Level	60.8	7.0	8.0	-1.0	
Receiver-17	0	0	---	66.0	0.0	---	---	Sound Level	62.3	3.8	8.0	-4.2	
Receiver-15	0	0	---	68.9	0.0	---	---	Sound Level	68.2	0.7	8.0	-7.3	

REPORT:

**INPUT TRAFFIC FOR TNM VEHICLES (LAeq)**

TNM VERSION:

3.1.7970.37608

REPORT DATE:

27 December 2022

CALCULATED WITH:

3.1.7970.37608

CALCULATION DATE:

12/27/2022 11:20:21 AM

CASE:

Project Lane Configurations

ORGANIZATION:

Pima County Department of Transportation

ANALYSIS BY:

Tin Cheung

PROJECT/CONTRACT:

Grant Road Phases 5 & 6

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]		
Grant Highland EB Frontage2	Point-173	2459	10	20	0	30	0	30	0	30	0	30
	Point-173	2460	10	20	0	30	0	30	0	30	0	30
	Point-176	2461	10	20	0	30	0	30	0	30	0	30
	30	2462	10	20	0	30	0	30	0	30	0	30
	Point-180	2463	10	20	0	30	0	30	0	30	0	30
Grant Mountain WB Frontage2	Point-184	21	4	20	0	20	0	20	0	20	0	20
	Point-183	22	4	20	0	20	0	20	0	20	0	20
Grant Mountain WB Frontage	Point-185	2468	4	20	0	30	0	30	0	30	0	30
	Point-186	2469	4	20	0	30	0	30	0	30	0	30
Grant Mountain EBR	Point-187	2470	44	40	1	40	1	40	0	40	0	40
	Point-188	2471	44	40	1	40	1	40	0	40	0	40
	Point-190	2472	44	40	1	40	1	40	0	40	0	40
Grant Mountain EBL	Point-191	2473	56	40	2	40	1	40	0	40	0	40
	Point-192	2474	56	40	2	40	1	40	0	40	0	40
	Point-194	2475	56	40	2	40	1	40	0	40	0	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]		
Grant Mountain EB-Bus	Point-195	2476	0	5	0	5	0	5	4	5	0	5
	Point-196	2477	0	5	0	5	0	5	4	5	0	5
Grant Highland EB Frontage	Point-207	2484	10	20	0	30	0	30	0	30	0	30
	Point-208	2485	10	20	0	30	0	30	0	30	0	30
	Point-210	2486	10	20	0	30	0	30	0	30	0	30
	Point-212	2487	10	20	0	30	0	30	0	30	0	30
	Point-214	2488	10	20	0	30	0	30	0	30	0	30
Grant Campbell WB-UT	Point-219	2493	276	40	9	40	4	40	1	40	1	40
	Point-220	2494	276	40	9	40	4	40	1	40	1	40
	Point-222	2495	276	40	9	40	4	40	1	40	1	40
	Point-224	2496	276	40	9	40	4	40	1	40	1	40
	Point-226	2497	276	40	9	40	4	40	1	40	1	40
	Point-228	2498	276	40	9	40	4	40	1	40	1	40
	Point-230	2499	276	40	9	40	4	40	1	40	1	40
	Point-232	2500	276	40	9	40	4	40	1	40	1	40
	Point-234	2501	276	40	9	40	4	40	1	40	1	40
	Point-236	2502	276	40	9	40	4	40	1	40	1	40
	Point-238	2503	276	40	9	40	4	40	1	40	1	40
	Point-240	2504	276	40	9	40	4	40	1	40	1	40
	Point-242	2505	276	40	9	40	4	40	1	40	1	40
Grant Martin EBR	Point-243	2506	10	30	0	30	0	30	0	30	0	30
	Point-244	2507	10	30	0	30	0	30	0	30	0	30
	Point-246	2508	10	30	0	30	0	30	0	30	0	30

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]		
Grant Martin EBR	Point-248	2509	10	30	0	30	0	30	0	30	0	30
	Point-250	2510	10	30	0	30	0	30	0	30	0	30
Grant Campbell EBR	Point-251	2511	514	30	16	30	8	30	2	30	3	30
	Point-252	2512	514	30	16	30	8	30	2	30	3	30
	Point-254	2513	514	30	16	30	8	30	2	30	3	30
	Point-256	2514	514	30	16	30	8	30	2	30	3	30
	Point-258	2515	514	30	16	30	8	30	2	30	3	30
	Point-260	2516	514	30	16	30	8	30	2	30	3	30
	Point-262	2517	514	30	16	30	8	30	2	30	3	30
	Point-264	2518	514	30	16	30	8	30	2	30	3	30
Campbell SB-2D	Point-265	2519	527	40	10	40	22	40	16	40	3	40
	Point-266	2520	527	40	10	40	22	40	16	40	3	40
	Point-268	2521	527	40	10	40	22	40	16	40	3	40
Campbell SB-1D	Point-269	2522	527	40	10	40	22	40	16	40	3	40
	Point-270	2523	527	40	10	40	22	40	16	40	3	40
Campbell NB-Left1	Point-288	23	158	40	3	40	6	40	5	40	1	40
	Point-286	24	158	40	3	40	6	40	5	40	1	40
	Point-284	25	158	40	3	40	6	40	5	40	1	40
	Point-282	26	158	40	3	40	6	40	5	40	1	40
	Point-281	27	158	40	3	40	6	40	5	40	1	40
Campbell NB Left2	Point-289	2535	158	40	3	40	6	40	5	40	1	40
	Point-0	50	158	40	3	40	6	40	5	40	1	40
	Point-290	2537	158	40	3	40	6	40	5	40	1	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Campbell NB Left2	Point-292	2538	158	40	3	40	6	40	5	40	1	40
	Point-294	2539	158	40	3	40	6	40	5	40	1	40
	Point-296	2540	158	40	3	40	6	40	5	40	1	40
	Point-298	2541	158	40	3	40	6	40	5	40	1	40
Campbell NB-1	Point-300	29	579	40	11	40	24	40	17	40	3	40
	Point-299	30	579	40	11	40	24	40	17	40	3	40
Campbell NB-2	Point-301	2543	579	40	11	40	24	40	17	40	3	40
	Point-302	2544	579	40	11	40	24	40	17	40	3	40
Campbell NB-R	Point-303	2545	412	40	8	40	17	40	12	40	2	40
	Point-304	2546	412	40	8	40	17	40	12	40	2	40
	Point-306	2547	412	40	8	40	17	40	12	40	2	40
	Point-308	2548	412	40	8	40	17	40	12	40	2	40
Grant Campbell EBD-Bus	Point-310	2549	412	40	8	40	17	40	12	40	2	40
	Point-311	2550	0	5	0	5	0	5	4	5	0	5
	Point-312	2551	0	5	0	5	0	5	4	5	0	5
	Point-314	2552	0	5	0	5	0	5	4	5	0	5
Grant Campbell WB-R	Point-316	2553	0	5	0	5	0	5	4	5	0	5
	Point-323	2560	465	40	15	40	7	40	1	40	2	40
	Point-324	2561	465	40	15	40	7	40	1	40	2	40
Grant Campbell WB-D	Point-326	2562	465	40	15	40	7	40	1	40	2	40
	Point-330	34	0	5	0	5	0	5	4	5	0	5
	Point-328	35	0	5	0	5	0	5	4	5	0	5

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Grant Campbell WB-D	Point-327	36	0	5	0	5	0	5	4	5	0	5
Grant Campbell EB-UT	Point-337	2570	245	40	8	40	4	40	1	40	1	40
	Point-338	2571	245	40	8	40	4	40	1	40	1	40
	Point-340	2572	245	40	8	40	4	40	1	40	1	40
	Point-342	2573	245	40	8	40	4	40	1	40	1	40
	Point-344	2574	245	40	8	40	4	40	1	40	1	40
	Point-346	2575	245	40	8	40	4	40	1	40	1	40
	Point-348	2576	245	40	8	40	4	40	1	40	1	40
	Point-350	2577	245	40	8	40	4	40	1	40	1	40
	Point-352	2578	245	40	8	40	4	40	1	40	1	40
	Point-354	2579	245	40	8	40	4	40	1	40	1	40
	Point-356	2580	245	40	8	40	4	40	1	40	1	40
	Point-358	2581	245	40	8	40	4	40	1	40	1	40
Grant Norris Frontage	Point-359	2582	15	20	0	30	0	30	0	30	0	30
	Point-360	2583	15	20	0	30	0	30	0	30	0	30
	Point-362	2584	15	20	0	30	0	30	0	30	0	30
	Point-364	2585	15	20	0	30	0	30	0	30	0	30
Grant Norris Frontage2	Point-365	2586	15	20	0	30	0	30	0	30	0	30
	Point-366	2587	15	20	0	30	0	30	0	30	0	30
	30	2588	15	20	0	30	0	30	0	30	0	30
	Point-370	2589	15	20	0	30	0	30	0	30	0	30
	Point-372	2590	15	20	0	30	0	30	0	30	0	30

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]		
Grant Norris Frontage2	Point-374	2591	15	20	0	30	0	30	0	30	0	30
Grant Tucson - EBA-L1	Point-379	2596	88	40	3	40	1	40	0	40	0	40
	Point-380	2597	88	40	3	40	1	40	0	40	0	40
	Point-382	2598	88	40	3	40	1	40	0	40	0	40
Grant Tucson - EBD Bus	Point-385	2601	0	5	0	5	0	5	4	5	0	5
	Point-386	2602	0	5	0	5	0	5	4	5	0	5
Grant Tucson - WBA-R	Point-387	2603	59	40	5	40	6	40	1	40	2	40
	Point-388	2604	59	40	5	40	6	40	1	40	2	40
Grant Tucson - WBA-L1	Point-389	2605	46	40	1	40	1	40	0	40	0	40
	Point-390	2606	46	40	1	40	1	40	0	40	0	40
	Point-392	2607	46	40	1	40	1	40	0	40	0	40
Grant Country Club -EBL1	Point-404	0	133	40	4	40	2	40	0	40	1	40
	Point-403	1	133	40	4	40	2	40	0	40	1	40
Grant Country Club WBL1	Point-410	2	125	40	4	40	2	40	0	40	1	40
	Point-408	3	125	40	4	40	2	40	0	40	1	40
	Point-406	4	125	40	4	40	2	40	0	40	1	40
	Point-405	5	125	40	4	40	2	40	0	40	1	40
Grant Country Club WBR	Point-412	6	140	40	4	40	2	40	0	40	1	40
	Point-411	7	140	40	4	40	2	40	0	40	1	40
Country Club SBR	Point-427	2639	70	40	1	40	1	40	2	40	1	40
	Point-428	2640	70	40	1	40	1	40	2	40	1	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]		
Country Club SB-2	Point-429	2641	289	40	6	40	5	40	10	40	6	40
	Point-430	2642	289	40	6	40	5	40	10	40	6	40
	Point-432	2643	289	40	6	40	5	40	10	40	6	40
Country Club SB-1	Point-433	2644	289	40	6	40	5	40	10	40	6	40
	Point-434	2645	289	40	6	40	5	40	10	40	6	40
	Point-436	2646	289	40	6	40	5	40	10	40	6	40
Country Club SBL	Point-437	2647	166	40	3	40	3	40	6	40	3	40
	Point-438	2648	166	40	3	40	3	40	6	40	3	40
Country Club NBD-1	Point-439	2649	418	40	8	40	8	40	15	40	8	40
	Point-440	2650	418	40	8	40	8	40	15	40	8	40
	Point-442	2651	418	40	8	40	8	40	15	40	8	40
Country Club NBD-2	Point-443	2652	418	40	8	40	8	40	15	40	8	40
	Point-444	2653	418	40	8	40	8	40	15	40	8	40
	Point-446	2654	418	40	8	40	8	40	15	40	8	40
Grant Country Club -EBR	Point-459	2662	124	40	4	40	2	40	0	40	1	40
	Point-460	2663	124	40	4	40	2	40	0	40	1	40
Country Club NBL	Point-463	2666	188	40	4	40	4	40	7	40	4	40
	Point-464	2667	188	40	4	40	4	40	7	40	4	40
	Point-466	2668	188	40	4	40	4	40	7	40	4	40
Country Club NBR	Point-467	2669	126	40	2	40	2	40	4	40	3	40
	Point-468	2670	126	40	2	40	2	40	4	40	3	40
Grant Country Club EB Bus	Point-469	2671	0	5	0	5	0	5	4	5	0	5

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Grant Country Club EB Bus	Point-470	2672	0	5	0	5	0	5	4	5	0	5
Campbell NB-Bus	Point-471	2673	0	5	0	5	0	5	4	5	0	5
	Point-472	2674	0	5	0	5	0	5	4	5	0	5
Country Club SBD2	Point-722	8	409	40	8	40	8	40	14	40	8	40
	Point-720	9	409	40	8	40	8	40	14	40	8	40
	Point-719	10	409	40	8	40	8	40	14	40	8	40
Country Club NB-1	Point-724	11	443	40	8	40	8	40	15	40	9	40
	Point-11	452	286	40	5	40	5	40	10	40	6	40
	Point-723	13	286	40	5	40	5	40	10	40	6	40
Country Club SBD1	Point-728	12	409	40	8	40	8	40	14	40	8	40
	Point-726	14	409	40	8	40	8	40	14	40	8	40
	Point-725	15	409	40	8	40	8	40	14	40	8	40
Country Club NB-2	Point-812	16	443	40	8	40	8	40	15	40	9	40
	Point-810	17	443	40	8	40	8	40	15	40	9	40
	Point-12	453	286	40	5	40	5	40	10	40	6	40
	Point-809	19	286	40	5	40	5	40	10	40	6	40
Grant Mountain WBD-Bus	5	18	0	5	0	5	0	5	4	5	0	5
	0	33	0	5	0	5	0	5	4	5	0	5
Grant Tucson WBD-Bus	7	38	0	5	0	5	0	5	4	5	0	5
	1	44	0	5	0	5	0	5	4	5	0	5
	0	45	0	5	0	5	0	5	4	5	0	5
Grant Country Club WBD-Bus	8	46	0	5	0	5	0	5	4	5	0	5

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Grant Country Club WBD-Bus	0	54	0	5	0	5	0	5	4	5	0	5
Campbell SB-R	Point-0	55	108	40	2	40	4	40	3	40	1	40
	Point-3	57	108	40	2	40	4	40	3	40	1	40
Campbell SB-2	Point-4	58	542	40	10	40	22	40	16	40	3	40
	Point-5	59	542	40	10	40	22	40	16	40	3	40
Campbell SB-1	Point-6	60	542	40	10	40	22	40	16	40	3	40
	Point-7	61	542	40	10	40	22	40	16	40	3	40
Campbell SB L-2	Point-8	62	70	40	1	40	3	40	2	40	0	40
	Point-9	63	70	40	1	40	3	40	2	40	0	40
Campbell SB L-1	Point-11	37	70	40	1	40	3	40	2	40	0	40
	Point-10	64	70	40	1	40	3	40	2	40	0	40
Campbell NB-1D	Point-12	66	802	40	15	40	33	40	24	40	4	40
	Point-13	68	802	40	15	40	33	40	24	40	4	40
	Point-15	69	802	40	15	40	33	40	24	40	4	40
Campbell NB-2D	Point-16	70	802	40	15	40	33	40	24	40	4	40
	Point-17	71	802	40	15	40	33	40	24	40	4	40
	Point-19	72	802	40	15	40	33	40	24	40	4	40
	Point-21	73	802	40	15	40	33	40	24	40	4	40
Grant Mountain WBR	Point-22	74	81	40	3	40	1	40	0	40	0	40
	Point-23	75	81	40	3	40	1	40	0	40	0	40
	Point-25	76	81	40	3	40	1	40	0	40	0	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-3a	Grant RoadMountain AvenueEB Approach	65	577	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Approach	67	544	40	17	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Approach	77	544	40	17	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	78	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	79	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	80	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	81	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	82	569	40	18	40	9	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-3a	Grant RoadMountain AvenueEB Departure	83	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	84	569	40	18	40	9	40	2	40	3	40
	Grant RoadCampbell AvenueEB Approach	85	715	40	23	40	11	40	2	40	4	40
	Grant RoadCampbell AvenueEB Approach	86	715	40	23	40	11	40	2	40	4	40
	Grant RoadCampbell AvenueEB Approach	87	715	40	23	40	11	40	2	40	4	40
EB-2a	Grant RoadMountain AvenueEB Approach	88	577	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Approach	89	544	40	17	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	90	569	40	18	40	9	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-2a	Grant RoadMountain AvenueEB Departure	91	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	92	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	93	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	94	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	95	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	96	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	97	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	98	569	40	18	40	9	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-2a	Grant RoadCamp bell AvenueEB Approach	99	715	40	23	40	11	40	2	40	4	40
	Grant RoadCamp bell AvenueEB Approach	100	715	40	23	40	11	40	2	40	4	40
	Grant RoadCamp bell AvenueEB Approach	101	715	40	23	40	11	40	2	40	4	40
EB-1a	Grant RoadMoun tain AvenueEB Approach	102	577	40	18	40	9	40	2	40	3	40
	Grant RoadMoun tain AvenueEB Approach	103	544	40	17	40	9	40	2	40	3	40
	Grant RoadMoun tain AvenueEB Approach	104	544	40	17	40	9	40	2	40	3	40
	Grant RoadMoun tain AvenueEB Departure	105	569	40	18	40	9	40	2	40	3	40
	Grant RoadMoun tain AvenueEB Departure	106	569	40	18	40	9	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-1a	Grant RoadMountain AvenueEB Departure	107	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	108	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	109	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	110	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	111	569	40	18	40	9	40	2	40	3	40
	Grant RoadMountain AvenueEB Departure	112	569	40	18	40	9	40	2	40	3	40
	Grant RoadCampbell AvenueEB Approach	113	715	40	23	40	11	40	2	40	4	40
	Grant RoadCampbell AvenueEB Approach	114	715	40	23	40	11	40	2	40	4	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-1a	Grant RoadCamp bell AvenueEB Approach	115	715	40	23	40	11	40	2	40	4	40
Grant Mountain WBL	Point-447	116	63	40	2	40	1	40	0	40	0	40
	Point-445	117	63	40	2	40	1	40	0	40	0	40
	Point-443	118	63	40	2	40	1	40	0	40	0	40
	Point-442	119	63	40	2	40	1	40	0	40	0	40
WB-1a	Grant RoadCounty Club RoadWB Approach	120	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	121	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	122	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	123	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	124	520	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-1a	Grant RoadCounty Club RoadWB Approach	125	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	126	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	127	432	40	14	40	7	40	1	40	2	40
	Grant RoadCounty Club RoadWB Approach	128	432	40	14	40	7	40	1	40	2	40
	Grant RoadCounty Club RoadWB Approach	129	432	40	14	40	7	40	1	40	2	40
	Grant RoadCounty Club RoadWB Departure	131	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Departure	132	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Departure	133	520	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-1a	Grant RoadCounty Club RoadWB Departure	134	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Departure	135	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Departure	136	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Departure	137	520	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	138	495	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	139	495	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	140	495	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-1a	Grant RoadTucson Boulevard WB Approach	141	495	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	142	495	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	143	456	40	14	40	7	40	1	40	2	40
	Grant RoadTucson Boulevard WB Approach	144	456	40	14	40	7	40	1	40	2	40
	Grant RoadTucson Boulevard WB Approach	145	456	40	14	40	7	40	1	40	2	40
	Grant RoadTucson Boulevard WB Departure	146	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	147	510	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-1a	Grant RoadTucson Boulevard WB Departure	148	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	149	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	150	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	151	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	152	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	153	510	40	16	40	8	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	154	616	40	20	40	10	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-1a	Grant RoadCamp bell AvenueWB Approach	155	616	40	20	40	10	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Approach	156	616	40	20	40	10	40	2	40	3	40
WB-2a	Grant RoadCounty Club RoadWB Approach	20	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	157	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	158	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	159	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	160	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	161	520	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-2a	Grant Road County Club Road WB Approach	162	432	40	14	40	7	40	1	40	2	40
	Grant Road County Club Road WB Approach	163	432	40	14	40	7	40	1	40	2	40
	Grant Road County Club Road WB Approach	164	432	40	14	40	7	40	1	40	2	40
	Grant Road County Club Road WB Departure	165	520	40	16	40	8	40	2	40	3	40
	Grant Road County Club Road WB Departure	166	520	40	16	40	8	40	2	40	3	40
	Grant Road County Club Road WB Departure	167	520	40	16	40	8	40	2	40	3	40
	Grant Road County Club Road WB Departure	168	520	40	16	40	8	40	2	40	3	40
	Grant Road County Club Road WB Departure	169	520	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-2a	Grant RoadCounty Club RoadWB Departure	170	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Departure	171	520	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	172	495	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	173	495	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	174	495	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	175	456	40	14	40	7	40	1	40	2	40
	Grant RoadTucson Boulevard WB Approach	176	456	40	14	40	7	40	1	40	2	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-2a	Grant RoadTucson Boulevard WB Approach	177	456	40	14	40	7	40	1	40	2	40
	Grant RoadTucson Boulevard WB Departure	178	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	179	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	180	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	181	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	182	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	183	510	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-2a	Grant RoadTucson Boulevard WB Departure	184	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	185	510	40	16	40	8	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	186	616	40	20	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	187	616	40	20	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	188	616	40	20	40	10	40	2	40	3	40
WB-3a	Grant RoadCounty Club RoadWB Approach	189	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	190	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	191	520	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-3a	Grant RoadCounty Club RoadWB Approach	192	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	193	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	194	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	195	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Approach	196	432	40	14	40	7	40	1	40	2	40
	Grant RoadCounty Club RoadWB Approach	197	432	40	14	40	7	40	1	40	2	40
	Grant RoadCounty Club RoadWB Departure	198	432	40	14	40	7	40	1	40	2	40
	Grant RoadCounty Club RoadWB Departure	199	432	40	14	40	7	40	1	40	2	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-3a	Grant RoadCounty Club RoadWB Departure	200	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Departure	201	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Departure	202	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Departure	203	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Departure	204	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Departure	205	520	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadWB Departure	206	520	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	207	495	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-3a	Grant RoadTucson Boulevard WB Approach	208	495	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	209	495	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	210	495	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	211	495	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Approach	212	456	40	14	40	7	40	1	40	2	40
	Grant RoadTucson Boulevard WB Approach	213	456	40	14	40	7	40	1	40	2	40
	Grant RoadTucson Boulevard WB Approach	214	456	40	14	40	7	40	1	40	2	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-3a	Grant RoadTucson Boulevard WB Departure	215	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	216	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	217	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	218	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	219	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	220	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	221	510	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-3a	Grant RoadTucson Boulevard WB Departure	222	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	223	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	224	510	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard WB Departure	225	510	40	16	40	8	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	226	616	40	20	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	227	616	40	20	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	228	616	40	20	40	10	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-3a	Grant RoadCamp bell AvenueWB Approach	229	616	40	20	40	10	40	2	40	3	40
EB-1a_Divided	Grant RoadCamp bell AvenueEB Approach	230	715	40	23	40	11	40	2	40	4	40
	Grant RoadCamp bell AvenueEB Approach	231	715	40	23	40	11	40	2	40	4	40
	Grant RoadCamp bell AvenueEB Approach	232	715	40	23	40	11	40	2	40	4	40
	Grant RoadCamp bell AvenueEB Approach	233	544	40	17	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueEB Approach	234	544	40	17	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueEB Approach	235	544	40	17	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueEB Departure	236	544	40	17	40	9	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-2a_Divided	Grant RoadCamp bell AvenueEB Approach	237	715	40	23	40	11	40	2	40	4	40
	Grant RoadCamp bell AvenueEB Approach	238	715	40	23	40	11	40	2	40	4	40
	Grant RoadCamp bell AvenueEB Approach	239	715	40	23	40	11	40	2	40	4	40
	Grant RoadCamp bell AvenueEB Approach	240	544	40	17	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueEB Approach	241	544	40	17	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueEB Approach	242	544	40	17	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueEB Departure	243	544	40	17	40	9	40	2	40	3	40
EB-3a_Divided	Grant RoadCamp bell AvenueEB Approach	244	715	40	23	40	11	40	2	40	4	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-3a_Divided	Grant RoadCamp bell AvenueEB Approach	245	715	40	23	40	11	40	2	40	4	40
	Grant RoadCamp bell AvenueEB Approach	246	715	40	23	40	11	40	2	40	4	40
	Grant RoadCamp bell AvenueEB Approach	247	544	40	17	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueEB Approach	248	544	40	17	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueEB Approach	249	544	40	17	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueEB Approach	250	544	40	17	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueEB Approach	251	607	40	19	40	10	40	2	40	3	40
WB-1a_Divided 2	Grant RoadCamp bell AvenueWB Departure	252	607	40	19	40	10	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-1a_Divided 2	Grant RoadCamp bell AvenueWB Departure	253	515	40	16	40	8	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	254	515	40	16	40	8	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	255	515	40	16	40	8	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	256	515	40	16	40	8	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	257	515	40	16	40	8	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	258	515	40	16	40	8	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	259	515	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	260	491	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-1a_Divided 2	Grant RoadMountain AvenueWB Approach	261	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	262	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	263	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	264	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	265	443	40	14	40	7	40	1	40	2	40
	Grant RoadMountain AvenueWB Approach	266	443	40	14	40	7	40	1	40	2	40
	Grant RoadMountain AvenueWB Approach	267	443	40	14	40	7	40	1	40	2	40
	Grant RoadMountain AvenueWB Departure	268	467	40	15	40	7	40	1	40	2	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-1a_Divided 2	Grant RoadMountain AvenueWB Departure	269	467	40	15	40	7	40	1	40	2	40
	Grant RoadMountain AvenueWB Departure	270	467	40	15	40	7	40	1	40	2	40
	Point-559	271	467	40	15	40	7	40	1	40	2	40
EB-1a_Divided_Divided	Grant RoadCampbell AvenueEB Departure	272	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	273	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	274	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	275	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	276	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	277	653	40	21	40	10	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-1a_Divided_Divided	Grant RoadCampbell AvenueEB Departure	278	653	40	21	40	10	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	279	542	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	280	542	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	281	542	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	282	542	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	283	512	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	284	512	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-1a_Divided_Divided	Grant RoadTucson Boulevard EB Departure	285	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	286	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	287	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	288	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	289	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	290	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	291	548	40	17	40	9	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-1a_Divided_Divided	Grant RoadTucson Boulevard EB Departure	292	548	40	17	40	9	40	2	40	3	40
	Grant RoadCounty Club RoadEB Approach	293	594	40	19	40	9	40	2	40	3	40
	Grant RoadCounty Club RoadEB Approach	294	594	40	19	40	9	40	2	40	3	40
	Grant RoadCounty Club RoadEB Approach	295	594	40	19	40	9	40	2	40	3	40
	Grant RoadCounty Club RoadEB Approach	296	594	40	19	40	9	40	2	40	3	40
	Grant RoadCounty Club RoadEB Approach	297	509	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadEB Approach	298	509	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	299	609	40	19	40	10	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-1a_Divided_Divided	Grant RoadCounty Club RoadEB Departure	300	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	301	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	302	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	303	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	304	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	305	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	306	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	307	609	40	19	40	10	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-1a_Divided_Divided	Grant RoadCounty Club RoadEB Departure	308	609	40	19	40	10	40	2	40	3	40
	Point-308	309	609	40	19	40	10	40	2	40	3	40
EB-2a_Divided_Divided	Grant RoadCampbell AvenueEB Departure	310	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	311	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	312	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	313	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	314	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	315	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	316	653	40	21	40	10	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-2a_Divided_Divided	Grant RoadTucson Boulevard EB Approach	317	542	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	318	542	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	319	542	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	320	542	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	321	542	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	322	512	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	323	512	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-2a_Divided_Divided	Grant RoadTucson Boulevard EB Departure	324	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	325	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	326	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	327	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	328	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	329	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	330	548	40	17	40	9	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-2a_Divided_Divided	Grant Road Tucson Boulevard EB Departure	331	548	40	17	40	9	40	2	40	3	40
	Grant County Club Road EB Approach	332	594	40	19	40	9	40	2	40	3	40
	Grant County Club Road EB Approach	333	594	40	19	40	9	40	2	40	3	40
	Grant County Club Road EB Approach	334	594	40	19	40	9	40	2	40	3	40
	Grant County Club Road EB Approach	335	594	40	19	40	9	40	2	40	3	40
	Grant County Club Road EB Approach	336	509	40	16	40	8	40	2	40	3	40
	Grant County Club Road EB Approach	337	509	40	16	40	8	40	2	40	3	40
	Grant County Club Road EB Departure	338	609	40	19	40	10	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-2a_Divided_Divided	Grant RoadCounty Club RoadEB Departure	339	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	340	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	341	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	342	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	343	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	344	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	345	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	346	609	40	19	40	10	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-2a_Divided_Divided	Grant RoadCounty Club RoadEB Departure	347	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	348	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	349	609	40	19	40	10	40	2	40	3	40
	Point-195	350	609	40	19	40	10	40	2	40	3	40
EB-3a_Divided_Divided	Grant RoadCampbell AvenueEB Departure	351	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	352	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	353	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	354	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	355	653	40	21	40	10	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-3a_Divided_Divided	Grant RoadCampbell AvenueEB Departure	356	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	357	653	40	21	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueEB Departure	358	653	40	21	40	10	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	359	542	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	360	542	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	361	542	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	362	542	40	17	40	9	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-3a_Divided_Divided	Grant RoadTucson Boulevard EB Approach	363	512	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard EB Approach	364	512	40	16	40	8	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	365	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	366	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	367	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	368	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	369	548	40	17	40	9	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-3a_Divided_Divided	Grant RoadTucson Boulevard EB Departure	370	548	40	17	40	9	40	2	40	3	40
	Grant RoadTucson Boulevard EB Departure	371	548	40	17	40	9	40	2	40	3	40
	Grant RoadCounty Club RoadEB Approach	372	594	40	19	40	9	40	2	40	3	40
	Grant RoadCounty Club RoadEB Approach	373	594	40	19	40	9	40	2	40	3	40
	Grant RoadCounty Club RoadEB Approach	374	509	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadEB Approach	375	509	40	16	40	8	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	376	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	377	609	40	19	40	10	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
EB-3a_Divided_Divided	Grant RoadCounty Club RoadEB Departure	378	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	379	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	380	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	381	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	382	609	40	19	40	10	40	2	40	3	40
	Grant RoadCounty Club RoadEB Departure	383	609	40	19	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	384	616	40	20	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	385	616	40	20	40	10	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-3a_Divided	Grant RoadCamp bell AvenueWB Approach	386	616	40	20	40	10	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Approach	387	616	40	20	40	10	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Approach	388	553	40	18	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Approach	389	553	40	18	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	390	607	40	19	40	10	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	391	607	40	19	40	10	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	392	515	40	16	40	8	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	393	515	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-3a_Divided	Grant RoadCampbell AvenueWB Departure	394	515	40	16	40	8	40	2	40	3	40
	Grant RoadCampbell AvenueWB Departure	395	515	40	16	40	8	40	2	40	3	40
	Grant RoadCampbell AvenueWB Departure	396	515	40	16	40	8	40	2	40	3	40
	Grant RoadCampbell AvenueWB Departure	397	515	40	16	40	8	40	2	40	3	40
	Grant RoadCampbell AvenueWB Departure	398	515	40	16	40	8	40	2	40	3	40
	Grant RoadCampbell AvenueWB Departure	399	515	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	400	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	401	491	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-3a_Divided	Grant RoadMountain AvenueWB Approach	402	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	403	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	404	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	405	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	406	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	407	443	40	14	40	7	40	1	40	2	40
	Grant RoadMountain AvenueWB Approach	408	443	40	14	40	7	40	1	40	2	40
	Grant RoadMountain AvenueWB Approach	409	467	40	15	40	7	40	1	40	2	40
	Grant RoadMountain AvenueWB Departure											

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-3a_Divided	Grant RoadMountain AvenueWB Departure	410	467	40	15	40	7	40	1	40	2	40
	Grant RoadMountain AvenueWB Departure	411	467	40	15	40	7	40	1	40	2	40
	Grant RoadMountain AvenueWB Departure	412	467	40	15	40	7	40	1	40	2	40
WB-2a_Divided	Grant RoadCampbell AvenueWB Approach	413	616	40	20	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	414	616	40	20	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	415	616	40	20	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	416	616	40	20	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	417	553	40	18	40	9	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-2a_Divided	Grant RoadCamp bell AvenueWB Approach	418	553	40	18	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Approach	419	553	40	18	40	9	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	420	607	40	19	40	10	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	421	515	40	16	40	8	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	422	515	40	16	40	8	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	423	515	40	16	40	8	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	424	515	40	16	40	8	40	2	40	3	40
	Grant RoadCamp bell AvenueWB Departure	425	515	40	16	40	8	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-2a_Divided	Grant RoadCampbell AvenueWB Departure	426	515	40	16	40	8	40	2	40	3	40
	Grant RoadCampbell AvenueWB Departure	427	515	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	428	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	429	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	430	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	431	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	432	491	40	16	40	8	40	2	40	3	40
	Grant RoadMountain AvenueWB Approach	433	443	40	14	40	7	40	1	40	2	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-2a_Divided	Grant RoadMountain AvenueWB Approach	434	443	40	14	40	7	40	1	40	2	40
	Grant RoadMountain AvenueWB Departure	435	467	40	15	40	7	40	1	40	2	40
	Grant RoadMountain AvenueWB Departure	436	467	40	15	40	7	40	1	40	2	40
	Point-1112	437	467	40	15	40	7	40	1	40	2	40
WB-1a_Divided	Grant RoadCampbell AvenueWB Approach	438	616	40	20	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	439	616	40	20	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	440	616	40	20	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	441	616	40	20	40	10	40	2	40	3	40
	Grant RoadCampbell AvenueWB Approach	442	553	40	18	40	9	40	2	40	3	40

Roadway Name	Road Segment		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Start Point		Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
	Name	No.										
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
WB-1a_Divided	Grant RoadCampbell AvenueWB Approach	443	553	40	18	40	9	40	2	40	3	40
	Grant RoadCampbell AvenueWB Departure	444	553	40	18	40	9	40	2	40	3	40
Mountain NB Approach	Point-0	39	443	25	3	25	6	25	10	25	6	25
	Point-1	40	443	25	3	25	6	25	10	25	6	25
Mountain SB Departure	Point-2	41	338	25	2	25	4	25	8	25	4	25
	Point-3	42	338	25	2	25	4	25	8	25	4	25
Mountain SB Approach	Point-4	43	285	25	2	25	4	25	7	25	4	25
	Point-5	47	285	25	2	25	4	25	7	25	4	25
Mountain NB Departure	Point-6	48	486	25	3	25	6	25	11	25	6	25
	Point-7	49	486	25	3	25	6	25	11	25	6	25
Tucson NB Approach	Point-1	51	810	40	5	40	10	40	19	40	11	40
	Point-2	52	810	40	5	40	10	40	19	40	11	40
Tucson SB Departure	Point-5	446	558	40	4	40	7	40	13	40	7	40
	Point-6	447	558	40	4	40	7	40	13	40	7	40
Tucson NB Departure	Point-7	448	748	35	5	35	10	35	17	35	10	35
	Point-8	449	748	35	5	35	10	35	17	35	10	35
Tucson SB Approach	Point-9	450	563	35	4	35	7	35	13	35	7	35
	Point-10	451	563	35	4	35	7	35	13	35	7	35

REPORT:

**BUILDING ROW INPUT**

TNM VERSION:

3.1.7970.37608

REPORT DATE:

27 December 2022

CALCULATED WITH:

3.1.7970.37608

CALCULATION DATE:

12/27/2022 11:20:21 AM

CASE:

Project Lane Configurations

ORGANIZATION:

Pima County Department of  
Transportation

ANALYSIS BY:

Tin Cheung

PROJECT/CONTRACT:

Grant Road Phases 5 & 6

Building Row Name	Average Height	Building Gap	Building Row Notes	Point Number	Coordinates			Point Notes
	[ft]	%			X	Y	Z	
					[ft]	[ft]	[ft]	
Building Row-1	20.00	80.00		156	998008.60	455856.70	0.00	
				156	998008.60	455856.70	0.00	
Building Row-2	20.00	80.00		158	998092.40	455843.40	0.00	
				158	998092.40	455843.40	0.00	
Building Row-4	20.00	80.00		161	998093.20	456038.10	0.00	
				161	998093.20	456038.10	0.00	
Building Row-5	20.00	80.00		163	997585.80	456025.40	0.00	
				163	997585.80	456025.40	0.00	
Building Row-8	20.00	80.00		169	1000772.00	456199.30	0.00	
				169	1000772.00	456199.30	0.00	
Building Row-9	20.00	80.00		172	1003252.00	456251.60	0.00	
				172	1003252.00	456251.60	0.00	
				172	1003252.00	456251.60	0.00	
Building Row-10	20.00	80.00		174	1000507.00	455951.00	0.00	
				174	1000507.00	455951.00	0.00	
Building Row-11	20.00	80.00		178	1003221.00	456092.10	0.00	
				178	1003221.00	456092.10	0.00	

Building Row Name	Average Height	Building Gap	Building Row Notes	Point Number	Coordinates			Point Notes
	[ft]	%			X	Y	Z	
					[ft]	[ft]	[ft]	
Building Row-11				178	1003221.00	456092.10	0.00	
				178	1003221.00	456092.10	0.00	

REPORT:

**INPUT BARRIERS**

TNM VERSION:

3.1.7970.37608

REPORT DATE:

CALCULATED WITH:

3.1.7970.37608

CALCULATION DATE:

CASE:

Project Lane Configurations

ORGANIZATION:

ANALYSIS BY:

Tin Cheung

PROJECT/CONTRACT:

Barrier Name	Type	Height		Top Width	Run:Rise	Barrier Notes	Point		Coordinates			Height	Point Notes	Perturbable Barrier Param.			Area	Vo
		Min	Max				Name	Number	X	Y	Z			Unit	Cost			
		[ft]	[ft]	[ft]	m:m							[ft]				[ft]	[ft]	[ft]
Barrier-1	Berm	0.00	300.00	0.00			Point-0	0	1003411.00	456371.10	0.00	10.00		0.00	0	0	0	
							Point-1	1	1003413.00	456291.10	0.00	10.00		0.00	0	0	0	
							Point-3	2	1003517.00	456292.00	0.00	10.00		0.00	0	0	0	
Barrier-2	Berm	0.00	300.00	0.00			Point-8	6	1005831.00	456328.10	0.00	10.00		0.00	0	0	0	
							Point-9	7	1005825.00	456531.90	0.00	10.00		0.00	0	0	0	
							Point-11	8	1005362.00	456522.70	0.00	10.00		0.00	0	0	0	
							Point-13	9	1005366.00	456302.40	0.00	10.00		0.00	0	0	0	
Barrier-3	Berm	0.00	300.00	0.00			Point-14	10	1000947.00	455690.90	0.00	10.00		0.00	0	0	0	
							Point-15	11	1000944.00	455758.50	0.00	10.00		0.00	0	0	0	
							Point-17	12	1000774.00	455751.20	0.00	10.00		0.00	0	0	0	
							Point-19	13	1000774.00	455815.60	0.00	10.00		0.00	0	0	0	
							Point-21	14	1000810.00	455814.30	0.00	10.00		0.00	0	0	0	
							Point-23	15	1000805.00	455919.00	0.00	10.00		0.00	0	0	0	
							Point-25	16	1001096.00	455921.70	0.00	10.00		0.00	0	0	0	

27 December 2022

12/27/2022 11:20:21 AM

Pima County Department of Transportation

Grant Road Phases 5 & 6

ment			
Volume	[Additional]	On	
Unit	Linear	Structure	Reflection
Cost	Unit Cost		
\$/ft³	\$/ft		
0	0	No	No
0	0	No	No
0	0	No	No
0	0	No	No
0	0	No	No
0	0	No	No
0	0	No	No
0	0	No	No
0	0	No	No
0	0	No	No
0	0	No	No
0	0	No	No
0	0	No	No
0	0	No	No
0	0	No	No
0	0	No	No

Barrier Name	Type	Height		Top Width	Run:Rise	Barrier Notes	Point		Coordinates			Height	Point Notes	Perturbable Barrier Param.			Area	Vo
		Min	Max				Name	Number	X	Y	Z			Unit Cost	C			
		[ft]	[ft]	[ft]	m:m				[ft]	[ft]	[ft]	[ft]				Up	Down	[\$/ft²]
Barrier-3							Point-27	17	1001097.00	455695.50	0.00	10.00		0.00	0	0	0	
Barrier-4	Berm	0.00	300.00	0.00			Point-28	18	1003434.00	455909.10	0.00	10.00		0.00	0	0	0	
							Point-29	19	1003428.00	456103.00	0.00	10.00		0.00	0	0	0	
							Point-31	20	1003520.00	456103.90	0.00	10.00		0.00	0	0	0	
Barrier-5	Berm	0.00	300.00	0.00			Point-32	21	1005931.00	455920.50	0.00	10.00		0.00	0	0	0	
							Point-33	22	1005927.00	455986.50	0.00	10.00		0.00	0	0	0	
Barrier-6	Berm	0.00	300.00	0.00			Point-34	23	1005953.00	456002.40	0.00	10.00		0.00	0	0	0	
							Point-35	24	1005950.00	456079.10	0.00	10.00		0.00	0	0	0	
Barrier-7	Berm	0.00	300.00	0.00			Point-36	25	1005884.00	456104.90	0.00	10.00		0.00	0	0	0	
							Point-37	26	1005880.00	456167.60	0.00	10.00		0.00	0	0	0	
Barrier-8	Berm	0.00	300.00	0.00			Point-39	28	1006051.00	455998.30	0.00	10.00		0.00	0	0	0	
							Point-41	29	1006048.00	456059.40	0.00	10.00		0.00	0	0	0	
Barrier-9	Berm	0.00	300.00	0.00			Point-42	30	1006225.00	456173.30	0.00	10.00		0.00	0	0	0	
							Point-43	31	1006225.00	456096.50	0.00	10.00		0.00	0	0	0	
Barrier-10	Berm	0.00	300.00	0.00			Point-54	70	1006737.00	456531.30	0.00	6.00		0.00	0	0	0	
							Point-55	71	1006740.00	456395.90	0.00	6.00		0.00	0	0	0	
							Point-57	72	1006513.00	456388.90	0.00	6.00		0.00	0	0	0	
							Point-59	73	1006519.00	456316.30	0.00	6.00		0.00	0	0	0	
							Point-61	74	1006132.00	456317.70	0.00	6.00		0.00	0	0	0	
							Point-63	75	1006139.00	456582.70	0.00	6.00		0.00	0	0	0	
							Point-65	76	1006365.00	456584.80	0.00	6.00		0.00	0	0	0	



Barrier Name	Type	Height		Top Width	Run:Rise	Barrier Notes	Point		Coordinates			Height	Point Notes	Perturbable Barrier Param.			Area	Vo
		Min	Max				Name	Number	X	Y	Z			Unit Cost	C			
		[ft]	[ft]	[ft]	m:m				[ft]	[ft]	[ft]	[ft]				Up	Down	[\$/ft²]
Barrier-10							Point-67	77	1006383.00	456583.30	0.00	6.00		0.00	0	0	0	
							Point-69	78	1006383.00	456794.50	0.00	6.00		0.00	0	0	0	
Barrier-11	Berm	0.00	300.00	0.00			Point-0	56	997901.30	456024.50	0.00	12.00		0.00	0	0	0	
							Point-1	57	997899.70	456070.30	0.00	12.00		0.00	0	0	0	
Barrier-12	Berm	0.00	300.00	0.00			Point-4	60	997974.70	456028.00	0.00	12.00		0.00	0	0	0	
							Point-5	61	997972.90	456085.00	0.00	12.00		0.00	0	0	0	
Barrier-13	Berm	0.00	300.00	0.00			Point-6	62	997915.80	456072.10	0.00	12.00		0.00	0	0	0	
							Point-7	63	997965.20	456072.90	0.00	12.00		0.00	0	0	0	
Barrier-14	Berm	0.00	300.00	0.00			Point-8	64	1000316.00	456328.90	0.00	12.00		0.00	0	0	0	
							Point-9	65	1000320.00	456259.60	0.00	12.00		0.00	0	0	0	
Barrier-15	Berm	0.00	300.00	0.00			Point-10	66	1000297.00	456251.20	0.00	12.00		0.00	0	0	0	
							Point-11	67	1000299.00	456209.90	0.00	12.00		0.00	0	0	0	
Barrier-16	Berm	0.00	300.00	0.00			Point-16	81	1000297.00	456206.60	0.00	6.00		0.00	0	0	0	
							Point-17	82	1000516.00	456207.30	0.00	6.00		0.00	0	0	0	
Barrier-17	Berm	0.00	300.00	0.00			Point-22	87	1000630.00	456361.50	0.00	12.00		0.00	0	0	0	
							Point-23	88	1000634.00	456291.30	0.00	12.00		0.00	0	0	0	
Barrier-18	Berm	0.00	300.00	0.00			Point-24	89	1000515.00	456239.90	0.00	12.00		0.00	0	0	0	
							Point-25	90	1000518.00	456206.90	0.00	12.00		0.00	0	0	0	
Barrier-19	Berm	0.00	300.00	0.00			Point-26	91	1000506.00	456333.90	0.00	12.00		0.00	0	0	0	
							Point-27	92	1000506.00	456272.90	0.00	12.00		0.00	0	0	0	
Barrier-22	Berm	0.00	300.00	0.00			Point-32	97	1001747.00	456270.90	0.00	12.00		0.00	0	0	0	
							Point-33	98	1001709.00	456269.80	0.00	12.00		0.00	0	0	0	



Barrier Name	Type	Height		Top Width	Run:Rise	Barrier Notes	Point		Coordinates			Height	Point Notes	Perturbable Barrier Param.			Area	Vo
		Min	Max				Name	Number	X	Y	Z			Unit Cost	C			
		[ft]	[ft]	[ft]	m:m				[ft]	[ft]	[ft]	[ft]				Up	Down	[\$/ft²]
Barrier-25	Berm	0.00	300.00	0.00			Point-38	3	1004060.00	456259.00	0.00	12.00		0.00	0	0	0	
							Point-39	104	1004059.00	456320.10	0.00	12.00		0.00	0	0	0	
Barrier-26	Berm	0.00	300.00	0.00			Point-40	105	1004347.00	456295.50	0.00	12.00		0.00	0	0	0	
							Point-41	106	1004350.00	456265.00	0.00	12.00		0.00	0	0	0	
Barrier-27	Berm	0.00	300.00	0.00			Point-42	107	1004257.00	456264.10	0.00	12.00		0.00	0	0	0	
							Point-43	108	1004257.00	456452.30	0.00	12.00		0.00	0	0	0	
Barrier-28	Berm	0.00	300.00	0.00			Point-44	109	1004547.00	456159.50	0.00	12.00		0.00	0	0	0	
							Point-45	110	1004547.00	456030.70	0.00	12.00		0.00	0	0	0	
Barrier-29	Berm	0.00	300.00	0.00			Point-46	111	1004395.00	456089.60	0.00	12.00		0.00	0	0	0	
							Point-47	112	1004392.00	456152.30	0.00	12.00		0.00	0	0	0	
Barrier-31	Berm	0.00	300.00	0.00			Point -55	4	997767.80	455985.90	0.00	7.00		0.00	0	0	0	
							Point -56	5	997841.70	455987.10	0.00	7.00		0.00	0	0	0	
							Point -57	27	997902.80	455988.00	0.00	7.00		0.00	0	0	0	
							Point -58	32	997933.60	455984.50	0.00	7.00		0.00	0	0	0	
Barrier-32	Berm	0.00	300.00	0.00			Point -61	80	998325.00	456021.30	0.00	7.00		0.00	0	0	0	
							Point -62	83	998349.90	456022.00	0.00	7.00		0.00	0	0	0	
							Point -63	84	998374.90	456022.60	0.00	7.00		0.00	0	0	0	
							Point -65	86	998380.40	456022.70	0.00	7.00		0.00	0	0	0	
							Point -66	113	998404.90	456046.80	0.00	7.00		0.00	0	0	0	
Barrier-33	Berm	0.00	300.00	0.00			Point -67	126	998636.50	455939.60	0.00	6.00		0.00	0	0	0	
							Point -68	127	998491.40	455938.50	0.00	6.00		0.00	0	0	0	
							Point -76	128	998486.50	455938.00	0.00	6.00		0.00	0	0	0	
							Point -78	135	998475.20	455933.10	0.00	6.00		0.00	0	0	0	



Barrier Name	Type	Height		Top Width	Run:Rise	Barrier Notes	Point		Coordinates			Height	Point Notes	Perturbable Barrier Param.			Area Unit Cost	Vertical Curve
		Min	Max				Name	Number	X	Y	Z			Incr-ment	Number of Incr. Up	Number of Incr. Down		
		[ft]	[ft]	[ft]	m:m							[ft]					[ft]	[ft]
Barrier-33							Point -77	136	998467.00	455923.70	0.00	6.00		0.00	0	0	0	
							Point -69	137	998465.10	455919.30	0.00	6.00		0.00	0	0	0	
Barrier-34	Berm	0.00	300.00	0.00			Point -79	141	998661.10	455940.70	0.00	6.00		0.00	0	0	0	
							Point -80	142	998740.90	455942.80	0.00	5.00		0.00	0	0	0	
							Point-0	38	998741.60	455903.20	0.00	5.00		0.00	0	0	0	
Barrier-35	Berm	0.00	300.00	0.00			Point -82	144	999007.90	455982.00	0.00	0.00		0.00	1	0	0	
							Point -84	146	999112.50	455989.40	0.00	0.00		0.00	1	0	0	
							Point -87	149	999187.50	455990.70	0.00	0.00		0.00	1	0	0	
							Point -88	150	999245.00	455986.40	0.00	0.00		0.00	1	0	0	
Barrier-36	Berm	0.00	300.00	0.00			Point -92	151	999432.70	455986.10	0.00	6.00		0.00	0	0	0	
							Point -94	153	999482.60	455986.90	0.00	6.00		0.00	0	0	0	
							Point -90	154	999514.50	455997.30	0.00	6.00		0.00	0	0	0	
							Point -97	156	999581.90	455998.60	0.00	6.00		0.00	0	0	0	
							Point -91	158	999631.70	455992.80	0.00	6.00		0.00	0	0	0	
Barrier-37	Berm	0.00	300.00	0.00			Point -99	161	999388.40	455986.30	0.00	6.00		0.00	0	0	0	
							Point -101	163	999418.10	455986.80	0.00	6.00		0.00	0	0	0	
Barrier-38	Berm	0.00	300.00	0.00			Point -105	165	999585.90	455956.30	0.00	6.00		0.00	0	0	0	
							Point -112	172	999760.90	455959.20	0.00	6.00		0.00	0	0	0	
							Point -103	173	999776.00	455954.40	0.00	6.00		0.00	0	0	0	
							Point -113	174	999782.40	455948.30	0.00	6.00		0.00	0	0	0	
							Point -104	175	999786.40	455941.20	0.00	6.00		0.00	0	0	0	
Barrier-39	Berm	0.00	300.00	0.00			Point -114	201	999843.30	455936.90	0.00	6.00		0.00	0	0	0	
							Point -115	202	999854.10	455954.00	0.00	6.00		0.00	0	0	0	
							Point -116	203	999873.30	455960.80	0.00	6.00		0.00	0	0	0	



Barrier Name	Type	Height		Top Width	Run:Rise	Barrier Notes	Point		Coordinates			Height	Point Notes	Perturbable Barrier Param.			Area	Vo
		Min	Max				Name	Number	X	Y	Z			Unit Cost	C			
		[ft]	[ft]	[ft]	m:m				[ft]	[ft]	[ft]	[ft]				Up	Down	[\$/ft²]
Barrier-39							Point -117	204	1000074.00	455963.60	0.00	6.00		0.00	0	0	0	
Barrier-40	Berm	0.00	300.00	0.00			Point -129	205	1000093.00	455992.30	0.00	0.00		0.00	0	0	0	
							Point -132	206	1000167.00	456003.80	0.00	0.00		0.00	0	0	0	
							Point -127	207	1000199.00	456008.70	0.00	0.00		0.00	0	0	0	
							Point -128	210	1000256.00	456002.80	0.00	0.00		0.00	0	0	0	
Barrier-42	Berm	0.00	300.00	0.00			Point -171	251	1001345.00	456110.90	0.00	6.00		0.00	0	0	0	
							Point -174	254	1001420.00	456111.90	0.00	6.00		0.00	0	0	0	
Barrier-43	Berm	0.00	300.00	0.00			Point -145	309	1001445.00	456112.20	0.00	6.00		0.00	0	0	0	
							Point -146	310	1001495.00	456123.60	0.00	6.00		0.00	0	0	0	
							Point -147	311	1002050.00	456132.20	0.00	6.00		0.00	0	0	0	
							Point -148	312	1002063.00	456122.60	0.00	6.00		0.00	0	0	0	
							Point -149	313	1002091.00	456122.00	0.00	6.00		0.00	0	0	0	
Barrier-44	Berm	0.00	300.00	0.00			0	316	1002100.00	456122.60	0.00	6.00		0.00	0	0	0	
							Point -202	317	1002125.00	456123.00	0.00	6.00		0.00	0	0	0	
							Point -203	318	1002150.00	456123.40	0.00	6.00		0.00	0	0	0	
							Point -204	319	1002169.00	456134.10	0.00	6.00		0.00	0	0	0	
							Point -216	320	1002469.00	456138.80	0.00	6.00		0.00	0	0	0	
							Point -217	321	1002493.00	456132.60	0.00	6.00		0.00	0	0	0	
							Point -218	322	1002518.00	456130.70	0.00	6.00		0.00	0	0	0	
							Point -222	323	1002627.00	456132.00	0.00	6.00		0.00	0	0	0	
Barrier-45	Berm	0.00	300.00	0.00			Point -223	329	1002669.00	456123.90	0.00	6.00		0.00	0	0	0	



Barrier Name	Type	Height		Top Width	Run:Rise	Barrier Notes	Point		Coordinates			Height	Point Notes	Perturbable Barrier Param.			Area Unit Cost	Vertical Curve
		Min	Max				Name	Number	X	Y	Z			Incr-ment	Number of Incr. Up	Number of Incr. Down		
		[ft]	[ft]	[ft]	m:m							[ft]					[ft]	[ft]
Barrier-45							Point -155	333	1002789.00	456123.30	0.00	6.00		0.00	0	0	0	
							Point -227	334	1002803.00	456127.30	0.00	6.00		0.00	0	0	0	
							Point -156	335	1002811.00	456129.80	0.00	6.00		0.00	0	0	0	
Barrier-48	Berm	0.00	300.00	0.00			Point-0	33	998758.80	455938.10	0.00	5.00		0.00	0	0	0	
							Point-1	34	998835.90	455940.10	0.00	5.00		0.00	0	0	0	
							Point-3	35	998850.80	455938.10	0.00	5.00		0.00	0	0	0	
							Point-5	36	998860.90	455927.10	0.00	5.00		0.00	0	0	0	
							Point-7	37	998864.70	455916.80	0.00	5.00		0.00	0	0	0	
							Point-9	39	998866.10	455904.40	0.00	5.00		0.00	0	0	0	
Barrier-49	Berm	0.00	300.00	0.00			Point-1	40	1000529.00	455995.10	0.00	5.00		0.00	0	0	0	
							Point-2	41	1000530.00	455887.40	0.00	5.00		0.00	0	0	0	
Barrier-50	Berm	0.00	300.00	0.00			Point-13	51	1002795.00	456100.80	0.00	5.00		0.00	0	0	0	
							Point-14	52	1002877.00	456100.50	0.00	5.00		0.00	0	0	0	
Barrier-51	Berm	0.00	300.00	0.00			Point-0	42	999080.60	455944.70	0.00	6.00		0.00	0	0	0	
							Point-1	43	999121.00	455945.40	0.00	6.00		0.00	0	0	0	
							Point-3	44	999122.50	455868.30	0.00	6.00		0.00	0	0	0	
Barrier-52	Berm	0.00	300.00	0.00			Point-4	45	999142.00	455946.40	0.00	6.00		0.00	0	0	0	
							Point-5	46	999201.40	455945.80	0.00	6.00		0.00	0	0	0	
							Point-7	47	999201.80	455869.10	0.00	6.00		0.00	0	0	0	
Barrier-53	Berm	0.00	300.00	0.00			Point-8	50	999078.50	455931.20	0.00	12.00		0.00	0	0	0	
							Point-9	53	999113.60	455932.40	0.00	12.00		0.00	0	0	0	
							Point-11	58	999114.20	455898.00	0.00	12.00		0.00	0	0	0	
Barrier-54	Berm	0.00	300.00	0.00			Point-14	114	1000130.00	455961.30	0.00	6.00		0.00	0	0	0	



Barrier Name	Type	Height		Top Width	Run:Rise	Barrier Notes	Point		Coordinates			Height	Point Notes	Perturbable Barrier Param.			Area	Vo
		Min	Max				Name	Number	X	Y	Z			Unit Cost	C			
		[ft]	[ft]	[ft]	m:m				[ft]	[ft]	[ft]	[ft]				Up	Down	[\$/ft²]
Barrier-54							Point-15	115	1000092.00	455961.30	0.00	6.00		0.00	0	0	0	
							Point-17	116	1000091.00	455912.30	0.00	6.00		0.00	0	0	0	
Barrier-55	Berm	0.00	300.00	0.00			Point-18	117	1000193.00	455924.00	0.00	6.00		0.00	0	0	0	
							Point-19	118	1000190.00	455965.50	0.00	6.00		0.00	0	0	0	
							Point-21	119	1000142.00	455963.10	0.00	6.00		0.00	0	0	0	
Barrier-56	Berm	0.00	300.00	0.00			Point-23	121	1002102.00	456285.20	0.00	12.00		0.00	0	0	0	
							Point-24	122	1002071.00	456284.90	0.00	12.00		0.00	0	0	0	
							Point-26	123	1002068.00	456332.20	0.00	12.00		0.00	0	0	0	
Barrier-57	Berm	0.00	300.00	0.00			Point-0	85	1002929.00	456031.30	0.00	12.00		0.00	0	0	0	
							Point-1	102	1002927.00	456095.10	0.00	12.00		0.00	0	0	0	
							Point-3	124	1002988.00	456093.50	0.00	12.00		0.00	0	0	0	
							Point-5	125	1003124.00	456096.40	0.00	12.00		0.00	0	0	0	
Barrier-58	Berm	0.00	300.00	0.00			Point-6	129	1000324.00	455871.80	0.00	12.00		0.00	0	0	0	
							Point-7	130	1000324.00	455952.70	0.00	12.00		0.00	0	0	0	
Barrier-60	Berm	0.00	300.00	0.00			Point-6	138	1002738.00	456098.40	0.00	4.50		0.00	0	0	0	
							Point-7	139	1002777.00	456099.30	0.00	4.50		0.00	0	0	0	
Barrier-61	Berm	0.00	300.00	0.00			Point-8	140	1002797.00	456099.10	0.00	3.50		0.00	0	0	0	
							Point-9	143	1002798.00	456005.80	0.00	3.50		0.00	0	0	0	
Barrier-63	Berm	0.00	300.00	0.00			Point -48	49	997681.20	455983.50	0.00	7.00		0.00	0	0	0	
							Point -49	54	997706.20	455983.90	0.00	7.00		0.00	0	0	0	
							Point -50	55	997731.20	455984.30	0.00	7.00		0.00	0	0	0	
							Point -52	59	997749.30	455984.60	0.00	7.00		0.00	0	0	0	



Barrier Name	Type	Height		Top Width	Run:Rise	Barrier Notes	Point		Coordinates			Height	Point Notes	Perturbable Barrier Param.			Area Unit Cost	Vertical Curve
		Min	Max				Name	Number	X	Y	Z			Incr-ment	Number of Incr. Up	Number of Incr. Down		
		[ft]	[ft]	[ft]	m:m							[ft]					[ft]	[ft]
Barrier-63						Point -53	68	997749.40	455975.20	0.00	7.00		0.00	0	0	0		
						Point -54	69	997767.90	455975.50	0.00	7.00		0.00	0	0	0		
Barrier-64	Berm	0.00	300.00	0.00			Point-6	145	1002225.00	456284.40	0.00	12.00		0.00	0	0	0	
						Point-7	147	1002228.00	456232.00	0.00	12.00		0.00	0	0	0		
						Point-9	148	1002263.00	456233.50	0.00	12.00		0.00	0	0	0		
						Point-11	152	1002261.00	456277.70	0.00	12.00		0.00	0	0	0		
						Point-13	155	1002323.00	456279.90	0.00	12.00		0.00	0	0	0		
						Point-15	157	1002324.00	456234.90	0.00	12.00		0.00	0	0	0		
						Point-17	159	1002359.00	456236.90	0.00	12.00		0.00	0	0	0		
						Point-19	160	1002356.00	456290.50	0.00	12.00		0.00	0	0	0		
Barrier-65	Berm	0.00	300.00	0.00			Point-20	162	1002373.00	456315.00	0.00	12.00		0.00	0	0	0	
						Point-21	164	1002372.00	456282.40	0.00	12.00		0.00	0	0	0		
						Point-23	166	1002392.00	456282.20	0.00	12.00		0.00	0	0	0		
						Point-25	167	1002391.00	456259.50	0.00	12.00		0.00	0	0	0		
						Point-27	168	1002408.00	456260.40	0.00	12.00		0.00	0	0	0		
						Point-29	169	1002408.00	456239.00	0.00	12.00		0.00	0	0	0		
						Point-31	170	1002440.00	456240.90	0.00	12.00		0.00	0	0	0		
						Point-33	171	1002438.00	456270.20	0.00	12.00		0.00	0	0	0		
Barrier-66	Berm	0.00	300.00	0.00			Point-34	176	1002450.00	456305.40	0.00	12.00		0.00	0	0	0	
						Point-35	177	1002489.00	456304.10	0.00	12.00		0.00	0	0	0		
						Point-37	178	1002489.00	456274.80	0.00	12.00		0.00	0	0	0		
						Point-39	179	1002478.00	456272.60	0.00	12.00		0.00	0	0	0		



Barrier Name	Type	Height		Top Width	Run:Rise	Barrier Notes	Point		Coordinates			Height	Point Notes	Perturbable Barrier Param.			Area Unit Cost	Segment
		Min	Max				Name	Number	X	Y	Z			Increment	Number of Incr. Up	Number of Incr. Down		
		[ft]	[ft]	[ft]	[ft]				[ft]	[ft]								
					m:m													
Barrier-66							Point-41	180	1002479.00	456242.50	0.00	12.00		0.00	0	0	0	
							Point-43	181	1002451.00	456243.10	0.00	12.00		0.00	0	0	0	
Barrier-67	Berm	0.00	300.00	0.00			Point-44	182	1002520.00	456312.20	0.00	12.00		0.00	0	0	0	
							Point-45	183	1002523.00	456255.70	0.00	12.00		0.00	0	0	0	
							Point-47	184	1002598.00	456257.20	0.00	12.00		0.00	0	0	0	
							Point-49	185	1002596.00	456316.60	0.00	12.00		0.00	0	0	0	
Barrier-68	Berm	0.00	300.00	0.00			Point-0	48	1004283.00	456262.70	0.00	6.00		0.00	0	0	0	
							Point-1	79	1004301.00	456262.50	0.00	6.00		0.00	0	0	0	
							Point-3	131	1004301.00	456409.80	0.00	6.00		0.00	0	0	0	
Barrier-69	Berm	0.00	300.00	0.00			Point-4	132	1004282.00	456402.60	0.00	12.00		0.00	0	0	0	
							Point-5	133	1004282.00	456261.90	0.00	12.00		0.00	0	0	0	
							Point-7	134	1004258.00	456262.50	0.00	12.00		0.00	0	0	0	
Barrier-60	Berm	0.00	21.00	0.00			Point-0	93	1004243.00	456293.70	0.00	10.00		0.00	0	0	0	
							Point-1	94	1004212.00	456293.00	0.00	10.00		0.00	0	0	0	
							Point-3	95	1004212.00	456262.50	0.00	10.00		0.00	0	0	0	
Barrier-61	Berm	0.00	21.00	0.00			Point-4	96	1004155.00	456303.60	0.00	10.00		0.00	0	0	0	
							Point-5	99	1004185.00	456303.90	0.00	10.00		0.00	0	0	0	
							Point-7	100	1004187.00	456260.60	0.00	10.00		0.00	0	0	0	



REPORT:

Sound-level Input: Receivers

TNM VERSION:

3.1.7970.37608

REPORT DATE:

27 December 2022

CALCULATED WITH:

3.1.7970.37608

CALCULATION DATE:

12/27/2022 11:20:21 AM

CASE:

Project Lane Configurations

ORGANIZATION:

Pima County Department of Transportation

ANALYSIS BY:

Tin Cheung

PROJECT/CONTRACT:

Grant Road Phases 5 & 6

Receiver Name	Sequence Number	Nb. R.R.	Coordinates (ground)			Height above Ground	Input Sound Levels and Criteria				Active in Calc.	Notes	
							Existing LAeq	Absolute Criterion	Relative Criterion	Noise Reduction Goal			
			X	Y	Z		[ft]	[dBA]	[dBA]	[dBA]			[dBA]
			[ft]	[ft]	[ft]		[ft]	[dBA]	[dBA]	[dBA]			[dBA]
Receiver-7	2	1	999545.60	455949.40	0.00	5.00	---	0	---	8			
Receiver-8	3	1	999666.10	456200.10	0.00	5.00	---	0	---	8			
Receiver-13	7	1	1001923.00	456077.30	0.00	5.00	---	0	---	8			
Receiver-4	14	1	998776.80	456197.80	0.00	5.00	---	0	---	8			
Receiver-6	15	1	999290.90	456198.30	0.00	5.00	---	0	---	8			
Receiver-9	17	1	999962.50	456215.90	0.00	5.00	---	0	---	8			
Receiver-16	21	1	1002416.00	456084.70	0.00	5.00	---	0	---	8			
Receiver-18	23	1	1004215.00	456303.80	0.00	5.00	---	0	---	8			
Receiver-5	28	1	999154.00	455933.80	0.00	5.00	---	0	---	8			
Receiver-21	34	1	1004474.00	456137.00	0.00	5.00	---	0	---	8			
Receiver-24	37	1	1006549.00	456423.00	0.00	5.00	---	0	---	8			
Receiver-25	39	1	1006955.00	456413.60	0.00	5.00	---	0	---	8			
Receiver-12	45	1	1000437.00	456229.30	0.00	5.00	---	0	---	8			
Receiver-26	49	1	1007038.00	456436.60	0.00	5.00	---	0	---	8			
Receiver-3	32	1	998563.50	455932.70	0.00	5.00	---	0	---	8			
Receiver-14	33	1	1002115.00	456285.40	0.00	5.00	---	0	---	8	Y		
Receiver-19	34	1	1004293.00	456271.90	0.00	5.00	---	0	---	8			

Receiver Name	Sequence Number	Nb. R.R.	Coordinates (ground)			Height above Ground	Input Sound Levels and Criteria				Active in Calc.	Notes
			X	Y	Z		Existing LAeq	Absolute Criterion	Relative Criterion	Noise Reduction Goal		
			[ft]	[ft]	[ft]		[dBA]	[dBA]	[dBA]	[dBA]		
Receiver-2	36	1	998361.60	456027.40	0.00	7.00	---	0	---	8		
Receiver-1	42	1	997809.00	456010.50	0.00	5.00	---	0	---	8		
Receiver-10	43	1	1000108.00	455958.00	0.00	5.00	---	0	---	8		
Receiver-17	45	1	1002729.00	456086.60	0.00	5.00	---	0	---	8		
Receiver-15	49	1	1002388.00	456249.10	0.00	5.00	---	0	---	8		

REPORT:

**INPUT ROADWAYS**

TNM VERSION:

3.1.7970.37608

REPORT DATE:

27 December 2022

CALCULATED WITH:

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CASE:

Project Lane Configurations

ORGANIZATION:

Pima County Department of Transportation

ANALYSIS BY:

Tin Cheung

PROJECT/CONTRACT:

Grant Road Phases 5 & 6

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X [ft]	Y [ft]	Z [ft]			Road Category	Pavement Type	On Structure
		Name	Number								
Grant Highland EB Frontage2		Point-173	2459	999341.80	455979.30	0.00	11.00		Mainline	Average	No
		Point-173	2460	999650.70	455983.30	0.00	11.00		Mainline	Average	No
		Point-176	2461	999691.30	455986.60	0.00	11.00		Mainline	Average	No
		30	2462	999707.40	455990.00	0.00	11.00		Mainline	Average	No
		Point-180	2463	999718.50	456001.70	0.00	11.00		Mainline	Average	No
Grant Mountain WB Frontage2		Point-184	21	997660.70	455993.80	0.00	11.00		Mainline	Average	No
		Point-183	22	997395.40	455989.80	0.00	11.00		Mainline	Average	No
Grant Mountain WB Frontage		Point-185	2468	997947.20	455998.10	0.00	11.00		Mainline	Average	No
		Point-186	2469	997669.00	455993.50	0.00	11.00		Mainline	Average	No
Grant Mountain EBR		Point-187	2470	997684.90	455882.00	0.00	11.00		Mainline	Average	No
		Point-188	2471	997862.50	455869.40	0.00	11.00		Mainline	Average	No
		Point-190	2472	998068.60	455872.90	0.00	11.00		Mainline	Average	No
Grant Mountain EBL		Point-191	2473	997850.80	455921.30	0.00	11.00		Mainline	Average	No
		Point-192	2474	997910.10	455922.70	0.00	11.00		Mainline	Average	No
		Point-194	2475	998065.60	455929.80	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
Grant Mountain EB-Bus		Point-195	2476	998215.60	455887.80	0.00	11.00		Mainline	Average	No
		Point-196	2477	998299.30	455900.20	0.00	11.00		Mainline	Average	No
Grant Highland EB Frontage		Point-207	2484	998633.70	455967.50	0.00	11.00		Mainline	Average	No
		Point-208	2485	998649.10	455962.70	0.00	11.00		Mainline	Average	No
		Point-210	2486	998703.40	455964.40	0.00	11.00		Mainline	Average	No
		Point-212	2487	998899.90	455969.50	0.00	11.00		Mainline	Average	No
		Point-214	2488	999330.20	455977.90	0.00	11.00		Mainline	Average	No
Grant Campbell WB-UT		Point-219	2493	1000479.00	456069.60	0.00	11.00		Mainline	Average	No
		Point-220	2494	1000430.00	456067.10	0.00	11.00		Mainline	Average	No
		Point-222	2495	1000344.00	456068.00	0.00	11.00		Mainline	Average	No
		Point-224	2496	1000281.00	456069.10	0.00	11.00		Mainline	Average	No
		Point-226	2497	1000053.00	456076.10	0.00	11.00		Mainline	Average	No
		Point-228	2498	999954.30	456073.50	0.00	11.00		Mainline	Average	No
		Point-230	2499	999934.80	456063.00	0.00	11.00		Mainline	Average	No
		Point-232	2500	999925.10	456044.80	0.00	11.00		Mainline	Average	No
		Point-234	2501	999923.20	456024.10	0.00	11.00		Mainline	Average	No
		Point-236	2502	999931.60	456006.50	0.00	11.00		Mainline	Average	No
		Point-238	2503	999948.30	455993.40	0.00	11.00		Mainline	Average	No
		Point-240	2504	999964.90	455988.60	0.00	11.00		Mainline	Average	No
		Point-242	2505	1000213.00	456032.50	0.00	11.00		Mainline	Average	No
Grant Martin EBR		Point-243	2506	1000066.00	456003.00	0.00	11.00		Mainline	Average	No
		Point-244	2507	1000079.00	455988.40	0.00	11.00		Mainline	Average	No
		Point-246	2508	1000092.00	455983.20	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X [ft]	Y [ft]	Z [ft]			Road Category	Pavement Type	On Structure
		Name	Number								
Grant Martin EBR		Point-248	2509	1000189.00	455984.90	0.00	11.00		Mainline	Average	No
		Point-250	2510	1000272.00	455993.00	0.00	11.00		Mainline	Average	No
Grant Campbell EBR		Point-251	2511	1000319.00	456015.80	0.00	11.00		Mainline	Average	No
		Point-252	2512	1000401.00	456012.40	0.00	11.00		Mainline	Average	No
		Point-254	2513	1000532.00	456016.80	0.00	11.00		Mainline	Average	No
		Point-256	2514	1000614.00	455977.60	0.00	11.00		Mainline	Average	No
		Point-258	2515	1000629.00	455958.30	0.00	11.00		Mainline	Average	No
		Point-260	2516	1000633.00	455936.10	0.00	11.00		Mainline	Average	No
		Point-262	2517	1000633.00	455898.10	0.00	11.00		Mainline	Average	No
		Point-264	2518	1000635.00	455885.30	0.00	11.00		Mainline	Average	No
Campbell SB-2D		Point-265	2519	1000644.00	456010.00	0.00	11.00		Mainline	Average	No
		Point-266	2520	1000646.00	455896.60	0.00	11.00		Mainline	Average	No
		Point-268	2521	1000652.00	455497.20	0.00	11.00		Mainline	Average	No
Campbell SB-1D		Point-269	2522	1000654.00	456007.20	0.00	11.00		Mainline	Average	No
		Point-270	2523	1000663.00	455508.00	0.00	11.00		Mainline	Average	No
Campbell NB-Left1		Point-288	23	1000676.00	456003.30	0.00	11.00		Mainline	Average	No
		Point-286	24	1000673.00	456050.70	0.00	11.00		Mainline	Average	No
		Point-284	25	1000666.00	456068.40	0.00	11.00		Mainline	Average	No
		Point-282	26	1000646.00	456084.70	0.00	11.00		Mainline	Average	No
		Point-281	27	1000620.00	456087.00	0.00	11.00		Mainline	Average	No
Campbell NB Left2		Point-289	2535	1000689.00	455577.10	0.00	11.00		Mainline	Average	No
		Point-0	50	1000684.00	456002.90	0.00	11.00		Mainline	Average	No
		Point-290	2537	1000685.00	456054.10	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
Campbell NB Left2		Point-292	2538	1000683.00	456076.40	0.00	11.00		Mainline	Average	No
		Point-294	2539	1000665.00	456091.90	0.00	11.00		Mainline	Average	No
		Point-296	2540	1000640.00	456098.30	0.00	11.00		Mainline	Average	No
		Point-298	2541	1000625.00	456097.30	0.00	11.00		Mainline	Average	No
Campbell NB-1		Point-300	29	1000700.00	455504.20	0.00	11.00		Mainline	Average	No
		Point-299	30	1000700.00	456046.00	0.00	11.00		Mainline	Average	No
Campbell NB-2		Point-301	2543	1000711.00	455497.70	0.00	11.00		Mainline	Average	No
		Point-302	2544	1000711.00	456047.80	0.00	11.00		Mainline	Average	No
Campbell NB-R		Point-303	2545	1000725.00	455484.20	0.00	11.00		Mainline	Average	No
		Point-304	2546	1000730.00	456021.50	0.00	11.00		Mainline	Average	No
		Point-306	2547	1000732.00	456035.60	0.00	11.00		Mainline	Average	No
		Point-308	2548	1000744.00	456049.70	0.00	11.00		Mainline	Average	No
		Point-310	2549	1000761.00	456052.60	0.00	11.00		Mainline	Average	No
Grant Campbell EBD-Bus		Point-311	2550	1000783.00	456050.90	0.00	11.00		Mainline	Average	No
		Point-312	2551	1000830.00	456043.10	0.00	11.00		Mainline	Average	No
		Point-314	2552	1000913.00	456051.20	0.00	11.00		Mainline	Average	No
		Point-316	2553	1000952.00	456069.80	0.00	11.00		Mainline	Average	No
Grant Campbell WB-R		Point-323	2560	1001026.00	456170.30	0.00	11.00		Mainline	Average	No
		Point-324	2561	1000895.00	456155.10	0.00	11.00		Mainline	Average	No
		Point-326	2562	1000766.00	456141.90	0.00	11.00		Mainline	Average	No
Grant Campbell WB-D		Point-330	34	1000622.00	456128.30	0.00	11.00		Mainline	Average	No
		Point-328	35	1000546.00	456120.60	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X [ft]	Y [ft]	Z [ft]			Road Category	Pavement Type	On Structure
		Name	Number								
Grant Campbell WB-D		Point-327	36	1000512.00	456113.20	0.00	11.00		Mainline	Average	No
Grant Campbell EB-UT		Point-337	2570	1000890.00	456100.20	0.00	11.00		Mainline	Average	No
		Point-338	2571	1001307.00	456158.00	0.00	11.00		Mainline	Average	No
		Point-340	2572	1001413.00	456166.80	0.00	11.00		Mainline	Average	No
		Point-342	2573	1001430.00	456174.00	0.00	11.00		Mainline	Average	No
		Point-344	2574	1001443.00	456191.00	0.00	11.00		Mainline	Average	No
		Point-346	2575	1001446.00	456210.00	0.00	11.00		Mainline	Average	No
		Point-348	2576	1001439.00	456231.80	0.00	11.00		Mainline	Average	No
		Point-350	2577	1001418.00	456247.70	0.00	11.00		Mainline	Average	No
		Point-352	2578	1001398.00	456251.30	0.00	11.00		Mainline	Average	No
		Point-354	2579	1001195.00	456198.30	0.00	11.00		Mainline	Average	No
		Point-356	2580	1001188.00	456198.20	0.00	11.00		Mainline	Average	No
		Point-358	2581	1001180.00	456201.80	0.00	11.00		Mainline	Average	No
Grant Norris Frontage		Point-359	2582	1001298.00	456112.90	0.00	11.00		Mainline	Average	No
		Point-360	2583	1001322.00	456093.80	0.00	11.00		Mainline	Average	No
		Point-362	2584	1001344.00	456090.30	0.00	11.00		Mainline	Average	No
		Point-364	2585	1002647.00	456109.90	0.00	11.00		Mainline	Average	No
Grant Norris Frontage2		Point-365	2586	1002653.00	456109.60	0.00	11.00		Mainline	Average	No
		Point-366	2587	1002804.00	456111.00	0.00	11.00		Mainline	Average	No
		30	2588	1002825.00	456113.20	0.00	11.00		Mainline	Average	No
		Point-370	2589	1002838.00	456125.30	0.00	11.00		Mainline	Average	No
		Point-372	2590	1002842.00	456136.50	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
Grant Norris Frontage2		Point-374	2591	1002840.00	456152.10	0.00	11.00		Mainline	Average	No
Grant Tucson - EBA-L1		Point-379	2596	1003100.00	456180.10	0.00	11.00		Mainline	Average	No
		Point-380	2597	1003195.00	456177.30	0.00	11.00		Mainline	Average	No
		Point-382	2598	1003358.00	456191.10	0.00	11.00		Mainline	Average	No
Grant Tucson - EBD Bus		Point-385	2601	1003421.00	456144.20	0.00	11.00		Mainline	Average	No
		Point-386	2602	1003479.00	456147.30	0.00	11.00		Mainline	Average	No
Grant Tucson - WBA-R		Point-387	2603	1003529.00	456257.10	0.00	11.00		Mainline	Average	No
		Point-388	2604	1003414.00	456249.00	0.00	11.00		Mainline	Average	No
Grant Tucson - WBA-L1		Point-389	2605	1003620.00	456205.50	0.00	11.00		Mainline	Average	No
		Point-390	2606	1003523.00	456206.30	0.00	11.00		Mainline	Average	No
		Point-392	2607	1003366.00	456192.00	0.00	11.00		Mainline	Average	No
Grant Country Club -EBL1		Point-404	0	1005588.00	456245.00	0.00	11.00		Mainline	Average	No
		Point-403	1	1005975.00	456245.30	0.00	11.00		Mainline	Average	No
Grant Country Club WBL1		Point-410	2	1006494.00	456237.70	0.00	11.00		Mainline	Average	No
		Point-408	3	1006378.00	456234.10	0.00	11.00		Mainline	Average	No
		Point-406	4	1006218.00	456238.80	0.00	11.00		Mainline	Average	No
		Point-405	5	1005990.00	456246.20	0.00	11.00		Mainline	Average	No
Grant Country Club WBR		Point-412	6	1006151.00	456293.10	0.00	11.00		Mainline	Average	No
		Point-411	7	1006042.00	456298.30	0.00	11.00		Mainline	Average	No
Country Club SBR		Point-427	2639	1005946.00	456476.10	0.00	11.00		Mainline	Average	No
		Point-428	2640	1005947.00	456292.50	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X [ft]	Y [ft]	Z [ft]			Road Category	Pavement Type	On Structure
		Name	Number								
Country Club SB-2		Point-429	2641	1005981.00	456788.00	0.00	11.00		Mainline	Average	No
		Point-430	2642	1005962.00	456515.40	0.00	11.00		Mainline	Average	No
		Point-432	2643	1005960.00	456292.60	0.00	11.00		Mainline	Average	No
Country Club SB-1		Point-433	2644	1005992.00	456785.20	0.00	11.00		Mainline	Average	No
		Point-434	2645	1005972.00	456518.00	0.00	11.00		Mainline	Average	No
		Point-436	2646	1005973.00	456291.50	0.00	11.00		Mainline	Average	No
Country Club SBL		Point-437	2647	1005982.00	456501.20	0.00	11.00		Mainline	Average	No
		Point-438	2648	1005987.00	456290.80	0.00	11.00		Mainline	Average	No
Country Club NBD-1		Point-439	2649	1006000.00	456290.50	0.00	11.00		Mainline	Average	No
		Point-440	2650	1005999.00	456647.80	0.00	11.00		Mainline	Average	No
		Point-442	2651	1006006.00	456724.30	0.00	11.00		Mainline	Average	No
Country Club NBD-2		Point-443	2652	1006013.00	456289.30	0.00	11.00		Mainline	Average	No
		Point-444	2653	1006010.00	456622.80	0.00	11.00		Mainline	Average	No
		Point-446	2654	1006016.00	456724.80	0.00	11.00		Mainline	Average	No
Grant Country Club -EBR		Point-459	2662	1005764.00	456195.00	0.00	11.00		Mainline	Average	No
		Point-460	2663	1005943.00	456195.00	0.00	11.00		Mainline	Average	No
Country Club NBL		Point-463	2666	1005995.00	455963.60	0.00	11.00		Mainline	Average	No
		Point-464	2667	1005991.00	456097.30	0.00	11.00		Mainline	Average	No
		Point-466	2668	1005984.00	456200.80	0.00	11.00		Mainline	Average	No
Country Club NBR		Point-467	2669	1006030.00	456017.20	0.00	11.00		Mainline	Average	No
		Point-468	2670	1006026.00	456200.30	0.00	11.00		Mainline	Average	No
Grant Country Club EB Bus		Point-469	2671	1006313.00	456179.90	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
Grant Country Club EB Bus		Point-470	2672	1006397.00	456178.60	0.00	11.00		Mainline	Average	No
Campbell NB-Bus		Point-471	2673	1000740.00	456220.50	0.00	11.00		Mainline	Average	No
		Point-472	2674	1000743.00	456318.80	0.00	11.00		Mainline	Average	No
Country Club SBD2		Point-722	8	1005964.00	456203.90	0.00	11.00		Mainline	Average	No
		Point-720	9	1005966.00	456081.30	0.00	11.00		Mainline	Average	No
		Point-719	10	1005990.00	455754.80	0.00	11.00		Mainline	Average	No
Country Club NB-1		Point-724	11	1006010.00	455764.00	0.00	11.00		Mainline	Average	No
		Point-11	452	1006006.00	455964.50	0.00	11.00		Mainline	Average	No
		Point-723	13	1006002.00	456203.80	0.00	11.00		Mainline	Average	No
Country Club SBD1		Point-728	12	1005973.00	456203.20	0.00	11.00		Mainline	Average	No
		Point-726	14	1005976.00	456083.10	0.00	11.00		Mainline	Average	No
		Point-725	15	1005999.00	455755.70	0.00	11.00		Mainline	Average	No
Country Club NB-2		Point-812	16	1006020.00	455762.40	0.00	11.00		Mainline	Average	No
		Point-810	17	1006016.00	455823.10	0.00	11.00		Mainline	Average	No
		Point-12	453	1006016.00	455965.00	0.00	11.00		Mainline	Average	No
		Point-809	19	1006012.00	456202.30	0.00	11.00		Mainline	Average	No
Grant Mountain WBD-Bus		5	18	997882.40	455972.80	0.00	11.00		Mainline	Average	No
		0	33	997810.90	455971.70	0.00	11.00		Mainline	Average	No
Grant Tucson WBD-Bus		7	38	1003122.00	456227.40	0.00	11.00		Mainline	Average	No
		1	44	1003051.00	456230.20	0.00	11.00		Mainline	Average	No
		0	45	1003048.00	456230.30	0.00	11.00		Mainline	Average	No
Grant Country Club WBD-Bus		8	46	1005617.00	456300.00	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
Grant Country Club WBD-Bus		0	54	1005541.00	456298.00	0.00	11.00		Mainline	Average	No
Campbell SB-R		Point-0	55	1000648.00	456249.40	0.00	11.00		Mainline	Average	No
		Point-3	57	1000637.00	456132.90	0.00	11.00		Mainline	Average	No
Campbell SB-2		Point-4	58	1000674.00	456351.20	0.00	11.00		Mainline	Average	No
		Point-5	59	1000654.00	456131.80	0.00	11.00		Mainline	Average	No
Campbell SB-1		Point-6	60	1000686.00	456380.20	0.00	11.00		Mainline	Average	No
		Point-7	61	1000665.00	456131.90	0.00	11.00		Mainline	Average	No
Campbell SB L-2		Point-8	62	1000695.00	456380.70	0.00	11.00		Mainline	Average	No
		Point-9	63	1000678.00	456130.40	0.00	11.00		Mainline	Average	No
Campbell SB L-1		Point-11	37	1000707.00	456382.40	0.00	11.00		Mainline	Average	No
		Point-10	64	1000689.00	456130.90	0.00	11.00		Mainline	Average	No
Campbell NB-1D		Point-12	66	1000703.00	456133.90	0.00	11.00		Mainline	Average	No
		Point-13	68	1000715.00	456243.40	0.00	11.00		Mainline	Average	No
		Point-15	69	1000718.00	456385.40	0.00	11.00		Mainline	Average	No
Campbell NB-2D		Point-16	70	1000714.00	456135.30	0.00	11.00		Mainline	Average	No
		Point-17	71	1000725.00	456245.60	0.00	11.00		Mainline	Average	No
		Point-19	72	1000726.00	456273.60	0.00	11.00		Mainline	Average	No
		Point-21	73	1000728.00	456387.50	0.00	11.00		Mainline	Average	No
Grant Mountain WBR		Point-22	74	998399.80	456012.90	0.00	11.00		Mainline	Average	No
		Point-23	75	998220.00	456000.90	0.00	11.00		Mainline	Average	No
		Point-25	76	998068.30	455995.50	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]					
EB-3a		Grant RoadMountain AvenueEB Approach	65	997220.10	455879.30	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Approach	67	997645.10	455885.20	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Approach	77	997928.30	455890.20	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	78	998067.90	455893.10	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	79	998205.90	455905.10	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	80	998302.00	455920.80	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	81	998443.50	455954.70	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	82	998605.80	455983.40	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X [ft]	Y [ft]	Z [ft]			Road Category	Pavement Type	On Structure
		Name	Number								
EB-3a		Grant RoadMountain AvenueEB Departure	83	998779.00	455996.50	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	84	998900.90	455998.80	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Approach	85	999358.10	456007.90	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Approach	86	999623.90	456011.90	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Approach	87	999918.10	456035.10	0.00	11.00		Mainline	Average	No
EB-2a		Grant RoadMountain AvenueEB Approach	88	997219.60	455890.10	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Approach	89	997644.60	455896.30	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	90	998067.90	455904.30	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]					
EB-2a		Grant RoadMountain AvenueEB Departure	91	998181.80	455913.90	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	92	998302.30	455931.90	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	93	998388.80	455955.00	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	94	998444.60	455966.70	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	95	998587.10	455991.90	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	96	998697.60	456003.20	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	97	998796.30	456007.80	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	98	998899.10	456009.90	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X [ft]	Y [ft]	Z [ft]			Road Category	Pavement Type	On Structure
		Name	Number								
EB-2a		Grant RoadCamp bell AvenueEB Approach	99	999356.80	456017.80	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	100	999664.80	456025.10	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	101	999919.40	456045.60	0.00	11.00		Mainline	Average	No
EB-1a		Grant RoadMoun tain AvenueEB Approach	102	997220.30	455901.20	0.00	11.00		Mainline	Average	No
		Grant RoadMoun tain AvenueEB Approach	103	997645.30	455907.50	0.00	11.00		Mainline	Average	No
		Grant RoadMoun tain AvenueEB Approach	104	997981.50	455912.60	0.00	11.00		Mainline	Average	No
		Grant RoadMoun tain AvenueEB Departure	105	998068.20	455915.40	0.00	11.00		Mainline	Average	No
		Grant RoadMoun tain AvenueEB Departure	106	998192.40	455926.40	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
EB-1a		Grant RoadMountain AvenueEB Departure	107	998287.30	455940.10	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	108	998390.80	455965.80	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	109	998443.30	455976.50	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	110	998573.70	456001.30	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	111	998721.60	456015.80	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueEB Departure	112	998898.20	456021.50	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Approach	113	999357.60	456028.50	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Approach	114	999607.90	456033.30	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X [ft]	Y [ft]	Z [ft]			Road Category	Pavement Type	On Structure
		Name	Number								
EB-1a		Grant RoadCamp bell AvenueEB Approach	115	999925.30	456055.90	0.00	11.00		Mainline	Average	No
Grant Mountain WBL		Point-447	116	998367.10	455975.40	0.00	11.00		Mainline	Average	No
		Point-445	117	998312.80	455965.90	0.00	11.00		Mainline	Average	No
		Point-443	118	998220.60	455946.90	0.00	11.00		Mainline	Average	No
		Point-442	119	998076.80	455929.10	0.00	11.00		Mainline	Average	No
WB-1a		Grant RoadCount ry Club RoadWB Approach	120	1008251.00	456316.00	0.00	11.00		Mainline	Average	No
		Grant RoadCount ry Club RoadWB Approach	121	1007971.00	456311.20	0.00	11.00		Mainline	Average	No
		Grant RoadCount ry Club RoadWB Approach	122	1007784.00	456309.00	0.00	11.00		Mainline	Average	No
		Grant RoadCount ry Club RoadWB Approach	123	1007323.00	456301.90	0.00	11.00		Mainline	Average	No
		Grant RoadCount ry Club RoadWB Approach	124	1007179.00	456296.10	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-1a		Grant RoadCounty Club RoadWB Approach	125	1006818.00	456267.90	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Approach	126	1006643.00	456253.90	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Approach	127	1006542.00	456248.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Approach	128	1006364.00	456245.00	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Approach	129	1006337.00	456245.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	131	1005982.00	456259.10	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	132	1005862.00	456261.80	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	133	1005560.00	456259.30	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]					
WB-1a		Grant RoadCounty Club RoadWB Departure	134	1005319.00	456245.40	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	135	1005174.00	456234.60	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	136	1004924.00	456216.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	137	1004774.00	456208.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	138	1004673.00	456208.50	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	139	1004537.00	456207.80	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	140	1004423.00	456204.90	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-1a		Grant RoadTucson Boulevard WB Approach	141	1004054.00	456201.50	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	142	1003886.00	456204.10	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	143	1003620.00	456214.80	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	144	1003562.00	456217.10	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	145	1003484.00	456215.50	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	146	1003351.00	456205.10	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	147	1003235.00	456195.60	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-1a		Grant RoadTucson Boulevard WB Departure	148	1003114.00	456194.50	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	149	1002883.00	456202.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	150	1002783.00	456205.30	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	151	1002658.00	456203.80	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	152	1002468.00	456188.60	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	153	1002188.00	456184.70	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueWB Approach	154	1002052.00	456192.40	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X [ft]	Y [ft]	Z [ft]			Road Category	Pavement Type	On Structure
		Name	Number								
WB-1a		Grant RoadCamp bell AvenueWB Approach	155	1001606.00	456186.30	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Approach	156	1001445.00	456184.80	0.00	11.00		Mainline	Average	No
WB-2a		Grant RoadCount ry Club RoadWB Approach	20	1008249.00	456326.70	0.00	11.00		Mainline	Average	No
		Grant RoadCount ry Club RoadWB Approach	157	1007971.00	456322.80	0.00	11.00		Mainline	Average	No
		Grant RoadCount ry Club RoadWB Approach	158	1007784.00	456319.30	0.00	11.00		Mainline	Average	No
		Grant RoadCount ry Club RoadWB Approach	159	1007324.00	456312.60	0.00	11.00		Mainline	Average	No
		Grant RoadCount ry Club RoadWB Approach	160	1007207.00	456309.30	0.00	11.00		Mainline	Average	No
		Grant RoadCount ry Club RoadWB Approach	161	1006818.00	456279.00	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]					
WB-2a		Grant RoadCounty Club RoadWB Approach	162	1006607.00	456261.40	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Approach	163	1006446.00	456257.20	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Approach	164	1006336.00	456256.70	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	165	1005983.00	456270.80	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	166	1005801.00	456273.40	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	167	1005623.00	456271.60	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	168	1005472.00	456266.10	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	169	1005336.00	456256.60	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-2a		Grant RoadCounty Club RoadWB Departure	170	1004861.00	456223.60	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	171	1004769.00	456219.20	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	172	1004674.00	456220.10	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	173	1004021.00	456212.60	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	174	1003788.00	456219.00	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	175	1003615.00	456226.50	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	176	1003523.00	456227.30	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-2a		Grant RoadTucson Boulevard WB Approach	177	1003395.00	456219.80	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	178	1003350.00	456215.80	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	179	1003223.00	456206.10	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	180	1003140.00	456205.10	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	181	1002878.00	456214.50	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	182	1002774.00	456215.80	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	183	1002616.00	456211.30	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-2a		Grant RoadTucson Boulevard WB Departure	184	1002449.00	456198.50	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	185	1002221.00	456195.00	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueWB Approach	186	1002051.00	456203.40	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueWB Approach	187	1001606.00	456198.00	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueWB Approach	188	1001449.00	456195.10	0.00	11.00		Mainline	Average	No
WB-3a		Grant RoadCounty Club RoadWB Approach	189	1008247.00	456337.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Approach	190	1007969.00	456333.40	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]					
WB-3a		Grant RoadCounty Club RoadWB Approach	191	1007783.00	456330.90	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Approach	192	1007463.00	456326.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Approach	193	1007322.00	456323.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Approach	194	1007194.00	456319.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Approach	195	1006818.00	456290.20	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Approach	196	1006593.00	456272.00	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Approach	197	1006439.00	456268.10	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	198	1006335.00	456268.40	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-3a		Grant RoadCounty Club RoadWB Departure	199	1006278.00	456269.50	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	200	1005981.00	456281.60	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	201	1005851.00	456284.20	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	202	1005598.00	456282.20	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	203	1005484.00	456278.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	204	1005174.00	456256.90	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	205	1004858.00	456234.20	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadWB Departure	206	1004762.00	456230.80	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-3a		Grant RoadTucson Boulevard WB Approach	207	1004674.00	456231.20	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	208	1004553.00	456230.10	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	209	1004473.00	456227.30	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	210	1004021.00	456223.60	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	211	1003883.00	456226.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	212	1003595.00	456238.30	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Approach	213	1003516.00	456238.40	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-3a		Grant RoadTucson Boulevard WB Approach	214	1003440.00	456234.40	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	215	1003350.00	456227.30	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	216	1003235.00	456218.50	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	217	1003179.00	456216.30	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	218	1003031.00	456219.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	219	1002851.00	456226.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	220	1002730.00	456226.20	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-3a		Grant RoadTucson Boulevard WB Departure	221	1002657.00	456224.80	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	222	1002564.00	456218.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	223	1002484.00	456210.80	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	224	1002242.00	456206.50	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard WB Departure	225	1002166.00	456208.70	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueWB Approach	226	1002051.00	456214.70	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueWB Approach	227	1001605.00	456208.60	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]					
WB-3a		Grant RoadCamp bell AvenueWB Approach	228	1001488.00	456207.10	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Approach	229	1001449.00	456204.90	0.00	11.00		Mainline	Average	No
EB-1a_Divided		Grant RoadCamp bell AvenueEB Approach	230	999938.50	456056.30	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	231	999955.60	456058.30	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	232	1000109.00	456060.50	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	233	1000282.00	456054.20	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	234	1000422.00	456051.80	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	235	1000567.00	456057.60	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]					
EB-1a_Divided		Grant RoadCamp bell AvenueEB Departure	236	1000663.00	456065.60	0.00	11.00		Mainline	Average	No
EB-2a_Divided		Grant RoadCamp bell AvenueEB Approach	237	999931.00	456047.00	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	238	999970.20	456048.50	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	239	1000088.00	456050.40	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	240	1000359.00	456040.50	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	241	1000467.00	456043.10	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	242	1000617.00	456051.50	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Departure	243	1000668.00	456056.10	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X [ft]	Y [ft]	Z [ft]			Road Category	Pavement Type	On Structure
		Name	Number								
EB-3a_Divided		Grant RoadCamp bell AvenueEB Approach	244	999928.60	456035.50	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	245	999994.80	456038.40	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	246	1000090.00	456038.80	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	247	1000320.00	456029.80	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	248	1000422.00	456029.50	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	249	1000621.00	456040.30	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueEB Approach	250	1000670.00	456045.80	0.00	11.00		Mainline	Average	No
WB-1a_Divided 2		Grant RoadCamp bell AvenueWB Departure	251	1000653.00	456092.00	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-1a_Divided 2		Grant RoadCamp bell AvenueWB Departure	252	1000554.00	456083.90	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	253	1000445.00	456078.90	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	254	1000345.00	456078.40	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	255	1000283.00	456080.10	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	256	1000053.00	456087.20	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	257	999944.30	456083.60	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	258	999821.10	456075.30	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	259	999630.50	456059.90	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-1a_Divided 2		Grant RoadMountain AvenueWB Approach	260	999357.00	456054.70	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	261	998899.30	456047.20	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	262	998771.50	456042.80	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	263	998596.20	456020.70	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	264	998503.80	456004.20	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	265	998336.30	455975.30	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	266	998266.10	455964.40	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	267	998154.10	455950.40	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-1a_Divided 2		Grant RoadMountain AvenueWB Departure	268	998067.90	455943.60	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Departure	269	997992.50	455941.00	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Departure	270	997645.10	455935.10	0.00	11.00		Mainline	Average	No
		Point-559	271	997222.30	455928.90	0.00	11.00		Mainline	Average	No
EB-1a_Divided_Divided		Grant RoadCampbell AvenueEB Departure	272	1000688.00	456070.30	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	273	1000980.00	456099.70	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	274	1001149.00	456124.40	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	275	1001293.00	456145.90	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	276	1001372.00	456151.80	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]					
EB-1a_Divided_Divided		Grant RoadCampbell AvenueEB Departure	277	1001452.00	456157.70	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	278	1001607.00	456161.10	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	279	1002051.00	456167.20	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	280	1002658.00	456176.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	281	1002843.00	456178.60	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	282	1002964.00	456173.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	283	1003154.00	456165.70	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
EB-1a_Divided_Divided		Grant RoadTucson Boulevard EB Approach	284	1003276.00	456171.00	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	285	1003351.00	456176.60	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	286	1003513.00	456188.80	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	287	1003753.00	456183.20	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	288	1003941.00	456176.60	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	289	1004022.00	456175.70	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	290	1004318.00	456179.30	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
EB-1a_Divided_Divided		Grant RoadTucson Boulevard EB Departure	291	1004414.00	456185.10	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	292	1004549.00	456190.90	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club Road EB Approach	293	1004673.00	456191.60	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club Road EB Approach	294	1004981.00	456197.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club Road EB Approach	295	1005073.00	456201.10	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club Road EB Approach	296	1005337.00	456219.60	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club Road EB Approach	297	1005516.00	456231.10	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
EB-1a_Divided_Divided		Grant RoadCounty Club RoadEB Approach	298	1005628.00	456233.40	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	299	1005981.00	456232.50	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	300	1006339.00	456217.70	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	301	1006488.00	456219.90	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	302	1006606.00	456225.90	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	303	1006819.00	456242.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	304	1007184.00	456271.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	305	1007390.00	456277.80	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
EB-1a_Divided_Divided		Grant RoadCounty Club RoadEB Departure	306	1007462.00	456278.80	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	307	1007786.00	456282.70	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	308	1008104.00	456287.30	0.00	11.00		Mainline	Average	No
		Point-308	309	1008253.00	456289.40	0.00	11.00		Mainline	Average	No
EB-2a_Divided_Divided		Grant RoadCampbell AvenueEB Departure	310	1000690.00	456059.00	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	311	1001004.00	456091.70	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	312	1001151.00	456113.30	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	313	1001294.00	456133.90	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	314	1001373.00	456140.00	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
EB-2a_Divided_Divided		Grant RoadCampbell AvenueEB Departure	315	1001451.00	456146.10	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	316	1001607.00	456148.80	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	317	1002051.00	456156.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	318	1002261.00	456159.70	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	319	1002659.00	456165.80	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	320	1002827.00	456167.70	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	321	1003029.00	456158.80	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
EB-2a_Divided_Divided		Grant RoadTucson Boulevard EB Approach	322	1003165.00	456155.10	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	323	1003250.00	456157.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	324	1003351.00	456165.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	325	1003515.00	456177.30	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	326	1003680.00	456175.50	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	327	1003923.00	456166.20	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	328	1004023.00	456165.40	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
EB-2a_Divided_Divided		Grant RoadTucson Boulevard EB Departure	329	1004165.00	456165.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	330	1004318.00	456168.10	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	331	1004550.00	456180.60	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club Road EB Approach	332	1004674.00	456181.70	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club Road EB Approach	333	1004949.00	456184.70	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club Road EB Approach	334	1005106.00	456191.90	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club Road EB Approach	335	1005337.00	456209.30	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
EB-2a_Divided_Divided		Grant RoadCounty Club RoadEB Approach	336	1005521.00	456220.40	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Approach	337	1005707.00	456223.00	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	338	1005982.00	456221.00	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	339	1006336.00	456206.50	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	340	1006435.00	456207.40	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	341	1006506.00	456209.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	342	1006614.00	456214.00	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	343	1006819.00	456231.60	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]					
EB-2a_Divided_Divided		Grant RoadCounty Club RoadEB Departure	344	1006948.00	456241.50	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	345	1007204.00	456261.20	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	346	1007377.00	456265.70	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	347	1007461.00	456267.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	348	1007786.00	456271.50	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	349	1008107.00	456276.10	0.00	11.00		Mainline	Average	No
		Point-195	350	1008252.00	456278.70	0.00	11.00		Mainline	Average	No
EB-3a_Divided_Divided		Grant RoadCampbell AvenueEB Departure	351	1000688.00	456048.00	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	352	1000954.00	456074.30	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
EB-3a_Divided_Divided		Grant RoadCampbell AvenueEB Departure	353	1001221.00	456114.30	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	354	1001335.00	456127.30	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	355	1001372.00	456130.10	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	356	1001469.00	456137.60	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	357	1001606.00	456139.70	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueEB Departure	358	1001725.00	456139.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	359	1002052.00	456145.00	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
EB-3a_Divided_Divided		Grant RoadTucson Boulevard EB Approach	360	1002796.00	456157.10	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	361	1002890.00	456155.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	362	1003005.00	456150.30	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	363	1003145.00	456143.40	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Approach	364	1003254.00	456146.80	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	365	1003352.00	456154.30	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	366	1003510.00	456166.50	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
EB-3a_Divided_Divided		Grant RoadTucson Boulevard EB Departure	367	1003646.00	456164.90	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	368	1003913.00	456155.30	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	369	1004119.00	456154.30	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	370	1004271.00	456155.70	0.00	11.00		Mainline	Average	No
		Grant RoadTucson Boulevard EB Departure	371	1004540.00	456169.80	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club Road EB Approach	372	1004675.00	456170.60	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club Road EB Approach	373	1004993.00	456174.80	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
EB-3a_Divided_Divided		Grant RoadCounty Club RoadEB Approach	374	1005466.00	456206.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Approach	375	1005620.00	456211.90	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	376	1005982.00	456211.10	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	377	1006345.00	456196.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	378	1006543.00	456199.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	379	1006820.00	456221.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	380	1007110.00	456244.60	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	381	1007268.00	456253.10	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X [ft]	Y [ft]	Z [ft]			Road Category	Pavement Type	On Structure
		Name	Number								
EB-3a_Divided_Divided		Grant RoadCounty Club RoadEB Departure	382	1007786.00	456260.30	0.00	11.00		Mainline	Average	No
		Grant RoadCounty Club RoadEB Departure	383	1008248.00	456267.10	0.00	11.00		Mainline	Average	No
WB-3a_Divided		Grant RoadCampbell AvenueWB Approach	384	1001438.00	456203.80	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueWB Approach	385	1001401.00	456201.20	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueWB Approach	386	1001261.00	456189.80	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueWB Approach	387	1001151.00	456173.10	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueWB Approach	388	1000991.00	456149.30	0.00	11.00		Mainline	Average	No
		Grant RoadCampbell AvenueWB Approach	389	1000831.00	456131.80	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-3a_Divided		Grant RoadCamp bell AvenueWB Departure	390	1000670.00	456115.90	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	391	1000556.00	456105.80	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	392	1000482.00	456101.80	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	393	1000384.00	456100.50	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	394	1000294.00	456101.80	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	395	1000117.00	456108.00	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	396	1000052.00	456110.70	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	397	999937.80	456106.40	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-3a_Divided		Grant RoadCamp bell AvenueWB Departure	398	999645.30	456083.10	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	399	999571.10	456080.40	0.00	11.00		Mainline	Average	No
		Grant RoadMoun tain AvenueWB Approach	400	999356.70	456076.80	0.00	11.00		Mainline	Average	No
		Grant RoadMoun tain AvenueWB Approach	401	998897.30	456068.90	0.00	11.00		Mainline	Average	No
		Grant RoadMoun tain AvenueWB Approach	402	998806.90	456066.50	0.00	11.00		Mainline	Average	No
		Grant RoadMoun tain AvenueWB Approach	403	998743.60	456062.60	0.00	11.00		Mainline	Average	No
		Grant RoadMoun tain AvenueWB Approach	404	998642.50	456050.10	0.00	11.00		Mainline	Average	No
		Grant RoadMoun tain AvenueWB Approach	405	998549.30	456034.80	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]					
WB-3a_Divided		Grant RoadMountain AvenueWB Approach	406	998440.90	456014.10	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	407	998360.60	455998.50	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	408	998165.90	455973.60	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Departure	409	998068.10	455965.80	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Departure	410	998001.40	455963.10	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Departure	411	997643.60	455957.40	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Departure	412	997215.80	455950.30	0.00	11.00		Mainline	Average	No
	WB-2a_Divided		Grant RoadCampbell AvenueWB Approach	413	1001437.00	456194.70	0.00	11.00		Mainline	Average

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-2a_Divided		Grant RoadCamp bell AvenueWB Approach	414	1001400.00	456192.50	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Approach	415	1001272.00	456179.80	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Approach	416	1001151.00	456161.80	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Approach	417	1000976.00	456135.70	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Approach	418	1000830.00	456120.40	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Approach	419	1000811.00	456119.30	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	420	1000669.00	456104.30	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	421	1000524.00	456092.30	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-2a_Divided		Grant RoadCamp bell AvenueWB Departure	422	1000375.00	456088.50	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	423	1000053.00	456097.50	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	424	999999.10	456096.60	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	425	999899.90	456092.70	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	426	999676.60	456073.60	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	427	999527.60	456068.70	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	428	999357.40	456065.50	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	429	998898.40	456058.50	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-2a_Divided		Grant RoadMountain AvenueWB Approach	430	998773.50	456054.30	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	431	998675.20	456043.30	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	432	998554.10	456024.90	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	433	998364.00	455986.80	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Approach	434	998158.60	455961.80	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Departure	435	998068.30	455954.60	0.00	11.00		Mainline	Average	No
		Grant RoadMountain AvenueWB Departure	436	997645.50	455946.10	0.00	11.00		Mainline	Average	No
		Point-1112	437	997219.70	455939.60	0.00	11.00		Mainline	Average	No
WB-1a_Divided		Grant RoadCampbell AvenueWB Approach	438	1001430.00	456183.90	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]	[ft]				
WB-1a_Divided		Grant RoadCamp bell AvenueWB Approach	439	1001364.00	456178.90	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Approach	440	1001265.00	456168.10	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Approach	441	1001148.00	456151.00	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Approach	442	1001019.00	456130.60	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Approach	443	1000832.00	456109.10	0.00	11.00		Mainline	Average	No
		Grant RoadCamp bell AvenueWB Departure	444	1000671.00	456094.60	0.00	11.00		Mainline	Average	No
		Mountain NB Approach		Point-0	39	998064.10	455678.50	0.00	11.00		Mainline
		Point-1	40	998062.80	455867.50	0.00	11.00		Mainline	Average	No
Mountain SB Departure		Point-2	41	998050.80	455868.20	0.00	11.00		Mainline	Average	No
		Point-3	42	998054.10	455678.00	0.00	11.00		Mainline	Average	No
Mountain SB Approach		Point-4	43	998039.50	456612.10	0.00	11.00		Mainline	Average	No
		Point-5	47	998049.90	456010.20	0.00	11.00		Mainline	Average	No

Roadway Name	Roadway Notes	Road Segment		Coordinates (pavement)			Width [ft]	Point Notes	Road Segment		
		Start Point		X	Y	Z			Road Category	Pavement Type	On Structure
		Name	Number	[ft]	[ft]	[ft]					
Mountain NB Departure		Point-6	48	998058.60	456011.50	0.00	11.00		Mainline	Average	No
		Point-7	49	998052.40	456612.70	0.00	11.00		Mainline	Average	No
Tucson NB Approach		Point-1	51	1003363.00	455677.40	0.00	11.00		Mainline	Average	No
		Point-2	52	1003353.00	456149.00	0.00	11.00		Mainline	Average	No
Tucson SB Departure		Point-5	446	1003329.00	456149.60	0.00	11.00		Mainline	Average	No
		Point-6	447	1003341.00	456678.40	0.00	11.00		Mainline	Average	No
Tucson NB Departure		Point-7	448	1003360.00	456236.50	0.00	11.00		Mainline	Average	No
		Point-8	449	1003358.00	456708.10	0.00	11.00		Mainline	Average	No
Tucson SB Approach		Point-9	450	1003332.00	456712.80	0.00	11.00		Mainline	Average	No
		Point-10	451	1003333.00	456236.30	0.00	11.00		Mainline	Average	No