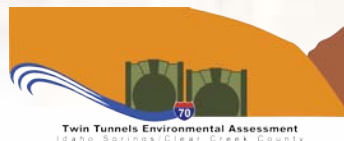


# Twin Tunnels Environmental Assessment Noise Technical Memorandum



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## Acronyms and Abbreviations

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23CFR772	Title 23, Code of Federal Regulations, Part 772 (the FHWA Noise Regulation)
CDOT	Colorado Department of Transportation
dB(A)	A-weighted decibels
FHWA	Federal Highway Administration
Leq(h)	Hourly Equivalent Noise Level
mph	Miles per hour
NEPA	National Environmental Policy Act
NAC	Noise Abatement Criteria
PEIS	Programmatic Environmental Impact Statement
ROD	Record of Decision
TNM	Traffic Noise Model

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## Section 1. Purpose of the Memorandum

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The Federal Highway Administration (FHWA), in cooperation with the Colorado Department of Transportation (CDOT), is preparing an Environmental Assessment (EA) for proposed changes to the eastbound lanes of I-70 and the eastbound bore of the Twin Tunnels between MP 241 and MP 244 in Clear Creek County, Colorado. The Twin Tunnels area is one of the most congested locations along the I-70 Mountain Corridor. Improvements are necessary to improve safety, operations, and travel time reliability in the eastbound direction of I-70 in the project area. Additionally, the improvements will be consistent with the I-70 Mountain Corridor Programmatic Environmental Impact Statement (PEIS) Record of Decision (ROD), I-70 Mountain Corridor Context Sensitive Solutions process, and other commitments of the PEIS. The Proposed Action would immediately address safety, mobility, and operations in the eastbound direction at the Twin Tunnels, but would not address all of the needs in the Twin Tunnels area. The Proposed Action would not preclude other improvements needed and approved by the I-70 PEIS ROD.

This technical memorandum discusses the regulatory setting and describes the affected environment and the impacts of the Proposed Action on traffic noise within the identified study area. The memorandum also documents mitigation measures, including applicable measures identified in the I-70 Mountain Corridor PEIS, which would reduce any impacts during construction and operation. The I-70 PEIS identified comprehensive improvements for the corridor.

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## Section 2. How Does the Analysis Relate to the Tier 1 PEIS?

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The efforts that resulted in approval of the I-70 PEIS and ROD comprised the Tier 1 environmental process. Those efforts examined alternatives, impacts, and mitigation for the entire I-70 Mountain Corridor on a programmatic basis, identifying a Preferred Alternative. Due to its length, complexity, and cost, the Preferred Alternative will not be implemented as a single project but by numerous projects at various locations over time. Subsequent environmental analysis is required for these specific corridor improvements. The Proposed Action for the Twin Tunnels area is one of the first projects undergoing Tier 2 analysis.

The Colorado Department of Transportation will conduct the following activities during Tier 2 processes:

- Develop specific and more detailed mitigation strategies and measures
- Develop best management practices specific to each project
- Identify extent and intensity of noise impacts to the project and surrounding area
- Adhere to any new laws and regulations that may be in place when Tier 2 processes are underway, including new regulations regarding noise abatement criteria expected to go into effect in July 2011

It should be noted noise analysis conducted for this and subsequent Tier 2 projects will only address highway traffic noise associated with the specific project and will not address future noise issues related to transit facilities described in the PEIS.

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## Section 3. What Process Was Followed to Analyze Traffic Noise?

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### 3.1 Methodology

This noise analysis complies with regulatory requirements defined in 23CFR772 and CDOT Noise Analysis and Abatement Guidelines approved June 16, 2012 by FHWA. Noise levels were predicted

using the TNM 2.5 highway noise level prediction software program developed by the Federal Highway Administration, which is approved for use on CDOT and Federal-aid projects. TNM calculates the hourly, noise level at a receptor location based on the following factors:

- the noise emission level of automobiles, medium trucks, heavy trucks, buses and motorcycles
- the volume and speed of each of these vehicle types on each key roadway
- the relative location of all roadways, receptors, and terrain features
- the type of land cover between each receptor and each roadway

The following paragraphs from the March 2011 *Colorado Noise Analysis and Abatement Guidelines* explain the technical terminology for the units of measurement that the model uses.

Since sound travels in waves, there are also varying frequencies associated with each sound event. The human ear does not respond equally to all frequencies, however, and filtering of these frequencies must be done in order to obtain accurate measurements and descriptions of highway traffic noise, as this noise is comprised of many frequencies. The filtering (weighting of frequencies) of the “A” scale on sound-level meters most closely approximates the average frequency response of the human ear, and is the scale that is used for traffic noise analyses. Decibel units described in this manner are referred to as A-weighted decibels, or dBA.

As sound intensity tends to fluctuate with time, a method is required to describe a noise source, such as a highway, in a steady state condition. The descriptor most commonly used in environmental noise analysis is the equivalent steady state sound level, or  $Leq$ . This value is representative of the same amount of acoustic energy that is contained in a time-varying sound measurement over a specified period. For highway traffic noise analyses in Colorado that time period is one hour, and the value then reflects the hourly equivalent sound level, or  $Leq(h)$ .

### 3.2 Study Area

The project study area is along the I-70 highway for approximately three miles between the East Idaho Springs interchange and the base of Floyd Hill, as shown in Figure 1.

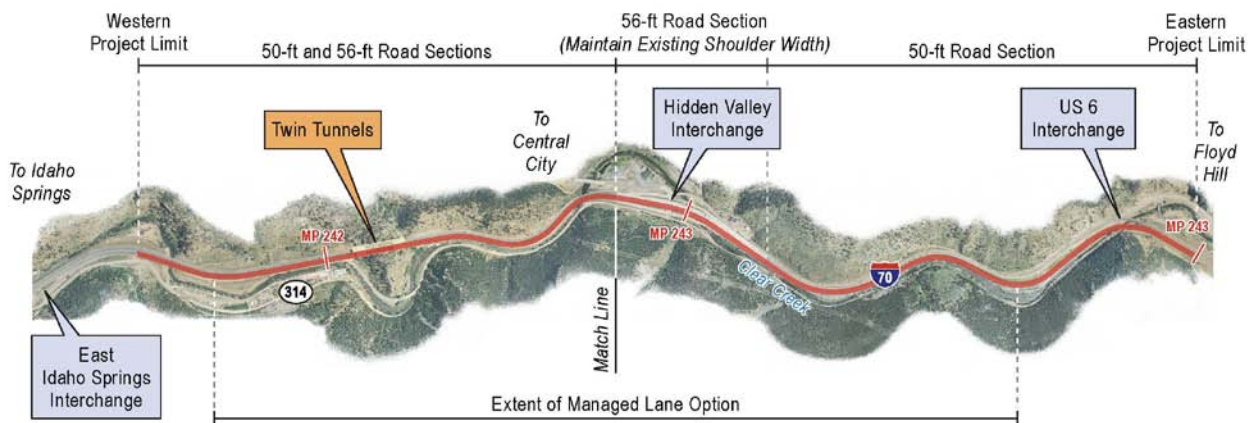


FIGURE 1 Study Area

### 3.3 Data Sources

The following paragraphs describe the TNM input data used to predict noise levels for existing, construction and design-year (2035) conditions on this project.

#### 3.3.1 Roadway alignments

The roadway alignments, including profiles and pavement width, for I-70, CR 314 and the detour were determined using the CAD roadway design files and topographical survey data developed for the project. Central City Parkway was not included in the model because of the low traffic volumes on this 30 mph facility that is 375 to 450 feet away from the I-70 project receptors.

#### 3.3.2 Traffic

Felsburg Holt & Ullevig developed traffic volumes reviewed for this noise analysis. Estimates of I-70 design hour existing and future traffic volumes in the immediate area of the project represent congested flow conditions. These congested flow rates, while carrying more vehicles, have significantly lower travel speeds and thus do not represent the loudest or worst hours for noise. The worst hour for noise is when the highest volume of traffic can travel at the highest free flow speed for the particular roadway. Using the Highway Capacity Manual (2000) and TNM, CDOT has developed maximum traffic volumes per lane at various posted speed limits to simulate free flow conditions and produce the loudest noise. Traffic volumes for this analysis, except for the frontage road, use these maximum flow rates for the posted speeds. Directional truck percentages were incorporated into these passenger vehicle volumes at a rate of 1:5 to account for the additional space required for medium and heavy trucks in travel lanes. The traffic volumes per lane per hour used for this analysis are shown in Table 1.

TABLE 1 Traffic Volumes Used for the Noise Analysis

Posted Speed (mph)	Traffic Volumes (vehicles/lane/hour)				
	Auto	Medium Trucks	Heavy Trucks	Buses	Motorcycles
<b>I-70 Eastbound</b>					
35	1,293	28	121	3	9
50	1,234	27	115	3	9
55	1,175	26	110	3	8
60	1,117	25	104	3	8
<b>I-70 Westbound</b>					
45	1,345	27	114	3	5
55	1,223	25	103	3	5
60	1,162	24	98	3	5
<b>Frontage Road (CR 314) combined directions</b>					
35	292				

#### 3.3.3 Receptor locations

A review of the project area, building permits and outdoor functions and uses of industrial facilities identified eight residential Category B receptors, one trail Category C receptor and 10 industrial and business Category F receptors as shown in Figures 2 and 3. No building permits for new facilities on undeveloped land qualify for noise sensitive NACs. Table 2 provides a description of the Category B and C receptors. Category F receptors are not evaluated for noise impacts per CDOT guidance. The exact locations and elevations of the receptors were determined using the CAD topographic files. In the TNM model, five feet were added to the elevation of each receiver to account for the height of a typical person's ear.





FIGURE 2 Receptor Locations West of the Twin Tunnels



FIGURE 3 Receptor Locations East of the Twin Tunnels

TABLE 2 Description of Receptors

Receptor Number	Land Use Description	CDOT NAC Category	Distance from I-70 Centerline (feet)
R1	Residence	B	355
R2	Residence	B	520
R3	Residence	B	575
R4	Residence	B	820
R5	Residence	B	210
R6	Residence	B	290
R7	Residence	B	350
R8	Residence	B	120
T1	Scott Lancaster Trail	C	80

### 3.3.4 Terrain features and structure locations

Existing terrain features such as field grass, mountain sides, retaining walls and existing structures can affect the way noise travels. Because of the varied mountainous environment associated with this project area, not all terrain elements were included in the TNM model. Those features adjacent to the receptor locations that would directly effect the propagation of traffic noise to the receptors, such as the river channel, particular ridges, retaining walls and several buildings e.g. Idaho Springs Waste Water Treatment Plant were included in the TNM model as shown in Figure 4 and included in the TNM output files in Appendix B. These features were validated during the model validation process.

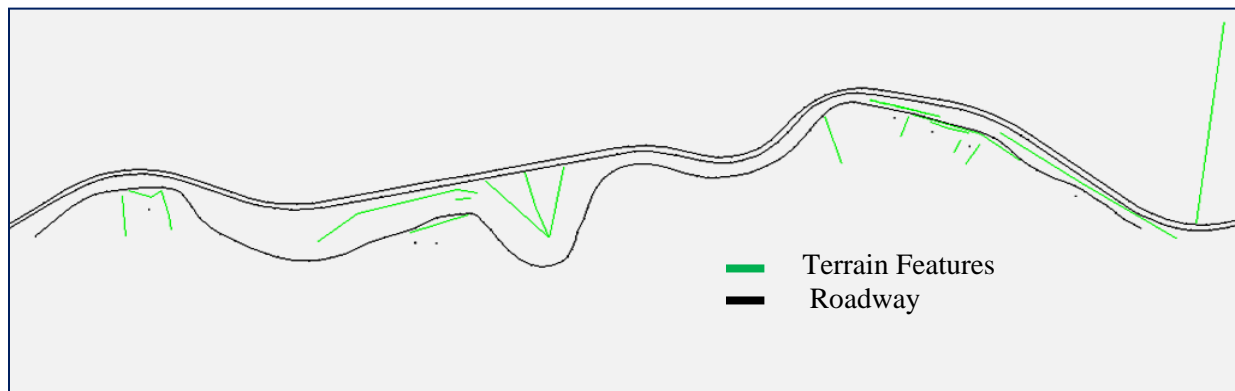


FIGURE 4 View from TNM Model

### 3.3.5 Field measurements and validation of the model

The model development data and procedures described in the previous sections were validated by measuring noise levels at six locations in the field and comparing the measured values to the TMN model results. Field noise measurements were conducted on October 21, 2011 a warm, dry, mostly low wind (less than 10 mph) day, using a Quest 2900 integrating/logging level Type II meter. Two measurements were taken at six different sites within the project area. Intermittent gusts invalidated some readings and these readings were not retained. Each measurement was sited within 100 of a roadway edge. During the measurement, the number of automobiles, medium trucks, heavy trucks, buses and motorcycles that passed on I-70 and adjacent facilities were documented. Average speeds were determined by driving in

the flow of traffic. Using the inputs noted above, noise levels were predicted at each field measurement location. The measured and predicted noise levels are compared in Table 3.

TABLE 3 Model Validation Results, Leq(h) in dB(A)

Location	Reading	Time	Field Measurement	Predicted Level	Difference
Site 1	#1	10:00 – 10:15 AM	70.4	71.6	1.2
	#2	10:16 – 10:31 AM	71.6	72.0	0.4
Site 2	#1	10:45 – 11:00 AM	74.5	73.3	-1.2
Site 3	#1	11:05 – 11:20 AM	70.0	70.7	0.7
Site 4	#1	12:47 – 1:02 PM	74.2	73.7	-0.5
	#2	1:03 – 1:18 PM	74.8	74.6	-0.2
Site 5	#1	1:28 – 1:43 PM	69.0	68.8	-0.2
	#2	1:45 – 2:00 PM	68.4	68.2	-0.2
Site 6	#1	2:10 – 2:25 PM	63.1	61.6	-1.5
	#2	2:30 – 2:45 PM	64.5	62.8	-1.7

The model is considered validated when the measured and predicted results are within  $\pm 3$  dB(A) which suggests the model is accurately predicting the existing noise environment.

### 3.4 Regulations

This section identifies the relevant federal, state, regional, and local regulations, guidelines, and/or laws that apply to highway traffic noise. The Twin Tunnels project involves the use of state and federal funds and thus is subject to both Federal regulations and State noise guidelines.

#### 3.4.1 Federal

The regulations that govern highway traffic noise for Federal-aid and Federal action projects are contained in Part 772 of Title 23 of the Code of Federal Regulations (23CFR772). These regulations describe the methods that must be followed in the evaluation and abatement of highway traffic noise in Federal-aid and Federal action highway projects. The regulations require each state highway agency to prepare and adopt written guidelines specific to that state which must demonstrate compliance with 23CFR772.

#### 3.4.2 State

CDOT's Noise Analysis and Abatement Guidelines dated June 16, 2011 describe the CDOT policy and program to implement 23CFR772. These guidelines establish noise abatement criteria, design and cost requirements for noise mitigation. Traffic noise impacts occur when noise levels, for different categories of land uses and activities, meet or exceed the CDOT Noise Abatement Criteria (NAC) shown in Table 4.

TABLE 4 CDOT Noise Abatement Criteria

Activity Category	Activity Leq(h)*	Evaluation Location	Activity Description
A	56	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to its intended purpose.
B <sup>1</sup>	66	Exterior	Residential
C <sup>1</sup>	66	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	51	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E <sup>1</sup>	71	NA	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	NA	NA	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	NA	NA	Undeveloped lands that are not permitted for development.

<sup>1</sup> Includes undeveloped lands permitted for this activity category.

\* Hourly A-weighted sound level in dB(A), reflecting a 1-dB(A) approach value below 23CFR772 values.

The guidelines also state that noise mitigation must be considered for any receptors where predicted noise levels for future conditions are greater than existing noise levels by 10 dB(A) or more.

All highway projects that are developed in conformance with the CDOT guidelines also conform with the Federal regulations and to FHWA noise standards.

### 3.4.3 Local

The City of Idaho Springs and Clear Creek County were contacted for this report. As of early 2012, neither of these jurisdictions has applicable traffic noise ordinances or policies.

## Section 4. What is CDOT's Proposed Action for the Twin Tunnels Area?

The Proposed Action would add a third eastbound travel lane to the I-70 highway for approximately three miles between the East Idaho Springs interchange and the base of Floyd Hill. The Proposed Action would provide a consistent 10-foot outside shoulder throughout the project area. CDOT is considering a range of widths for the inside shoulder between the west project limits and the Hidden Valley interchange. A 4-foot inside shoulder would be provided east of Hidden Valley. The eastbound bore of the Twin Tunnels would be expanded to accommodate the wider roadway section, and two tunnel widths are being evaluated. CDOT is also considering whether the additional capacity will operate exclusively as a general purpose lane or as a tolled lane during peak periods (also called a managed lane).

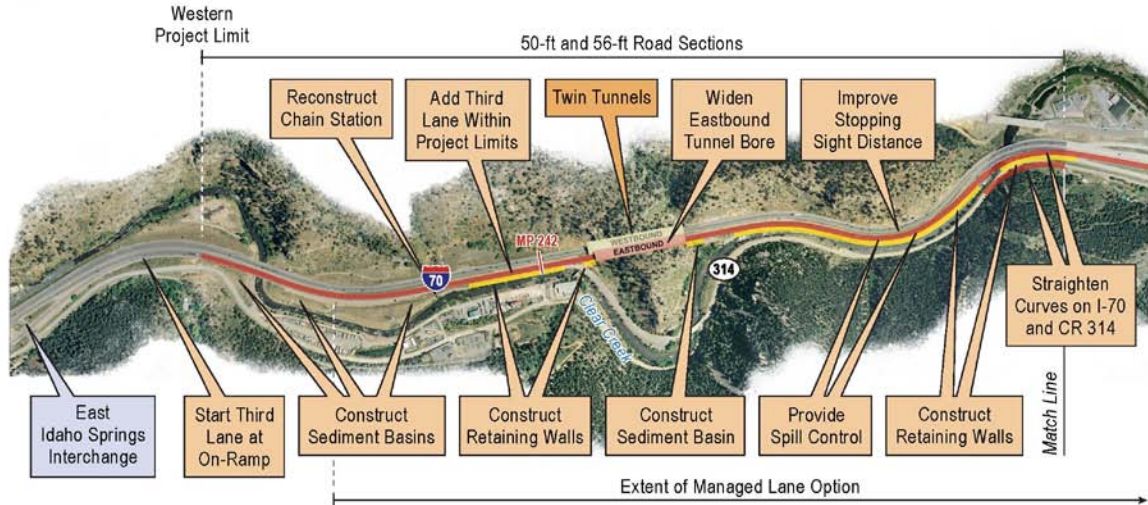


FIGURE 5 Proposed Action West of the Twin Tunnels

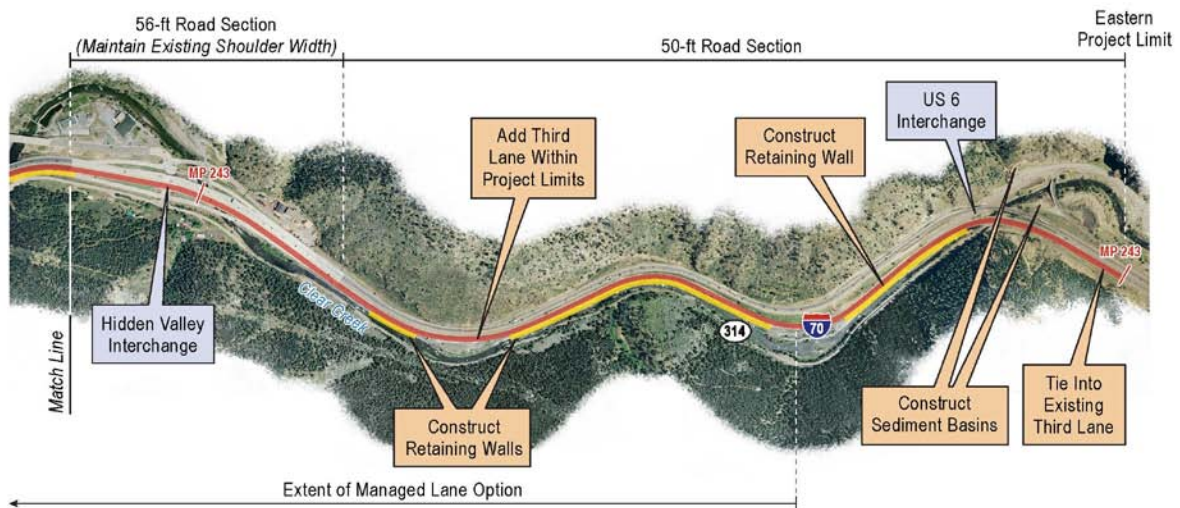


FIGURE 6 Proposed Action East of the Twin Tunnels

## Section 5. What Are the Current and Future Conditions of Noise Resources in the Study Area?

Using the described methodology, Existing 2012, No Action 2035, and Proposed 2035 noise levels were predicted for the 9 receptor locations shown in Figures 2 and 3. Table 5 lists the predicted noise levels for each receptor.

TABLE 5 Predicted Noise Level Results

Receptor	Modeled Noise Level, Leq(h) in dB(A)				CDOT Abatement Criteria Impacts		
	Existing 2012	No Action 2035	Proposed 2035	Change in Noise Levels (Proposed – Existing)	Sound Level	Increase over Existing	
West	R1	53.5	53.5	54.1	0.6	No	No
	R2	66.4	66.4	68.1	1.7	Yes	No
	R3	66.7	66.7	67.7	1.0	Yes	No
	R4	64.3	64.3	65.4	1.1	No	No
Hidden Valley	R5	70.7	70.7	71.5	0.8	Yes	No
	R6	66.6	66.6	67.9	1.3	Yes	No
	R7	70.1	70.1	71.1	1.0	Yes	No
	R8	72.2	72.2	73.3	1.1	Yes	No
West	T1	76.4	76.4	78.6	2.2	Yes	No

The predicted Existing 2012 noise levels at seven receptors, two of the residential receptors located south and west of the western portal of twin tunnels (R2 & R3), all four of the residential receptors in the Hidden Valley area (R5, R6, R7 and R8), and the one location on the Scott Lancaster Trail Bridge (T1) equal or exceed 66 dB(A). It should be noted that the predicted Existing 2012 and No Action 2035 noise levels are the same. This is because these two models reflect the same roadway configuration, number of lanes, and speeds with the same worst noise hour traffic volumes. While average daily traffic will increase by the year 2035 and the periods of congestion will be longer, the worst noise hour will remain the same point in time when the highest traffic volumes are able to travel at the highest posted speed. This is discussed in more detail in section 3.3.2.

In the future all of the seven existing impacted receptors will equal or exceed 66 dB(A). In the future there are no receptors predicted to have a substantial increase ( $\geq 10$  dB(A)) in noise levels over existing levels.

## Section 6. What Are the Environmental Consequences?

### 6.1 How does the No Action alternative affect noise resources?

As discussed in Section 5 the 2012 Existing conditions and the 2035 No Action Alternative will have the same roadway configuration, number of lanes, and speeds with the same worst noise hour traffic volumes. While average daily traffic will increase by the year 2035 and the periods of congestion will be longer, the worst noise hour will remain the same point in time when the highest traffic volumes are able to travel

at the highest posted speed. Thus, there is no difference in the noise levels and no changes to the existing noise environment from the 2035 No Action Alternative.

## 6.2 How does the Proposed Action affect noise resources?

### 6.2.1 What are the direct effects of the Proposed Action with a managed lane?

A managed lane is a tolled lane actively controlled with variable pricing to ensure the maximum volume of traffic traveling at the posted speed in that lane. Tolls will be collected by an electronic or video method with no delays to managed lane drivers. During peak hours this lane will have a higher travel speed than the general purpose lanes. The managed lane traveler will pay a higher fee for traveling in that lane during this time. During off peak traffic hours the managed lane price will also be reduced or eliminated all together reflecting the reduced value of traveling in this exclusive lane vs. the free general purpose lanes. During these off peak hours is when the most traffic will be traveling at the posted speeds on all three eastbound lanes exactly like the non-tolled facility. This will be the loudest hour for traffic. Thus, the managed lane will have no effect on the Proposed Action noise environment.

### 6.2.2 How does the Proposed Action change without tolling?

There will be no difference to the worst-hour noise impacts with or without tolling. As stated above, the TNM model was developed for the worst noise hour which will not change between these alternatives.

## 6.3 What indirect effects are anticipated?

There are no indirect effects anticipated.

## 6.4 What effects occur during construction?

This project will have several temporary impacts to the noise environment during construction. These impacts are associated with detouring eastbound traffic around the Twin Tunnels site, excavation of the tunnel via blasting, and standard construction techniques.

### 6.4.1 What are the effects of the detour?

During tunnel construction, CDOT will detour eastbound I-70 traffic to the adjacent frontage road (CR 314). The detour will transition off eastbound I-70 mainline just west of the western tunnel portal into the former game check area, and cross the Doghouse rail bridge. There, it will tie into the existing frontage road traveling east until transitioning back onto I-70 mainline just west of the Hidden Valley interchange. This detour was modeled using the noise modeling methodology described earlier to predict the temporary noise levels. Table 6 lists the predicted noise levels for each receptor. While the detour alignment will be closer to many of the receptors, the predicted noise levels for all receptors will be lower than existing levels due to the slower 35 mph speed of the detour and reduced speeds on eastbound I-70 immediately prior to the detour.

TABLE 6 Predicted Noise Level Results for the Detour

Receptor	Modeled Noise Level, Leq(h) in dB(A)			CDOT Abatement Criteria Impacts		
	Existing 2012	During Detour	Change in Noise Levels	Sound Level	Increase over Existing	
West	R1	53.5	53.2	-0.3	No	No
	R2	66.4	64.5	-1.9	No	No
	R3	66.7	65.0	-1.7	No	No
	R4	64.3	63.2	-1.1	No	No
Hidden Valley	R5	70.7	69.0	-1.7	Yes	No
	R6	66.6	64.7	-1.9	No	No
	R7	70.1	68.3	-1.8	Yes	No
	R8	72.2	70.3	-1.9	Yes	No
West	T1	76.4	N/A	N/A	N/A	N/A

N/A – T1 receptor location will be within the detour footprint

### 6.4.2 What are the effects of tunnel excavation?

Blasting work on the tunnel will be done from both ends by two different crews working 24 hours per day, seven days per week. The width of the tunnel will determine the cycle of blasting. However, blasting is expected to occur multiple times in a 24 hour period March through October 2013. Each crew will be on a different cycle and there would be several blasts during each cycle. At the beginning of construction, the blasting will be done at the portals. As the work progresses, the blasting will be inside the tunnel. Each blast will be relatively small, removing roughly six feet of rock at a time. The closest residential structure is 750 feet from the tunnel portal and is not expected to be impacted by the air blast overpressure. The water treatment plant is located roughly 225 feet from the portal and may be susceptible to the air blast overpressure.

### 6.4.3 What are the effects of standard construction techniques?

Standard construction techniques will generate noise from diesel-powered earth moving equipment such as dump trucks and bulldozers, back-up alarms on certain equipment, and compressors. Construction noise at off-site receptor locations will usually be dependent on the loudest one or two pieces of equipment operating at the moment. Noise levels from diesel-powered equipment range from 80 to 95 dB(A) at a distance of 50 feet.

## Section 7. What Mitigation Is Needed?

### 7.1 Tier 1 Mitigation Strategies

This study adheres to the Tier 1 mitigation strategies by conducting more specific and detailed noise analysis including mitigation strategies in accordance with the CDOT's Noise Analysis and Abatement Guidelines March 23, 2011 and by incorporating best management practices to this project.



## 7.2 Twin Tunnels Mitigation

### 7.2.1 Operations mitigation

As discussed in the previous section, predicted design-year noise levels equal or exceed CDOT's NAC at six Category B and one Category C locations. Per CDOT policy, the feasibility and reasonableness of constructing noise mitigation measures for these impacted receptors was analyzed.

Feasibility of abatement reviews the physical consideration and concerns with the construction of an acoustically effective noise barrier at a particular site. These criteria include:

- Does the proposed mitigation measure provide at least 5 dB(A) of noise reduction to a front row receptor?
- Are there any "fatal flaw" safety or maintenance issues involved with the proposed mitigation measure?
- Are there any obvious constructability issues with the proposed mitigation measure?

Reasonableness of abatement evaluates the combination of environmental, economic, and social factors associated with noise abatement measures. Reasonableness criteria include:

- Does the proposed mitigation measure provide a minimum of 7 dB(A) for one benefitted receptor?
- Is the proposed mitigation cost-reasonable? Is the cost benefit index (cost per receptor per decibel of reduction) no more than \$6,800?
- What are the desires of benefitted residents and owners?

Mitigation alternatives for impacted receptors were analyzed separately for the west and east areas, shown in Figures 7, 8 and 9.

#### West section

This area includes two impacted residences located on the hill south and west of the western portal. A 1140 foot long, 20 foot tall noise wall was modeled along I-70 from the tunnel portal west as shown in Figure 7. No residential properties were predicted to receive at least 5 dB(A) of noise reduction from this \$1,024,000 wall. The cost benefit for these combined locations was \$123,373 per receptor per decibel reduction, well over the \$6,500 threshold. This wall is not feasible or considered reasonable and not recommended. Please see the Noise Abatement Determination Worksheet in Appendix A.

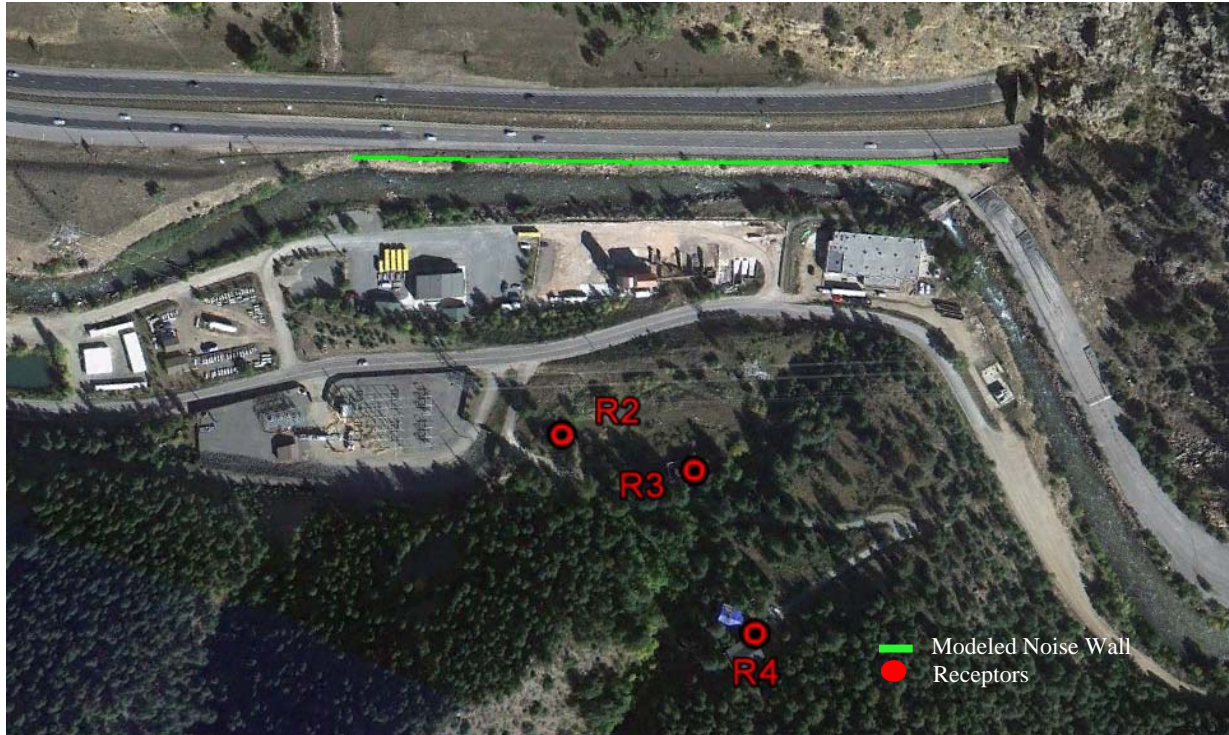


FIGURE 7 West Hillside Residences Modeled Wall

A wall 194 feet long and six feet high adjacent to the Scott Lancaster Trail bridge area was modeled as shown in Figure 8. This wall did provide a noise reduction of 8.3 dB(A) at this location. The wall was predicted to cost \$52,477 for a cost benefit of \$6,322 per receptor per decibel reduction. This wall is recommended based on the feasibility of constructing an acoustically effective noise barrier with reasonable cost benefit. There are local concerns about the potential for obscuring the Scott Lancaster Bridge which will need to be addressed during final design of the western portal and noise abatement barrier. Please see the Noise Abatement Determination Worksheet in Appendix A. Clear Creek County, the owner of the Scott Lancaster Trail, has approved the development of a noise barrier at this location. A copy of their approval is included in Appendix C.

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A noise wall 194 feet long and six feet in height is recommended at the Scott Lancaster bridge.

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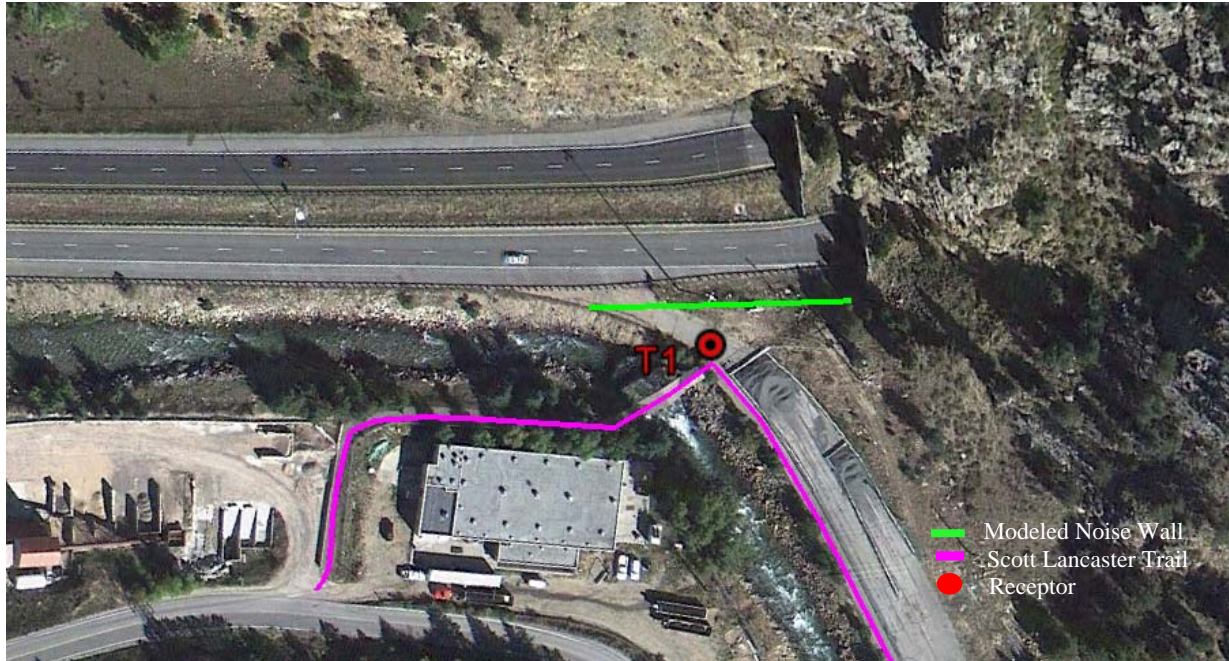


FIGURE 8 Scott Lancaster Bridge Modeled Wall

East section

This area includes four impacted residences located on the south side of I-70 in the Hidden Valley Interchange area as shown in Figure 9. A 1,900 foot long wall averaging 17.6 feet high was modeled along I-70. One residence received an 8.5 dB(A) noise reduction and the group averaged 5.6 dB(A) of noise reduction from this \$1,538,000 wall. However, because the cost benefit for these combined locations was \$68,660 per receptor per decibel reduction, well over the \$6,500 threshold. A wall is not considered reasonable and is not recommended. It should be noted that a wall was reviewed on the property line adjacent to the homes but was not feasible. Please see the Noise Abatement Determination Worksheet in Appendix A.



FIGURE 9 Hidden Valley Interchange Residences Modeled Walls

### 7.2.2 Detour mitigation

While some receptors will still exceed CDOT's noise impact criteria during construction, no additional mitigation is proposed.

### 7.2.3 Tunnel excavation mitigation

It is anticipated noise and vibration from the air-overpressure associated with blasting inside the tunnel would be largely muffled by the mountain. If safety procedures call for blasting debris blankets those blankets would also act to muffle some of the blasts sound pressure wave. However, the following mitigation measures are recommended:

- To address concerns with the wildlife lambing season of June to August, blasting should commence as far in advance of June as possible and on a consistent schedule to familiarize the animals with the practice.
- A communication protocol should be developed to inform local residents and businesses, City of Idaho Springs officials, Clear Creek County officials, City, County and State law enforcement agencies, and the traveling public about blasting schedules. This should be done both locally, with Variable Message Signs, and through various websites and media outlets.
- During initial blasting at the entrance to the western portal, the contractor should monitor the air blast overpressure at business structures susceptible to damage. At that time an engineer should make a determination of potential risks and need for additional mitigation.
- During initial blasting at the entrance to the western portal, CDOT will consider monitoring 24 hour noise levels at sensitive receptors to determine if additional temporary mitigation is required.

### 7.2.4 Standard construction mitigation

Temporary construction noise can be mitigated by limiting night work to the extent possible in residential areas, requiring the contractor to use well-maintained equipment (particularly with respect to mufflers), and through the use of other mitigation measures such as temporary noise barriers, blasting blankets and where applicable provide overnight lodging vouchers for affected residents.

## Section 8. References

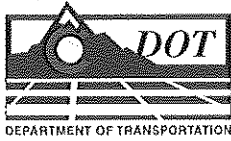
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- Colorado Department of Transportation (CDOT). 2011. Noise Analysis and Abatement Guidelines
- Google Earth. 2012
- U.S. Department of Transportation (FHWA). Federal Highway Noise Standards, Part 772 Title 23 of the Code of Federal Regulations (23CFR772)

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Appendix A  
Noise Abatement Determination Worksheets

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# Noise Analysis and Abatement Guidelines

## COLORADO DEPARTMENT OF TRANSPORTATION NOISE ABATEMENT DETERMINATION WORKSHEET

Instructions: To complete this form refer to CDOT Noise Analysis Guidelines

STIP # \_\_\_\_\_ Date of Analysis: 5-1-12

Project Name & Location: Twin Tunnels EA / TI Scott Lancaster Bridge area

### A. FEASIBILITY:

- Can a 5dBA noise reduction be achieved by constructing a noise barrier or berm?  
 YES  NO
- Are there any fatal flaw drainage, terrain, safety, or maintenance issues involving the proposed noise barrier or berm?  
 YES  NO
- Can a noise barrier or berm less than 20 feet tall be constructed?  
 YES  NO

### B. REASONABLENESS:

- Has the Design goal of 7 dBA noise reduction for abatement measure been met for at least one impacted receptor?  
 YES  NO
- Is the Cost Benefit Index below \$6800 per receptor per dBA?  
 YES  NO
- Are more than 50% of benefited resident/owners in favor of the recommended noise abatement measure?  
 YES  NO

### C. INSULATION CONSIDERATION:

- Are normal noise abatement measures physically infeasible or economically unreasonable?  
 YES  NO  
If the answer to 1 is YES, then:
  - Does this project have noise impacts to NAC Activity Category D?  
 YES  NO
  - If yes, is it reasonable and feasible to provide insulation for these buildings?  
 YES  NO

### D. ADDITIONAL CONSIDERATIONS:

*This location is adjacent to I-70 and the Scott Lancaster Bridge at the western portal of EB I-70. There are concerns about the visual effects to the bridge.*

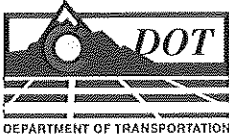
### E. STATEMENT OF LIKELIHOOD:

- Are noise mitigation measures feasible?  
 YES  NO
- Are noise mitigation measures reasonable?  
 YES  NO
- Is insulation of buildings both feasible and reasonable?  
 YES  NO
- Shall noise abatement measures be provided?  
 YES  NO

### F. ABATEMENT DECISION DESCRIPTION AND JUSTIFICATION:

*A barrier can be built that is both feasible and reasonable. The cost benefit is \$6,322 per receptor per decibel reduction. Clear Creek County has responded favorably to the concept in writing.*

Completed by: *Long E G* Date: 5-1-12



# Noise Analysis and Abatement Guidelines

## COLORADO DEPARTMENT OF TRANSPORTATION NOISE ABATEMENT DETERMINATION WORKSHEET

Instructions: To complete this form refer to CDOT Noise Analysis Guidelines

STIP # \_\_\_\_\_ Date of Analysis: 2-10-12

Project Name & Location: Twin Tunnels EA / R2 & R3

### A. FEASIBILITY:

1. Can a 5dBA noise reduction be achieved by constructing a noise barrier or berm?  
 YES  NO
2. Are there any fatal flaw drainage, terrain, safety, or maintenance issues involving the proposed noise barrier or berm?  
 YES  NO
3. Can a noise barrier or berm less than 20 feet tall be constructed?  
 YES  NO

### B. REASONABLENESS:

1. Has the Design goal of 7 dBA noise reduction for abatement measure been met for at least one impacted receptor?  
 YES  NO
2. Is the Cost Benefit Index below \$6800 per receptor per dBA?  
 YES  NO
3. Are more than 50% of benefited resident/owners in favor of the recommended noise abatement measure?  
 YES  NO TBD as of 2-10-12

### C. INSULATION CONSIDERATION:

1. Are normal noise abatement measures physically infeasible or economically unreasonable?  
 YES  NO  
If the answer to 1 is YES, then:
  2. a. Does this project have noise impacts to NAC Activity Category D?  
 YES  NO
  - b. If yes, is it reasonable and feasible to provide insulation for these buildings?  
 YES  NO

### D. ADDITIONAL CONSIDERATIONS:

### E. STATEMENT OF LIKELIHOOD:

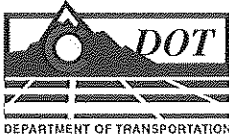
- |  |   |
|--|---|
| 1. Are noise mitigation measures feasible?<br><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO                  | 2. Are noise mitigation measures reasonable?<br><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO   |
| 3. Is insulation of buildings both feasible and reasonable?<br><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | 4. Shall noise abatement measures be provided?<br><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO |

### F. ABATEMENT DECISION DESCRIPTION AND JUSTIFICATION:

these receptors are located 50 to 65 higher than I-70 overlooking the roadway. Mitigation is not feasible or reasonable for these locations.

Completed by: [Signature] Date: 2-10-12





# Noise Analysis and Abatement Guidelines

## COLORADO DEPARTMENT OF TRANSPORTATION NOISE ABATEMENT DETERMINATION WORKSHEET

Instructions: To complete this form refer to CDOT Noise Analysis Guidelines

STIP # \_\_\_\_\_ Date of Analysis: 2-10-12

Project Name & Location: Twin Tunnels EA / R5, R6, R7 & R8

### A. FEASIBILITY:

1. Can a 5dBA noise reduction be achieved by constructing a noise barrier or berm?  
 YES  NO
2. Are there any fatal flaw drainage, terrain, safety, or maintenance issues involving the proposed noise barrier or berm?  
 YES  NO
3. Can a noise barrier or berm less than 20 feet tall be constructed?  
 YES  NO

### B. REASONABLENESS:

1. Has the Design goal of 7 dBA noise reduction for abatement measure been met for at least one impacted receptor?  
 YES  NO
2. Is the Cost Benefit Index below \$6800 per receptor per dBA?  
 YES  NO
3. Are more than 50% of benefited resident/owners in favor of the recommended noise abatement measure?  
 YES  NO TBD as of 2-10-12

### C. INSULATION CONSIDERATION:

1. Are normal noise abatement measures physically infeasible or economically unreasonable?  
 YES  NO  
If the answer to 1 is YES, then:
2. a. Does this project have noise impacts to NAC Activity Category D?  
 YES  NO
- b. If yes, is it reasonable and feasible to provide insulation for these buildings?  
 YES  NO

### D. ADDITIONAL CONSIDERATIONS:

### E. STATEMENT OF LIKELIHOOD:

- |   |  |
|---|--|
| 1. Are noise mitigation measures feasible?<br><input type="checkbox"/> YES <input type="checkbox"/> NO                  | 2. Are noise mitigation measures reasonable?<br><input type="checkbox"/> YES <input type="checkbox"/> NO   |
| 3. Is insulation of buildings both feasible and reasonable?<br><input type="checkbox"/> YES <input type="checkbox"/> NO | 4. Shall noise abatement measures be provided?<br><input type="checkbox"/> YES <input type="checkbox"/> NO |

### F. ABATEMENT DECISION DESCRIPTION AND JUSTIFICATION:

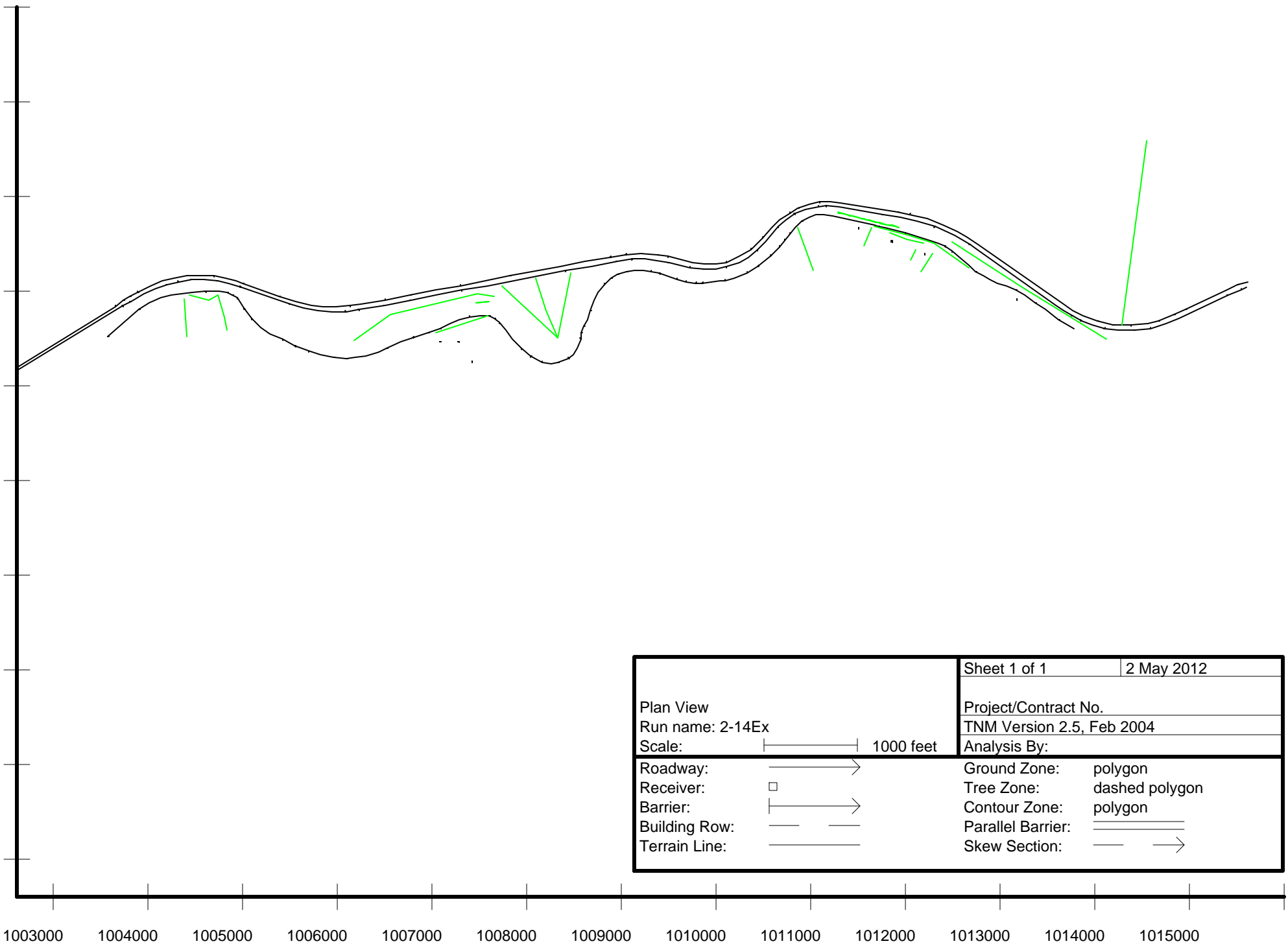
*While a barrier can be developed to achieve an 8.5 dBA insertion loss, because of the large lots spread out along 1900 I.E. at I-70 the cost benefit is \$68,660 per receptor per decibel reduction, well over the \$6,500 goal. A wall is not recommended.*

Completed by: [Signature] Date: 2-10-12

Appendix B  
TNM Model Input and Output Files

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## Existing Model Data



		Sheet 1 of 1	2 May 2012
Plan View		Project/Contract No.	
Run name: 2-14Ex		TNM Version 2.5, Feb 2004	
Scale:		Analysis By:	
Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	



**INPUT: ROADWAYS**

<Project Name?>

		point71	71	1,002,761.7	695,844.5	7,455.70				Average	
		point72	72	1,002,840.1	695,890.2	7,455.00				Average	
		point73	73	1,002,983.8	695,971.8	7,453.50				Average	
		point74	74	1,003,106.9	696,029.8	7,452.40				Average	
		point75	75	1,003,223.9	696,071.3	7,451.40				Average	
		point76	76	1,003,345.6	696,100.6	7,450.50				Average	
		point77	77	1,003,482.3	696,117.8	7,449.50				Average	
		point78	78	1,003,610.4	696,120.0	7,448.50				Average	
		point79	79	1,003,754.1	696,105.0	7,446.30				Average	
		point80	80	1,003,865.9	696,082.0	7,444.60				Average	
		point81	81	1,003,997.4	696,043.5	7,442.10				Average	
		point82	82	1,004,400.5	695,899.1	7,433.50				Average	
		point83	83	1,004,512.8	695,860.9	7,431.10				Average	
		point84	84	1,004,655.3	695,822.4	7,427.70				Average	
		point85	85	1,004,806.9	695,794.7	7,424.60					
Frontage	24.0	point164	164	1,012,735.0	695,604.9	7,280.80				Average	
		point165	165	1,012,667.0	695,645.7	7,280.80				Average	
		point166	166	1,012,574.6	695,701.7	7,281.00				Average	
		point167	167	1,012,502.6	695,754.8	7,281.90				Average	
		point168	168	1,012,430.3	695,813.9	7,282.10				Average	
		point169	169	1,012,331.1	695,879.9	7,283.90				Average	
		point170	170	1,012,212.0	695,960.3	7,286.90				Average	
		point171	171	1,012,125.7	696,014.4	7,287.70				Average	
		point172	172	1,012,023.4	696,054.1	7,286.10				Average	
		point173	173	1,011,928.5	696,085.7	7,285.40				Average	
		point174	174	1,011,847.4	696,127.0	7,286.50				Average	
		point175	175	1,011,777.8	696,162.4	7,287.10				Average	
		point176	176	1,011,707.8	696,208.5	7,289.90				Average	
		point177	177	1,011,628.2	696,269.8	7,297.90				Average	
		point178	178	1,011,550.2	696,337.0	7,302.50					
WB I-70-Western	30.0	point279	279	1,006,036.4	696,009.3	7,402.52				Average	
		point277	277	1,005,774.8	695,959.8	7,406.58				Average	
		point278	278	1,005,513.1	695,910.2	7,410.64				Average	
		point25	25	1,005,251.4	695,860.6	7,414.70				Average	
		point24	24	1,005,142.8	695,843.8	7,416.80				Average	
		point23	23	1,004,997.2	695,835.0	7,419.40				Average	
		point22	22	1,004,855.0	695,837.2	7,422.40				Average	
		point21	21	1,004,732.2	695,853.2	7,424.80				Average	
		point20	20	1,004,569.3	695,892.1	7,428.70				Average	

INPUT: ROADWAYS

<Project Name?>

		point19	19	1,004,403.4	695,946.5	7,433.60				Average	
		point18	18	1,004,020.3	696,083.6	7,444.40				Average	
		point17	17	1,003,945.6	696,107.9	7,446.30				Average	
		point16	16	1,003,839.5	696,135.4	7,446.50				Average	
		point15	15	1,003,715.9	696,156.6	7,448.80				Average	
		point14	14	1,003,553.9	696,166.3	7,451.10				Average	
		point13	13	1,003,426.7	696,159.1	7,451.90				Average	
		point12	12	1,003,289.1	696,135.9	7,452.70				Average	
		point11	11	1,003,171.8	696,103.1	7,453.70				Average	
		point10	10	1,003,045.9	696,053.5	7,454.90				Average	
		point9	9	1,002,917.8	695,988.5	7,455.60				Average	
		point8	8	1,002,838.7	695,942.7	7,455.70				Average	
		point7	7	1,002,770.7	695,900.4	7,456.00				Average	
		point6	6	1,002,680.4	695,842.1	7,456.40				Average	
		point5	5	1,001,405.5	695,053.3	7,468.40				Average	
		point4	4	1,001,279.4	694,975.9	7,472.50				Average	
		point3	3	1,001,171.6	694,911.1	7,476.60				Average	
		point2	2	1,001,042.0	694,840.3	7,483.00				Average	
		point1	1	1,000,939.5	694,790.0	7,487.80					
Frontage-2	24.0	point298	298	1,011,550.2	696,337.0	7,302.50				Average	
		point179	179	1,011,456.3	696,417.7	7,311.80				Average	
		point180	180	1,011,380.1	696,469.0	7,318.70				Average	
		point181	181	1,011,307.4	696,504.1	7,323.20				Average	
		point182	182	1,011,223.2	696,533.9	7,322.60				Average	
		point183	183	1,010,961.4	696,606.4	7,306.00				Average	
		point184	184	1,010,747.2	696,668.6	7,327.90				Average	
		point185	185	1,010,686.5	696,684.4	7,334.10				Average	
		point186	186	1,010,641.7	696,694.9	7,338.40				Average	
		point187	187	1,010,202.5	696,787.6	7,346.40				Average	
		point188	188	1,010,104.3	696,801.8	7,342.00				Average	
		point189	189	1,010,023.6	696,796.9	7,339.60				Average	
		point190	190	1,009,953.3	696,774.6	7,338.20				Average	
		point191	191	1,009,883.6	696,731.8	7,337.10				Average	
		point192	192	1,009,811.7	696,667.3	7,336.30				Average	
		point193	193	1,009,754.6	696,601.9	7,334.80				Average	
		point194	194	1,009,701.9	696,535.0	7,333.60				Average	
		point195	195	1,009,645.4	696,467.4	7,333.10				Average	
		point196	196	1,009,556.7	696,371.8	7,332.60				Average	
		point197	197	1,009,422.0	696,261.6	7,333.20				Average	

**INPUT: ROADWAYS**

<Project Name?>

		point198	198	1,009,305.8	696,195.5	7,334.00				Average	
		point199	199	1,009,233.5	696,161.5	7,334.40				Average	
		point200	200	1,009,168.0	696,136.5	7,334.50				Average	
		point201	201	1,009,070.3	696,112.5	7,334.40				Average	
		point202	202	1,009,014.6	696,104.6	7,334.90				Average	
		point203	203	1,008,835.7	696,086.5	7,335.10				Average	
		point204	204	1,008,767.1	696,086.6	7,335.20				Average	
		point205	205	1,008,667.5	696,100.6	7,335.80				Average	
		point206	206	1,008,566.7	696,127.7	7,336.90				Average	
		point207	207	1,008,386.3	696,186.1	7,342.40				Average	
		point208	208	1,008,298.5	696,208.7	7,346.40				Average	
		point209	209	1,008,215.3	696,218.0	7,349.60				Average	
		point210	210	1,008,124.9	696,216.6	7,352.60				Average	
		point211	211	1,008,045.5	696,204.9	7,355.50				Average	
		point212	212	1,007,952.0	696,175.9	7,359.40				Average	
		point213	213	1,007,881.3	696,137.4	7,362.60				Average	
		point214	214	1,007,808.4	696,073.4	7,365.20				Average	
		point215	215	1,007,740.3	695,983.3	7,367.30				Average	
		point216	216	1,007,701.2	695,903.9	7,367.60				Average	
		point217	217	1,007,665.2	695,791.1	7,366.90				Average	
		point218	218	1,007,633.1	695,696.7	7,366.80				Average	
		point219	219	1,007,596.4	695,627.3	7,366.70				Average	
		point220	220	1,007,572.2	695,559.3	7,368.70				Average	
		point221	221	1,007,560.6	695,500.7	7,369.50				Average	
		point222	222	1,007,524.4	695,396.9	7,377.70				Average	
		point223	223	1,007,480.0	695,332.8	7,382.20				Average	
		point224	224	1,007,435.0	695,293.6	7,382.30				Average	
		point225	225	1,007,327.4	695,245.5	7,378.60				Average	
		point226	226	1,007,249.9	695,239.6	7,378.40				Average	
		point227	227	1,007,152.0	695,256.4	7,379.40				Average	
		point228	228	1,007,037.9	695,313.7	7,382.80				Average	
		point229	229	1,006,941.1	695,397.2	7,384.10				Average	
		point230	230	1,006,846.4	695,498.3	7,389.70				Average	
		point231	231	1,006,777.4	695,594.5	7,391.70				Average	
		point232	232	1,006,708.6	695,670.2	7,391.30				Average	
		point233	233	1,006,660.3	695,719.1	7,391.30				Average	
		point234	234	1,006,603.4	695,743.7	7,391.50				Average	
		point235	235	1,006,501.3	695,740.0	7,392.50				Average	
		point236	236	1,006,394.8	695,731.0	7,395.00				Average	



INPUT: ROADWAYS

<Project Name?>

		point237	237	1,006,284.5	695,702.4	7,403.20				Average	
		point238	238	1,006,185.5	695,656.1	7,410.30				Average	
		point239	239	1,006,086.5	695,602.6	7,418.00				Average	
		point240	240	1,005,966.5	695,560.4	7,420.10				Average	
		point241	241	1,005,803.9	695,515.3	7,414.40				Average	
		point242	242	1,005,672.1	695,471.2	7,411.50				Average	
		point243	243	1,005,531.7	695,396.6	7,405.00				Average	
		point244	244	1,005,438.1	695,357.5	7,399.80				Average	
		point245	245	1,005,302.7	695,321.7	7,398.40				Average	
		point246	246	1,005,199.6	695,304.3	7,398.50				Average	
		point247	247	1,005,109.6	695,294.8	7,400.10				Average	
		point248	248	1,004,971.6	695,301.8	7,402.80				Average	
		point249	249	1,004,825.8	695,334.1	7,405.90				Average	
		point250	250	1,004,711.3	695,367.2	7,408.30				Average	
		point251	251	1,004,565.1	695,421.8	7,412.40				Average	
		point252	252	1,004,433.2	695,490.1	7,413.90				Average	
		point253	253	1,004,301.9	695,552.9	7,415.10				Average	
		point254	254	1,004,207.8	695,617.5	7,419.10				Average	
		point255	255	1,004,111.1	695,708.5	7,428.50				Average	
		point256	256	1,004,035.6	695,816.7	7,440.30				Average	
		point257	257	1,003,960.4	695,926.5	7,453.10				Average	
		point258	258	1,003,913.2	695,964.3	7,458.70				Average	
		point259	259	1,003,857.4	695,984.7	7,464.60				Average	
		point260	260	1,003,766.8	695,997.1	7,475.10				Average	
		point261	261	1,003,624.4	695,993.6	7,485.40				Average	
		point262	262	1,003,487.1	695,983.7	7,490.30				Average	
		point263	263	1,003,264.7	695,953.9	7,479.70				Average	
		point264	264	1,003,156.7	695,926.9	7,471.10				Average	
		point265	265	1,003,037.2	695,874.9	7,460.80				Average	
		point266	266	1,002,934.5	695,806.1	7,455.60				Average	
		point267	267	1,002,604.8	695,522.0	7,455.30					
EB I-70-Eastern side-2-2-2-2-EB I-70-Eastern	30.0	point268	268	1,004,806.9	695,794.7	7,424.60				Average	
		point86	86	1,004,958.9	695,782.5	7,421.60				Average	
		point87	87	1,005,098.1	695,786.7	7,418.90				Average	
		point88	88	1,005,237.6	695,802.4	7,415.40				Average	
		point284	284	1,005,508.2	695,853.4	7,410.61				Average	
		point285	285	1,005,778.8	695,904.4	7,405.82				Average	
		point286	286	1,006,049.2	695,955.5	7,401.03				Average	
		point287	287	1,006,319.8	696,006.5	7,396.24				Average	

INPUT: ROADWAYS

<Project Name?>

	point293	293	1,006,590.4	696,057.5	7,391.45				Average	
	point289	289	1,006,860.9	696,108.6	7,386.66				Average	
	point297	297	1,007,402.0	696,210.6	7,377.08				Average	
	point292	292	1,007,672.6	696,261.6	7,372.29				Average	
	point89	89	1,007,943.1	696,312.7	7,367.50				Average	
	point90	90	1,008,103.5	696,333.9	7,362.10				Average	
	point91	91	1,008,237.3	696,335.9	7,357.70				Average	
	point92	92	1,008,485.0	696,301.3	7,352.90				Average	
	point93	93	1,008,707.6	696,249.4	7,351.50				Average	
	point94	94	1,008,853.9	696,227.7	7,351.30				Average	
	point95	95	1,008,982.3	696,231.3	7,350.00				Average	
	point96	96	1,009,094.3	696,252.2	7,349.60				Average	
	point97	97	1,009,227.6	696,301.3	7,348.70				Average	
	point98	98	1,009,325.6	696,358.1	7,348.10				Average	
	point99	99	1,009,415.7	696,429.2	7,347.70				Average	
	point100	100	1,009,502.2	696,518.5	7,346.70				Average	
	point101	101	1,009,636.2	696,675.5	7,345.40				Average	
	point102	102	1,009,716.1	696,751.9	7,344.90				Average	
	point103	103	1,009,808.4	696,809.4	7,344.90				Average	
	point104	104	1,009,921.0	696,860.7	7,341.60				Average	
	point105	105	1,010,054.8	696,889.2	7,339.30				Average	
	point106	106	1,010,137.5	696,891.7	7,337.70				Average	
	point107	107	1,010,277.8	696,878.5	7,335.60				Average	
	point108	108	1,010,731.9	696,803.2	7,330.50				Average	
	point109	109	1,010,915.8	696,770.1	7,327.30				Average	
	point110	110	1,011,092.0	696,731.4	7,323.20				Average	
	point111	111	1,011,274.0	696,673.2	7,320.20				Average	
	point112	112	1,011,483.8	696,579.1	7,314.20				Average	
	point113	113	1,011,643.2	696,485.2	7,310.60				Average	
	point114	114	1,011,705.4	696,442.9	7,309.70				Average	
	point115	115	1,012,546.3	695,850.9	7,287.50				Average	
	point116	116	1,012,625.4	695,796.6	7,287.00				Average	
	point117	117	1,012,716.6	695,740.8	7,285.90				Average	
	point118	118	1,012,810.6	695,692.5	7,285.60				Average	
	point119	119	1,012,925.5	695,647.1	7,284.50				Average	
	point120	120	1,013,058.9	695,609.6	7,283.60				Average	
	point121	121	1,013,195.9	695,588.9	7,282.60				Average	
	point122	122	1,013,369.8	695,587.9	7,281.30				Average	
	point123	123	1,013,536.6	695,610.5	7,279.80				Average	

**INPUT: ROADWAYS**

<Project Name?>

		point124	124	1,013,699.4	695,655.9	7,278.20				Average
		point125	125	1,013,836.6	695,710.9	7,276.50				Average
		point126	126	1,014,348.5	695,959.5	7,271.20				Average
		point127	127	1,014,490.7	696,019.2	7,270.10				Average
		point128	128	1,014,549.2	696,037.4	7,270.00				
WB I-70-central-2-2-WB I-70-central	30.0	point280	280	1,010,361.6	696,914.6	7,334.20				Average
		point45	45	1,010,285.2	696,926.1	7,335.70				Average
		point44	44	1,010,174.0	696,935.2	7,337.70				Average
		point43	43	1,010,063.0	696,931.1	7,339.20				Average
		point42	42	1,009,959.9	696,911.0	7,341.20				Average
		point41	41	1,009,840.7	696,871.0	7,341.40				Average
		point40	40	1,009,752.0	696,821.4	7,344.30				Average
		point39	39	1,009,643.2	696,746.4	7,346.80				Average
		point38	38	1,009,560.6	696,667.0	7,348.50				Average
		point37	37	1,009,465.0	696,560.4	7,349.70				Average
		point36	36	1,009,344.0	696,439.5	7,351.50				Average
		point35	35	1,009,225.5	696,359.7	7,352.00				Average
		point34	34	1,009,086.4	696,304.1	7,352.50				Average
		point33	33	1,008,977.2	696,282.4	7,353.50				Average
		point32	32	1,008,855.9	696,281.3	7,354.50				Average
		point31	31	1,008,730.0	696,300.0	7,354.80				Average
		point30	30	1,008,470.6	696,359.7	7,357.30				Average
		point29	29	1,008,371.0	696,378.4	7,359.10				Average
		point28	28	1,008,195.0	696,393.5	7,363.80				Average
		point27	27	1,008,032.3	696,383.9	7,369.20				Average
		point26	26	1,007,868.1	696,356.3	7,374.10				Average
		point270	270	1,007,606.4	696,306.8	7,378.16				Average
		point271	271	1,007,344.8	696,257.2	7,382.22				Average
		point283	283	1,006,821.4	696,158.1	7,390.34				Average
		point274	274	1,006,559.8	696,108.5	7,394.40				Average
		point275	275	1,006,298.1	696,058.9	7,398.46				Average
		point276	276	1,006,036.4	696,009.3	7,402.52				

INPUT: TRAFFIC FOR LAeq1h Volumes

<Project Name?>

<Organization?>		2 May 2012										
<Analysis By?>		TNM 2.5										
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:		<Project Name?>										
RUN:		<Run Title?>										
Roadway	Points											
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
WB I-70 eastern	point66	66	2351	55	52	55	220	55	6	55	16	55
	point65	65	2351	55	52	55	220	55	6	55	16	55
	point64	64	2690	55	50	55	207	55	6	55	10	55
	point63	63	2351	55	52	55	220	55	6	55	16	55
	point62	62	2351	55	52	55	220	55	6	55	16	55
	point61	61	2351	55	52	55	220	55	6	55	16	55
	point60	60	2351	55	52	55	220	55	6	55	16	55
	point59	59	2351	55	52	55	220	55	6	55	16	55
	point58	58	2351	55	52	55	220	55	6	55	16	55
	point57	57	2351	55	52	55	220	55	6	55	16	55
	point56	56	2351	55	52	55	220	55	6	55	16	55
	point55	55	2351	55	52	55	220	55	6	55	16	55
	point54	54	2351	55	52	55	220	55	6	55	16	55
	point53	53	2351	55	52	55	220	55	6	55	16	55
	point52	52	2351	55	52	55	220	55	6	55	16	55
	point51	51	2351	55	52	55	220	55	6	55	16	55
	point50	50	2351	55	52	55	220	55	6	55	16	55
	point49	49	2351	55	52	55	220	55	6	55	16	55
	point48	48	2351	55	52	55	220	55	6	55	16	55
	point47	47	2351	55	52	55	220	55	6	55	16	55
	point46	46										
EB I-70 Western side	point67	67	2233	60	49	60	209	60	6	60	16	60
	point68	68	2233	60	49	60	209	60	6	60	16	60

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point69	69	2233	60	49	60	209	60	6	60	16	60
	point70	70	2233	60	49	60	209	60	6	60	16	60
	point71	71	2233	60	49	60	209	60	6	60	16	60
	point72	72	2233	60	49	60	209	60	6	60	16	60
	point73	73	2233	60	49	60	209	60	6	60	16	60
	point74	74	2233	60	49	60	209	60	6	60	16	60
	point75	75	2233	60	49	60	209	60	6	60	16	60
	point76	76	2233	60	49	60	209	60	6	60	16	60
	point77	77	2233	60	49	60	209	60	6	60	16	60
	point78	78	2233	60	49	60	209	60	6	60	16	60
	point79	79	2233	60	49	60	209	60	6	60	16	60
	point80	80	2233	60	49	60	209	60	6	60	16	60
	point81	81	2233	60	49	60	209	60	6	60	16	60
	point82	82	2233	60	49	60	209	60	6	60	16	60
	point83	83	2233	60	49	60	209	60	6	60	16	60
	point84	84	2233	60	49	60	209	60	6	60	16	60
	point85	85										
Frontage	point164	164	0	0	0	0	0	0	0	0	0	0
	point165	165	0	0	0	0	0	0	0	0	0	0
	point166	166	0	0	0	0	0	0	0	0	0	0
	point167	167	0	0	0	0	0	0	0	0	0	0
	point168	168	0	0	0	0	0	0	0	0	0	0
	point169	169	0	0	0	0	0	0	0	0	0	0
	point170	170	0	0	0	0	0	0	0	0	0	0
	point171	171	0	0	0	0	0	0	0	0	0	0
	point172	172	0	0	0	0	0	0	0	0	0	0
	point173	173	0	0	0	0	0	0	0	0	0	0
	point174	174	0	0	0	0	0	0	0	0	0	0
	point175	175	0	0	0	0	0	0	0	0	0	0
	point176	176	0	0	0	0	0	0	0	0	0	0
	point177	177	0	0	0	0	0	0	0	0	0	0
	point178	178										
WB I-70-Western	point279	279	2233	60	49	60	209	60	6	60	16	60
	point277	277	2233	60	49	60	209	60	6	60	16	60
	point278	278	2233	60	49	60	209	60	6	60	16	60
	point25	25	2233	60	49	60	209	60	6	60	16	60

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point24	24	2233	60	49	60	209	60	6	60	16	60
	point23	23	2233	60	49	60	209	60	6	60	16	60
	point22	22	2233	60	49	60	209	60	6	60	16	60
	point21	21	2233	60	49	60	209	60	6	60	16	60
	point20	20	2233	60	49	60	209	60	6	60	16	60
	point19	19	2233	60	49	60	209	60	6	60	16	60
	point18	18	2233	60	49	60	209	60	6	60	16	60
	point17	17	2233	60	49	60	209	60	6	60	16	60
	point16	16	2233	60	49	60	209	60	6	60	16	60
	point15	15	2233	60	49	60	209	60	6	60	16	60
	point14	14	2233	60	49	60	209	60	6	60	16	60
	point13	13	2233	60	49	60	209	60	6	60	16	60
	point12	12	2233	60	49	60	209	60	6	60	16	60
	point11	11	2233	60	49	60	209	60	6	60	16	60
	point10	10	2233	60	49	60	209	60	6	60	16	60
	point9	9	2233	60	49	60	209	60	6	60	16	60
	point8	8	2233	60	49	60	209	60	6	60	16	60
	point7	7	2233	60	49	60	209	60	6	60	16	60
	point6	6	2233	60	49	60	209	60	6	60	16	60
	point5	5	2233	60	49	60	209	60	6	60	16	60
	point4	4	2233	60	49	60	209	60	6	60	16	60
	point3	3	2233	60	49	60	209	60	6	60	16	60
	point2	2	2233	60	49	60	209	60	6	60	16	60
	point1	1										
Frontage-2	point298	298	292	35	0	0	0	0	0	0	0	0
	point179	179	292	35	0	0	0	0	0	0	0	0
	point180	180	292	35	0	0	0	0	0	0	0	0
	point181	181	292	35	0	0	0	0	0	0	0	0
	point182	182	292	35	0	0	0	0	0	0	0	0
	point183	183	292	35	0	0	0	0	0	0	0	0
	point184	184	292	35	0	0	0	0	0	0	0	0
	point185	185	292	35	0	0	0	0	0	0	0	0
	point186	186	292	35	0	0	0	0	0	0	0	0
	point187	187	292	35	0	0	0	0	0	0	0	0
	point188	188	292	35	0	0	0	0	0	0	0	0
	point189	189	292	35	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point190	190	292	35	0	0	0	0	0	0	0	0
	point191	191	292	35	0	0	0	0	0	0	0	0
	point192	192	292	35	0	0	0	0	0	0	0	0
	point193	193	292	35	0	0	0	0	0	0	0	0
	point194	194	292	35	0	0	0	0	0	0	0	0
	point195	195	292	35	0	0	0	0	0	0	0	0
	point196	196	292	35	0	0	0	0	0	0	0	0
	point197	197	292	35	0	0	0	0	0	0	0	0
	point198	198	292	35	0	0	0	0	0	0	0	0
	point199	199	292	35	0	0	0	0	0	0	0	0
	point200	200	292	35	0	0	0	0	0	0	0	0
	point201	201	292	35	0	0	0	0	0	0	0	0
	point202	202	292	35	0	0	0	0	0	0	0	0
	point203	203	292	35	0	0	0	0	0	0	0	0
	point204	204	292	35	0	0	0	0	0	0	0	0
	point205	205	292	35	0	0	0	0	0	0	0	0
	point206	206	292	35	0	0	0	0	0	0	0	0
	point207	207	292	35	0	0	0	0	0	0	0	0
	point208	208	292	35	0	0	0	0	0	0	0	0
	point209	209	292	35	0	0	0	0	0	0	0	0
	point210	210	292	35	0	0	0	0	0	0	0	0
	point211	211	292	35	0	0	0	0	0	0	0	0
	point212	212	292	35	0	0	0	0	0	0	0	0
	point213	213	292	35	0	0	0	0	0	0	0	0
	point214	214	292	35	0	0	0	0	0	0	0	0
	point215	215	292	35	0	0	0	0	0	0	0	0
	point216	216	292	35	0	0	0	0	0	0	0	0
	point217	217	292	35	0	0	0	0	0	0	0	0
	point218	218	292	35	0	0	0	0	0	0	0	0
	point219	219	292	35	0	0	0	0	0	0	0	0
	point220	220	292	35	0	0	0	0	0	0	0	0
	point221	221	292	35	0	0	0	0	0	0	0	0
	point222	222	292	35	0	0	0	0	0	0	0	0
	point223	223	292	35	0	0	0	0	0	0	0	0
	point224	224	292	35	0	0	0	0	0	0	0	0
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**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point226	226	292	35	0	0	0	0	0	0	0	0
	point227	227	292	35	0	0	0	0	0	0	0	0
	point228	228	292	35	0	0	0	0	0	0	0	0
	point229	229	292	35	0	0	0	0	0	0	0	0
	point230	230	292	35	0	0	0	0	0	0	0	0
	point231	231	292	35	0	0	0	0	0	0	0	0
	point232	232	292	35	0	0	0	0	0	0	0	0
	point233	233	292	35	0	0	0	0	0	0	0	0
	point234	234	292	35	0	0	0	0	0	0	0	0
	point235	235	292	35	0	0	0	0	0	0	0	0
	point236	236	292	35	0	0	0	0	0	0	0	0
	point237	237	292	35	0	0	0	0	0	0	0	0
	point238	238	292	35	0	0	0	0	0	0	0	0
	point239	239	292	35	0	0	0	0	0	0	0	0
	point240	240	292	35	0	0	0	0	0	0	0	0
	point241	241	292	35	0	0	0	0	0	0	0	0
	point242	242	292	35	0	0	0	0	0	0	0	0
	point243	243	292	35	0	0	0	0	0	0	0	0
	point244	244	292	35	0	0	0	0	0	0	0	0
	point245	245	292	35	0	0	0	0	0	0	0	0
	point246	246	292	35	0	0	0	0	0	0	0	0
	point247	247	292	35	0	0	0	0	0	0	0	0
	point248	248	292	35	0	0	0	0	0	0	0	0
	point249	249	292	35	0	0	0	0	0	0	0	0
	point250	250	292	35	0	0	0	0	0	0	0	0
	point251	251	292	35	0	0	0	0	0	0	0	0
	point252	252	292	35	0	0	0	0	0	0	0	0
	point253	253	292	35	0	0	0	0	0	0	0	0
	point254	254	292	35	0	0	0	0	0	0	0	0
	point255	255	292	35	0	0	0	0	0	0	0	0
	point256	256	292	35	0	0	0	0	0	0	0	0
	point257	257	292	35	0	0	0	0	0	0	0	0
	point258	258	292	35	0	0	0	0	0	0	0	0
	point259	259	292	35	0	0	0	0	0	0	0	0
	point260	260	292	35	0	0	0	0	0	0	0	0
	point261	261	292	35	0	0	0	0	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point262	262	292	35	0	0	0	0	0	0	0	0
	point263	263	292	35	0	0	0	0	0	0	0	0
	point264	264	292	35	0	0	0	0	0	0	0	0
	point265	265	292	35	0	0	0	0	0	0	0	0
	point266	266	292	35	0	0	0	0	0	0	0	0
	point267	267										
EB I-70-Eastern side-2-2-2-2-EB I-70-Easte	point268	268	2351	55	52	55	220	55	6	55	16	55
	point86	86	2351	55	52	55	220	55	6	55	16	55
	point87	87	2351	55	52	55	220	55	6	55	16	55
	point88	88	2351	55	52	55	220	55	6	55	16	55
	point284	284	2351	55	52	55	220	55	6	55	16	55
	point285	285	2351	55	52	55	220	55	6	55	16	55
	point286	286	2351	55	52	55	220	55	6	55	16	55
	point287	287	2351	55	52	55	220	55	6	55	16	55
	point293	293	2351	55	52	55	220	55	6	55	16	55
	point289	289	2351	55	52	55	220	55	6	55	16	55
	point297	297	2351	55	52	55	220	55	6	55	16	55
	point292	292	2351	55	52	55	220	55	6	55	16	55
	point89	89	2351	55	52	55	220	55	6	55	16	55
	point90	90	2351	55	52	55	220	55	6	55	16	55
	point91	91	2351	55	52	55	220	55	6	55	16	55
	point92	92	2351	55	52	55	220	55	6	55	16	55
	point93	93	2351	55	52	55	220	55	6	55	16	55
	point94	94	2351	55	52	55	220	55	6	55	16	55
	point95	95	2351	55	52	55	220	55	6	55	16	55
	point96	96	2351	55	52	55	220	55	6	55	16	55
	point97	97	2351	55	52	55	220	55	6	55	16	55
	point98	98	2351	55	52	55	220	55	6	55	16	55
	point99	99	2351	55	52	55	220	55	6	55	16	55
	point100	100	2351	55	52	55	220	55	6	55	16	55
	point101	101	2351	55	52	55	220	55	6	55	16	55
	point102	102	2351	55	52	55	220	55	6	55	16	55
	point103	103	2351	55	52	55	220	55	6	55	16	55
	point104	104	2351	55	52	55	220	55	6	55	16	55
	point105	105	2351	55	52	55	220	55	6	55	16	55
	point106	106	2351	55	52	55	220	55	6	55	16	55

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point107	107	2351	55	52	55	220	55	6	55	16	55
	point108	108	2351	55	52	55	220	55	6	55	16	55
	point109	109	2351	55	52	55	220	55	6	55	16	55
	point110	110	2351	55	52	55	220	55	6	55	16	55
	point111	111	2351	55	52	55	220	55	6	55	16	55
	point112	112	2351	55	52	55	220	55	6	55	16	55
	point113	113	2351	55	52	55	220	55	6	55	16	55
	point114	114	2351	55	52	55	220	55	6	55	16	55
	point115	115	2351	55	52	55	220	55	6	55	16	55
	point116	116	2351	55	52	55	220	55	6	55	16	55
	point117	117	2351	55	52	55	220	55	6	55	16	55
	point118	118	2351	55	52	55	220	55	6	55	16	55
	point119	119	2351	55	52	55	220	55	6	55	16	55
	point120	120	2351	55	52	55	220	55	6	55	16	55
	point121	121	2351	55	52	55	220	55	6	55	16	55
	point122	122	2351	55	52	55	220	55	6	55	16	55
	point123	123	2351	55	52	55	220	55	6	55	16	55
	point124	124	2351	55	52	55	220	55	6	55	16	55
	point125	125	2351	55	52	55	220	55	6	55	16	55
	point126	126	2351	55	52	55	220	55	6	55	16	55
	point127	127	2351	55	52	55	220	55	6	55	16	55
	point128	128										
WB I-70-central-2-2-WB I-70-central	point280	280	2690	45	55	45	227	45	7	45	11	45
	point45	45	2690	45	55	45	227	45	7	45	11	45
	point44	44	2690	45	55	45	227	45	7	45	11	45
	point43	43	2690	45	55	45	227	45	7	45	11	45
	point42	42	2690	45	55	45	227	45	7	45	11	45
	point41	41	2690	45	55	45	227	45	7	45	11	45
	point40	40	2690	45	55	45	227	45	7	45	11	45
	point39	39	2690	45	55	45	227	45	7	45	11	45
	point38	38	2690	45	55	45	227	45	7	45	11	45
	point37	37	2690	45	55	45	227	45	7	45	11	45
	point36	36	2690	45	55	45	227	45	7	45	11	45
	point35	35	2690	45	55	45	227	45	7	45	11	45
	point34	34	2690	45	55	45	227	45	7	45	11	45
	point33	33	2690	45	55	45	227	45	7	45	11	45

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**<Project Name?>**

	point32	32	2690	45	55	45	227	45	7	45	11	45
	point31	31	2690	45	55	45	227	45	7	45	11	45
	point30	30	2690	45	55	45	227	45	7	45	11	45
	point29	29	2690	45	55	45	227	45	7	45	11	45
	point28	28	2690	45	55	45	227	45	7	45	11	45
	point27	27	2690	45	55	45	227	45	7	45	11	45
	point26	26	2690	45	55	45	227	45	7	45	11	45
	point270	270	2690	45	55	45	227	45	7	45	11	45
	point271	271	2690	45	55	45	227	45	7	45	11	45
	point283	283	2690	45	55	45	227	45	7	45	11	45
	point274	274	2690	45	55	45	227	45	7	45	11	45
	point275	275	2690	45	55	45	227	45	7	45	11	45
	point276	276										

**INPUT: RECEIVERS**

&lt;Project Name?&gt;

<Organization?>						2 May 2012					
<Analysis By?>						TNM 2.5					

**INPUT: RECEIVERS**
**PROJECT/CONTRACT:**

&lt;Project Name?&gt;

**RUN:**

&lt;Run Title?&gt;

Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
R1 - East Idaho	8	1	1,003,650.2	695,781.8	7,522.00	4.92	0.00	66	10.0	8.0	Y
R2 -W Portal 1st on hill	10	1	1,006,089.5	695,466.6	7,438.00	4.92	0.00	66	10.0	8.0	Y
R3 -W Portal 2nd on hill	12	1	1,006,282.3	695,463.5	7,454.00	4.92	0.00	66	10.0	8.0	Y
R4 -W Portal 3rd hill	13	1	1,006,420.8	695,258.0	7,520.00	4.92	0.00	66	10.0	8.0	Y
R5 - HV1	14	1	1,010,477.0	696,657.0	7,360.00	4.92	0.00	66	10.0	8.0	Y
R6 - HV2	15	1	1,010,823.6	696,521.8	7,338.70	4.92	0.00	66	10.0	8.0	Y
R7 - HV3	18	1	1,011,167.8	696,384.7	7,350.00	4.92	0.00	66	10.0	8.0	Y
R8 -HV4	19	1	1,012,139.3	695,909.8	7,302.80	4.92	0.00	66	10.0	8.0	Y
T1 - Trail at Bridge	26	1	1,006,598.7	695,998.9	7,389.00	4.92	0.00	66	10.0	8.0	Y

**INPUT: TERRAIN LINES**

<Project Name?>

<Organization?>			<b>2 May 2012</b>	
<Analysis By?>			<b>TNM 2.5</b>	
<b>INPUT: TERRAIN LINES</b>				
<b>PROJECT/CONTRACT:</b>	<b>&lt;Project Name?&gt;</b>			
<b>RUN:</b>	<b>&lt;Run Title?&gt;</b>			
<b>Terrain Line</b>	<b>Points</b>			
<b>Name</b>	<b>No.</b>	<b>Coordinates (ground)</b>		
		<b>X</b>	<b>Y</b>	<b>Z</b>
		ft	ft	ft
Terrain Line1	1	1,013,240.5	695,651.3	7,280.00
	2	1,013,491.3	697,572.6	8,050.00
Terrain Line2	3	1,009,838.7	696,665.7	7,340.00
	4	1,009,997.6	696,211.5	7,620.00
Terrain Line3	5	1,011,452.2	696,510.5	7,288.00
	6	1,012,190.2	696,036.7	7,280.00
	7	1,013,069.2	695,500.7	7,272.00
Bottom of Wall	8	1,010,258.1	696,824.2	7,334.00
	9	1,010,352.6	696,801.6	7,332.00
	10	1,010,460.3	696,775.2	7,330.00
	11	1,010,509.5	696,762.7	7,330.00
	12	1,010,537.9	696,755.9	7,330.00
	13	1,010,559.3	696,750.8	7,330.00
	14	1,010,610.1	696,738.4	7,330.00
	15	1,010,652.2	696,726.4	7,330.00
	16	1,010,696.2	696,715.7	7,328.00
	17	1,010,730.6	696,707.6	7,328.00
	18	1,010,780.0	696,695.3	7,324.00
	19	1,010,825.7	696,686.2	7,320.00
	20	1,010,896.6	696,666.7	7,312.00
Top of Wall	21	1,010,262.2	696,821.0	7,346.00
	22	1,010,300.4	696,812.1	7,348.00
	23	1,010,352.6	696,799.6	7,350.00
	24	1,010,376.9	696,793.8	7,351.90

**INPUT: TERRAIN LINES**

&lt;Project Name?&gt;

	25	1,010,402.3	696,787.8	7,352.00
	26	1,010,460.3	696,773.2	7,350.00
	27	1,010,509.5	696,760.8	7,348.00
	28	1,010,559.0	696,748.8	7,344.00
	29	1,010,583.5	696,742.9	7,342.00
	30	1,010,629.9	696,731.7	7,338.00
	31	1,010,675.5	696,720.7	7,334.00
	32	1,010,709.9	696,712.4	7,330.00
	33	1,010,862.5	696,675.1	7,316.00
	34	1,010,896.6	696,666.7	7,312.00
Terrain Line9	35	1,006,740.0	696,052.0	7,390.00
	36	1,007,316.0	695,513.0	7,370.00
Terrain Line10	37	1,007,091.3	696,134.7	7,680.00
	38	1,007,197.3	695,799.3	7,560.00
	39	1,007,316.0	695,513.0	7,370.00
e portal	40	1,007,450.6	696,185.0	7,380.00
	41	1,007,316.0	695,513.0	7,370.00
Terrain Line12	42	1,006,650.0	695,939.7	7,370.00
	43	1,006,473.0	695,970.0	7,374.00
	44	1,005,563.0	695,749.0	7,385.00
	45	1,005,188.0	695,477.0	7,390.00
Terrain Line13	46	1,006,457.8	695,875.7	7,404.00
	47	1,006,599.0	695,891.0	7,404.00
Terrain Line14	48	1,006,040.0	695,563.9	7,420.00
	49	1,006,585.0	695,734.0	7,391.00
Terrain Line15	50	1,006,457.8	695,876.7	7,390.00
	51	1,006,599.0	695,892.0	7,390.00
Terrain Line16	52	1,010,643.3	696,680.0	7,338.00
	53	1,011,001.0	696,580.8	7,305.40
	54	1,011,263.5	696,502.7	7,320.80
	55	1,011,629.9	696,244.2	7,295.00
Terrain Line17	56	1,010,807.0	696,613.0	7,340.00
	57	1,010,981.0	696,548.8	7,340.00
	58	1,011,162.7	696,507.5	7,336.00
Terrain Line18	59	1,011,252.7	696,397.5	7,335.00
	60	1,011,129.0	696,202.5	7,371.00

**INPUT: TERRAIN LINES**

Terrain Line19	61	1,003,403.9	695,912.3	7,490.00
	62	1,003,438.9	695,522.6	7,656.00
Terrain Line20	63	1,003,463.1	695,957.5	7,490.00
	64	1,003,666.4	695,901.1	7,530.00
	65	1,003,758.1	695,961.8	7,572.00
	66	1,003,830.4	695,727.8	7,545.00
	67	1,003,856.1	695,588.7	7,578.00
Terrain Line21	68	1,011,079.6	696,436.9	7,340.00
	69	1,011,020.3	696,322.0	7,420.00
Terrain Line22	70	1,010,606.1	696,661.0	7,340.00
	71	1,010,535.0	696,469.0	7,430.00

&lt;Project Name?&gt;

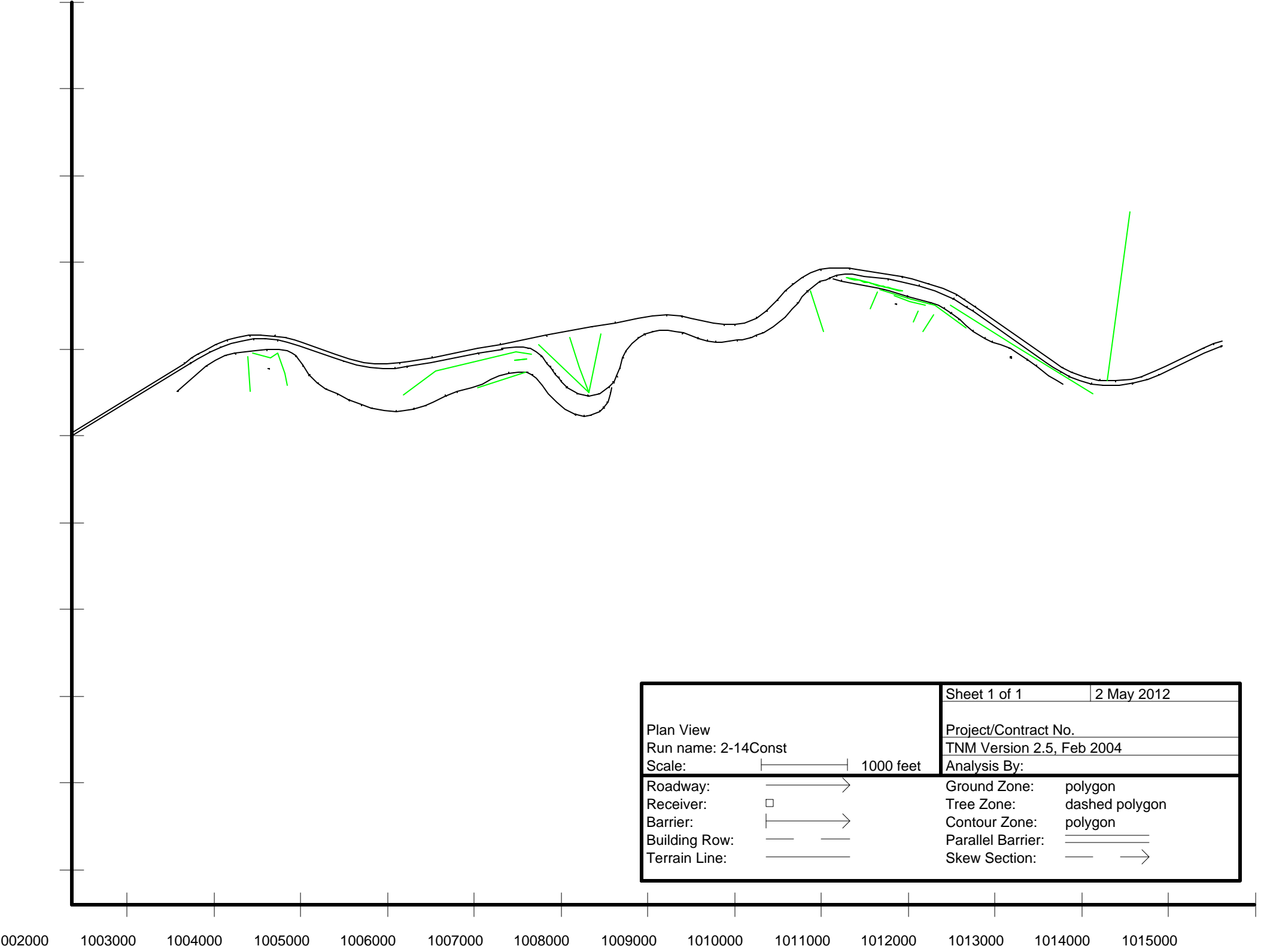
**RESULTS: SOUND LEVELS**

<Project Name?>

<Organization?>													2 May 2012	
<Analysis By?>													TNM 2.5	
													Calculated with TNM 2.5	
<b>RESULTS: SOUND LEVELS</b>														
<b>PROJECT/CONTRACT:</b>			<Project Name?>											
<b>RUN:</b>			<Run Title?>											
<b>BARRIER DESIGN:</b>			INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.					
<b>ATMOSPHERICS:</b>			68 deg F, 50% RH											
<b>Receiver</b>														
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing Calculated</b>	<b>Crit'n Sub'l Inc</b>	<b>Type Impact</b>	<b>With Barrier Calculated LAeq1h</b>	<b>Noise Reduction Calculated Goal Calculated minus Goal</b>			
				dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
R1 - East Idaho		8	1	0.0	53.5	66	53.5	10	----	53.5	0.0	8	-8.0	
R2 -W Portal 1st on hill		10	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0	
R3 -W Portal 2nd on hill		12	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0	
R4 -W Portal 3rd hill		13	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0	
R5 - HV1		14	1	0.0	70.7	66	70.7	10	Snd Lvl	70.7	0.0	8	-8.0	
R6 - HV2		15	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0	
R7 - HV3		18	1	0.0	70.1	66	70.1	10	Snd Lvl	70.1	0.0	8	-8.0	
R8 -HV4		19	1	0.0	72.2	66	72.2	10	Snd Lvl	72.2	0.0	8	-8.0	
T1 - Trail at Bridge		26	1	0.0	76.4	66	76.4	10	Snd Lvl	76.4	0.0	8	-8.0	
<b>Dwelling Units</b>			<b># DUs</b>	<b>Noise Reduction</b>										
				<b>Min</b>	<b>Avg</b>	<b>Max</b>								
				<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected			9	0.0	0.0	0.0								
All Impacted			7	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								



## Construction Model Data



		Sheet 1 of 1	2 May 2012
Plan View		Project/Contract No.	
Run name: 2-14Const		TNM Version 2.5, Feb 2004	
Scale:		Analysis By:	
Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	

**INPUT: ROADWAYS**

<Project Name?>

<Organization?>					2 May 2012				
<Analysis By?>					TNM 2.5				

**INPUT: ROADWAYS**

PROJECT/CONTRACT: <Project Name?>

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

RUN: <Run Title?>

Roadway Name	Width	Points				Flow Control			Segment	On Struct?	
		Name	No.	Coordinates (pavement)			Control Device	Speed Constraint			Percent Vehicles Affected
				X	Y	Z					
				ft	ft	ft		mph	%		
WB I-70 eastern	30.0	point66	66	1,014,554.8	696,095.9	7,270.60			Average		
		point65	65	1,014,451.5	696,063.3	7,271.00			Average		
		point64	64	1,014,338.0	696,015.2	7,270.80			Average		
		point63	63	1,013,906.8	695,804.2	7,275.80			Average		
		point62	62	1,013,786.6	695,749.5	7,276.90			Average		
		point61	61	1,013,625.9	695,688.4	7,278.30			Average		
		point60	60	1,013,508.3	695,659.4	7,279.20			Average		
		point59	59	1,013,328.8	695,639.1	7,280.90			Average		
		point58	58	1,013,149.8	695,649.4	7,282.30			Average		
		point57	57	1,012,982.2	695,685.7	7,283.90			Average		
		point56	56	1,012,831.0	695,743.8	7,285.20			Average		
		point55	55	1,012,721.4	695,801.5	7,287.10			Average		
		point54	54	1,012,619.6	695,866.3	7,287.90			Average		
		point53	53	1,011,725.8	696,494.3	7,310.90			Average		
		point52	52	1,011,601.8	696,576.6	7,313.60			Average		
		point51	51	1,011,510.7	696,627.2	7,315.40			Average		
		point50	50	1,011,357.8	696,696.5	7,316.40			Average		
		point49	49	1,011,191.3	696,758.7	7,321.40			Average		
point48	48	1,011,009.5	696,807.2	7,323.10			Average				
point47	47	1,010,889.9	696,830.6	7,324.60			Average				
point46	46	1,010,361.6	696,914.6	7,334.20							
EB I-70 Western side	30.0	point67	67	1,000,942.9	694,753.5	7,481.60			Average		
		point68	68	1,001,039.3	694,799.9	7,476.80			Average		
		point69	69	1,001,172.3	694,872.0	7,470.50			Average		
		point70	70	1,001,361.9	694,986.6	7,463.40			Average		

INPUT: ROADWAYS

<Project Name?>

		point71	71	1,002,761.7	695,844.5	7,455.70				Average	
		point72	72	1,002,840.1	695,890.2	7,455.00				Average	
		point73	73	1,002,983.8	695,971.8	7,453.50				Average	
		point74	74	1,003,106.9	696,029.8	7,452.40				Average	
		point75	75	1,003,223.9	696,071.3	7,451.40				Average	
		point76	76	1,003,345.6	696,100.6	7,450.50				Average	
		point77	77	1,003,482.3	696,117.8	7,449.50				Average	
		point78	78	1,003,610.4	696,120.0	7,448.50				Average	
		point79	79	1,003,754.1	696,105.0	7,446.30				Average	
		point80	80	1,003,865.9	696,082.0	7,444.60				Average	
		point81	81	1,003,997.4	696,043.5	7,442.10				Average	
		point82	82	1,004,400.5	695,899.1	7,433.50				Average	
		point83	83	1,004,512.8	695,860.9	7,431.10				Average	
		point84	84	1,004,655.3	695,822.4	7,427.70				Average	
		point85	85	1,004,806.9	695,794.7	7,424.60					
WB I-70-Western	30.0	point279	279	1,006,036.4	696,009.3	7,402.52				Average	
		point277	277	1,005,774.8	695,959.8	7,406.58				Average	
		point278	278	1,005,513.1	695,910.2	7,410.64				Average	
		point25	25	1,005,251.4	695,860.6	7,414.70				Average	
		point24	24	1,005,142.8	695,843.8	7,416.80				Average	
		point23	23	1,004,997.2	695,835.0	7,419.40				Average	
		point22	22	1,004,855.0	695,837.2	7,422.40				Average	
		point21	21	1,004,732.2	695,853.2	7,424.80				Average	
		point20	20	1,004,569.3	695,892.1	7,428.70				Average	
		point19	19	1,004,403.4	695,946.5	7,433.60				Average	
		point18	18	1,004,020.3	696,083.6	7,444.40				Average	
		point17	17	1,003,945.6	696,107.9	7,446.30				Average	
		point16	16	1,003,839.5	696,135.4	7,446.50				Average	
		point15	15	1,003,715.9	696,156.6	7,448.80				Average	
		point14	14	1,003,553.9	696,166.3	7,451.10				Average	
		point13	13	1,003,426.7	696,159.1	7,451.90				Average	
		point12	12	1,003,289.1	696,135.9	7,452.70				Average	
		point11	11	1,003,171.8	696,103.1	7,453.70				Average	
		point10	10	1,003,045.9	696,053.5	7,454.90				Average	
		point9	9	1,002,917.8	695,988.5	7,455.60				Average	
		point8	8	1,002,838.7	695,942.7	7,455.70				Average	
		point7	7	1,002,770.7	695,900.4	7,456.00				Average	
		point6	6	1,002,680.4	695,842.1	7,456.40				Average	
		point5	5	1,001,405.5	695,053.3	7,468.40				Average	

**INPUT: ROADWAYS**

<Project Name?>

		point4	4	1,001,279.4	694,975.9	7,472.50				Average
		point3	3	1,001,171.6	694,911.1	7,476.60				Average
		point2	2	1,001,042.0	694,840.3	7,483.00				Average
		point1	1	1,000,939.5	694,790.0	7,487.80				
Frontage-2	24.0	point220	220	1,007,572.2	695,559.3	7,368.70				Average
		point221	221	1,007,560.6	695,500.7	7,369.50				Average
		point222	222	1,007,524.4	695,396.9	7,377.70				Average
		point223	223	1,007,480.0	695,332.8	7,382.20				Average
		point224	224	1,007,435.0	695,293.6	7,382.30				Average
		point225	225	1,007,327.4	695,245.5	7,378.60				Average
		point226	226	1,007,249.9	695,239.6	7,378.40				Average
		point227	227	1,007,152.0	695,256.4	7,379.40				Average
		point228	228	1,007,037.9	695,313.7	7,382.80				Average
		point229	229	1,006,941.1	695,397.2	7,384.10				Average
		point230	230	1,006,846.4	695,498.3	7,389.70				Average
		point231	231	1,006,777.4	695,594.5	7,391.70				Average
		point232	232	1,006,708.6	695,670.2	7,391.30				Average
		point233	233	1,006,660.3	695,719.1	7,391.30				Average
		point234	234	1,006,603.4	695,743.7	7,391.50				Average
		point235	235	1,006,501.3	695,740.0	7,392.50				Average
		point236	236	1,006,394.8	695,731.0	7,395.00				Average
		point237	237	1,006,284.5	695,702.4	7,403.20				Average
		point238	238	1,006,185.5	695,656.1	7,410.30				Average
		point239	239	1,006,086.5	695,602.6	7,418.00				Average
		point240	240	1,005,966.5	695,560.4	7,420.10				Average
		point241	241	1,005,803.9	695,515.3	7,414.40				Average
		point242	242	1,005,672.1	695,471.2	7,411.50				Average
		point243	243	1,005,531.7	695,396.6	7,405.00				Average
		point244	244	1,005,438.1	695,357.5	7,399.80				Average
		point245	245	1,005,302.7	695,321.7	7,398.40				Average
		point246	246	1,005,199.6	695,304.3	7,398.50				Average
		point247	247	1,005,109.6	695,294.8	7,400.10				Average
		point248	248	1,004,971.6	695,301.8	7,402.80				Average
		point249	249	1,004,825.8	695,334.1	7,405.90				Average
		point250	250	1,004,711.3	695,367.2	7,408.30				Average
		point251	251	1,004,565.1	695,421.8	7,412.40				Average
		point252	252	1,004,433.2	695,490.1	7,413.90				Average
		point253	253	1,004,301.9	695,552.9	7,415.10				Average
		point254	254	1,004,207.8	695,617.5	7,419.10				Average

**INPUT: ROADWAYS**

<Project Name?>

		point255	255	1,004,111.1	695,708.5	7,428.50				Average	
		point256	256	1,004,035.6	695,816.7	7,440.30				Average	
		point257	257	1,003,960.4	695,926.5	7,453.10				Average	
		point258	258	1,003,913.2	695,964.3	7,458.70				Average	
		point259	259	1,003,857.4	695,984.7	7,464.60				Average	
		point260	260	1,003,766.8	695,997.1	7,475.10				Average	
		point261	261	1,003,624.4	695,993.6	7,485.40				Average	
		point262	262	1,003,487.1	695,983.7	7,490.30				Average	
		point263	263	1,003,264.7	695,953.9	7,479.70				Average	
		point264	264	1,003,156.7	695,926.9	7,471.10				Average	
		point265	265	1,003,037.2	695,874.9	7,460.80				Average	
		point266	266	1,002,934.5	695,806.1	7,455.60				Average	
		point267	267	1,002,604.8	695,522.0	7,455.30					
Detour-2	12.0	point188	188	1,010,104.3	696,801.8	7,342.00				Average	
		point187	187	1,010,202.5	696,787.6	7,346.40				Average	
		point186	186	1,010,641.7	696,694.9	7,338.40				Average	
		point185	185	1,010,686.5	696,684.4	7,334.10				Average	
		point184	184	1,010,747.2	696,668.6	7,327.90				Average	
		point183	183	1,010,961.4	696,606.4	7,306.00				Average	
		point182	182	1,011,223.2	696,533.9	7,322.60				Average	
		point181	181	1,011,307.4	696,504.1	7,323.20				Average	
		point180	180	1,011,380.1	696,469.0	7,318.70				Average	
		point179	179	1,011,456.3	696,417.7	7,311.80				Average	
		point178	178	1,011,550.2	696,337.0	7,302.50				Average	
		point177	177	1,011,628.2	696,269.8	7,297.90				Average	
		point176	176	1,011,707.8	696,208.5	7,289.90				Average	
		point175	175	1,011,777.8	696,162.4	7,287.10				Average	
		point174	174	1,011,847.4	696,127.0	7,286.50				Average	
		point173	173	1,011,928.5	696,085.7	7,285.40				Average	
		point172	172	1,012,023.4	696,054.1	7,286.10				Average	
		point171	171	1,012,125.7	696,014.4	7,287.70				Average	
		point170	170	1,012,212.0	695,960.3	7,286.90				Average	
		point169	169	1,012,331.1	695,879.9	7,283.90				Average	
		point168	168	1,012,430.3	695,813.9	7,282.10				Average	
		point167	167	1,012,502.6	695,754.8	7,281.90				Average	
		point166	166	1,012,574.6	695,701.7	7,281.00				Average	
		point165	165	1,012,667.0	695,645.7	7,280.80				Average	
		point164	164	1,012,735.0	695,604.9	7,280.80					
Detour-2	30.0	point378	378	1,012,546.3	695,850.9	7,287.50				Average	

**INPUT: ROADWAYS**

<Project Name?>

		point116	116	1,012,625.4	695,796.6	7,287.00				Average	
		point117	117	1,012,716.6	695,740.8	7,285.90				Average	
		point118	118	1,012,810.6	695,692.5	7,285.60				Average	
		point119	119	1,012,925.5	695,647.1	7,284.50				Average	
		point120	120	1,013,058.9	695,609.6	7,283.60				Average	
		point121	121	1,013,195.9	695,588.9	7,282.60				Average	
		point122	122	1,013,369.8	695,587.9	7,281.30				Average	
		point123	123	1,013,536.6	695,610.5	7,279.80				Average	
		point124	124	1,013,699.4	695,655.9	7,278.20				Average	
		point125	125	1,013,836.6	695,710.9	7,276.50				Average	
		point126	126	1,014,348.5	695,959.5	7,271.20				Average	
		point127	127	1,014,490.7	696,019.2	7,270.10				Average	
		point128	128	1,014,549.2	696,037.4	7,270.00					
Detour	24.0	point268	268	1,004,806.9	695,794.7	7,424.60				Average	
		point86	86	1,004,958.9	695,782.5	7,421.60				Average	
		point87	87	1,005,098.1	695,786.7	7,418.90				Average	
		point88	88	1,005,237.6	695,802.4	7,415.40				Average	
		point284	284	1,005,508.2	695,853.4	7,410.61				Average	
		point285	285	1,005,778.8	695,904.4	7,405.82				Average	
		point286	286	1,006,049.2	695,955.5	7,401.03				Average	
		point287	287	1,006,319.8	696,006.5	7,396.24				Average	
		point310	310	1,006,319.8	696,007.5	7,396.20				Average	
		point311	311	1,006,478.9	696,030.4	7,391.00				Average	
		point312	312	1,006,558.7	696,031.0	7,390.00				Average	
		point313	313	1,006,620.4	696,015.2	7,389.20				Average	
		point314	314	1,006,640.1	696,010.2	7,389.00				Average	
		point315	315	1,006,714.3	695,972.2	7,388.00				Average	
		point316	316	1,006,772.3	695,921.1	7,386.00				Average	
		point317	317	1,006,807.6	695,877.8	7,384.00				Average	
		point318	318	1,006,838.6	695,839.0	7,382.00				Average	
		point319	319	1,006,868.5	695,801.4	7,380.00				Average	
		point320	320	1,006,901.1	695,760.5	7,378.00				Average	
		point321	321	1,006,934.4	695,718.8	7,376.00				Average	
		point322	322	1,006,966.7	695,678.3	7,374.00				Average	
		point323	323	1,007,002.6	695,633.2	7,372.00				Average	
		point324	324	1,007,060.5	695,567.0	7,370.00				Average	
		point325	325	1,007,183.2	695,492.9	7,368.00				Average	
		point326	326	1,007,307.8	695,472.9	7,367.00				Average	
		point327	327	1,007,432.4	695,497.4	7,366.00				Average	

INPUT: ROADWAYS

<Project Name?>

		point328	328	1,007,549.3	695,573.1	7,366.00				Average	
		point329	329	1,007,594.4	695,625.9	7,366.70				Average	
		point219	219	1,007,596.4	695,627.3	7,366.70				Average	
		point218	218	1,007,633.1	695,696.7	7,366.80				Average	
		point217	217	1,007,665.2	695,791.1	7,366.90				Average	
		point216	216	1,007,701.2	695,903.9	7,367.60				Average	
		point215	215	1,007,740.3	695,983.3	7,367.30				Average	
		point214	214	1,007,808.4	696,073.4	7,365.20				Average	
		point213	213	1,007,881.3	696,137.4	7,362.60				Average	
		point212	212	1,007,952.0	696,175.9	7,359.40				Average	
		point211	211	1,008,045.5	696,204.9	7,355.50				Average	
		point210	210	1,008,124.9	696,216.6	7,352.60				Average	
		point209	209	1,008,215.3	696,218.0	7,349.60				Average	
		point208	208	1,008,298.5	696,208.7	7,346.40				Average	
		point207	207	1,008,386.3	696,186.1	7,342.40				Average	
		point206	206	1,008,566.7	696,127.7	7,336.90				Average	
		point205	205	1,008,667.5	696,100.6	7,335.80				Average	
		point204	204	1,008,767.1	696,086.6	7,335.20				Average	
		point203	203	1,008,835.7	696,086.5	7,335.10				Average	
		point202	202	1,009,014.6	696,104.6	7,334.90				Average	
		point201	201	1,009,070.3	696,112.5	7,334.40				Average	
		point200	200	1,009,168.0	696,136.5	7,334.50				Average	
		point199	199	1,009,233.5	696,161.5	7,334.40				Average	
		point198	198	1,009,305.8	696,195.5	7,334.00				Average	
		point197	197	1,009,422.0	696,261.6	7,333.20				Average	
		point196	196	1,009,556.7	696,371.8	7,332.60				Average	
		point195	195	1,009,645.4	696,467.4	7,333.10				Average	
		point194	194	1,009,701.9	696,535.0	7,333.60				Average	
		point193	193	1,009,754.6	696,601.9	7,334.80				Average	
		point192	192	1,009,811.7	696,667.3	7,336.30				Average	
		point191	191	1,009,883.6	696,731.8	7,337.10				Average	
		point190	190	1,009,953.3	696,774.6	7,338.20				Average	
		point189	189	1,010,023.6	696,796.9	7,339.60				Average	
		point374	374	1,010,021.5	696,795.5	7,339.60				Average	
		point365	365	1,010,070.0	696,817.8	7,340.00				Average	
		point366	366	1,010,147.6	696,845.9	7,338.00				Average	
		point367	367	1,010,242.3	696,861.0	7,335.00				Average	
		point368	368	1,010,322.1	696,859.1	7,334.00				Average	
		point369	369	1,010,459.8	696,836.6	7,332.00				Average	



**INPUT: ROADWAYS**

<Project Name?>

		point108	108	1,010,731.9	696,803.2	7,330.50				Average
		point109	109	1,010,915.8	696,770.1	7,327.30				Average
		point110	110	1,011,092.0	696,731.4	7,323.20				Average
		point111	111	1,011,274.0	696,673.2	7,320.20				Average
		point112	112	1,011,483.8	696,579.1	7,314.20				Average
		point113	113	1,011,643.2	696,485.2	7,310.60				Average
		point114	114	1,011,705.4	696,442.9	7,309.70				Average
		point115	115	1,012,546.3	695,850.9	7,287.50				
WB I-70-central-2-2-WB I-70-central	30.0	point280	280	1,010,361.6	696,914.6	7,334.20				Average
		point45	45	1,010,285.2	696,926.1	7,335.70				Average
		point44	44	1,010,174.0	696,935.2	7,337.70				Average
		point43	43	1,010,063.0	696,931.1	7,339.20				Average
		point42	42	1,009,959.9	696,911.0	7,341.20				Average
		point41	41	1,009,840.7	696,871.0	7,341.40				Average
		point40	40	1,009,752.0	696,821.4	7,344.30				Average
		point39	39	1,009,643.2	696,746.4	7,346.80				Average
		point38	38	1,009,560.6	696,667.0	7,348.50				Average
		point37	37	1,009,465.0	696,560.4	7,349.70				Average
		point36	36	1,009,344.0	696,439.5	7,351.50				Average
		point35	35	1,009,225.5	696,359.7	7,352.00				Average
		point34	34	1,009,086.4	696,304.1	7,352.50				Average
		point33	33	1,008,977.2	696,282.4	7,353.50				Average
		point32	32	1,008,855.9	696,281.3	7,354.50				Average
		point31	31	1,008,730.0	696,300.0	7,354.80				Average
		point30	30	1,008,470.6	696,359.7	7,357.30				Average
		point29	29	1,008,371.0	696,378.4	7,359.10				Average
		point28	28	1,008,195.0	696,393.5	7,363.80				Average
		point27	27	1,008,032.3	696,383.9	7,369.20				Average
		point26	26	1,007,868.1	696,356.3	7,374.10				Average
		point270	270	1,007,606.4	696,306.8	7,378.16				Average
		point271	271	1,007,344.8	696,257.2	7,382.22				Average
		point283	283	1,006,821.4	696,158.1	7,390.34				Average
		point274	274	1,006,559.8	696,108.5	7,394.40				Average
		point275	275	1,006,298.1	696,058.9	7,398.46				Average
		point276	276	1,006,036.4	696,009.3	7,402.52				

INPUT: TRAFFIC FOR LAeq1h Volumes

<Project Name?>

<Organization?>		2 May 2012										
<Analysis By?>		TNM 2.5										
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:		<Project Name?>										
RUN:		<Run Title?>										
Roadway	Points											
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
WB I-70 eastern	point66	66	2351	55	52	55	220	55	6	55	16	55
	point65	65	2351	55	52	55	220	55	6	55	16	55
	point64	64	2351	55	52	55	220	55	6	55	16	55
	point63	63	2351	55	52	55	220	55	6	55	16	55
	point62	62	2351	55	52	55	220	55	6	55	16	55
	point61	61	2351	55	52	55	220	55	6	55	16	55
	point60	60	2351	55	52	55	220	55	6	55	16	55
	point59	59	2351	55	52	55	220	55	6	55	16	55
	point58	58	2351	55	52	55	220	55	6	55	16	55
	point57	57	2351	55	52	55	220	55	6	55	16	55
	point56	56	2351	55	52	55	220	55	6	55	16	55
	point55	55	2351	55	52	55	220	55	6	55	16	55
	point54	54	2351	55	52	55	220	55	6	55	16	55
	point53	53	2351	55	52	55	220	55	6	55	16	55
	point52	52	2351	55	52	55	220	55	6	55	16	55
	point51	51	2351	55	52	55	220	55	6	55	16	55
	point50	50	2351	55	52	55	220	55	6	55	16	55
	point49	49	2351	55	52	55	220	55	6	55	16	55
	point48	48	2351	55	52	55	220	55	6	55	16	55
	point47	47	2351	55	52	55	220	55	6	55	16	55
	point46	46										
EB I-70 Western side	point67	67	2351	55	52	55	220	55	6	55	16	55
	point68	68	2351	55	52	55	220	55	6	55	16	55

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point69	69	2351	55	52	55	220	55	6	55	16	55
	point70	70	2351	55	52	55	220	55	6	55	16	55
	point71	71	2351	55	52	55	220	55	6	55	16	55
	point72	72	2351	55	52	55	220	55	6	55	16	55
	point73	73	2351	55	52	55	220	55	6	55	16	55
	point74	74	2351	55	52	55	220	55	6	55	16	55
	point75	75	2351	55	52	55	220	55	6	55	16	55
	point76	76	2351	55	52	55	220	55	6	55	16	55
	point77	77	2351	55	52	55	220	55	6	55	16	55
	point78	78	2351	55	52	55	220	55	6	55	16	55
	point79	79	2351	55	52	55	220	55	6	55	16	55
	point80	80	2351	55	52	55	220	55	6	55	16	55
	point81	81	2351	55	52	55	220	55	6	55	16	55
	point82	82	2351	55	52	55	220	55	6	55	16	55
	point83	83	2351	55	52	55	220	55	6	55	16	55
	point84	84	2351	55	52	55	220	55	6	55	16	55
	point85	85										
WB I-70-Western	point279	279	2233	60	49	60	209	60	6	60	16	60
	point277	277	2233	60	49	60	209	60	6	60	16	60
	point278	278	2233	60	49	60	209	60	6	60	16	60
	point25	25	2233	60	49	60	209	60	6	60	16	60
	point24	24	2233	60	49	60	209	60	6	60	16	60
	point23	23	2233	60	49	60	209	60	6	60	16	60
	point22	22	2233	60	49	60	209	60	6	60	16	60
	point21	21	2233	60	49	60	209	60	6	60	16	60
	point20	20	2233	60	49	60	209	60	6	60	16	60
	point19	19	2233	60	49	60	209	60	6	60	16	60
	point18	18	2233	60	49	60	209	60	6	60	16	60
	point17	17	2233	60	49	60	209	60	6	60	16	60
	point16	16	2233	60	49	60	209	60	6	60	16	60
	point15	15	2233	60	49	60	209	60	6	60	16	60
	point14	14	2233	60	49	60	209	60	6	60	16	60
	point13	13	2233	60	49	60	209	60	6	60	16	60
	point12	12	2233	60	49	60	209	60	6	60	16	60
	point11	11	2233	60	49	60	209	60	6	60	16	60
	point10	10	2233	60	49	60	209	60	6	60	16	60

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point9	9	2233	60	49	60	209	60	6	60	16	60
	point8	8	2233	60	49	60	209	60	6	60	16	60
	point7	7	2233	60	49	60	209	60	6	60	16	60
	point6	6	2233	60	49	60	209	60	6	60	16	60
	point5	5	2233	60	49	60	209	60	6	60	16	60
	point4	4	2233	60	49	60	209	60	6	60	16	60
	point3	3	2233	60	49	60	209	60	6	60	16	60
	point2	2	2233	60	49	60	209	60	6	60	16	60
	point1	1										
Frontage-2	point220	220	0	0	0	0	0	0	0	0	0	0
	point221	221	0	0	0	0	0	0	0	0	0	0
	point222	222	0	0	0	0	0	0	0	0	0	0
	point223	223	0	0	0	0	0	0	0	0	0	0
	point224	224	0	0	0	0	0	0	0	0	0	0
	point225	225	0	0	0	0	0	0	0	0	0	0
	point226	226	0	0	0	0	0	0	0	0	0	0
	point227	227	0	0	0	0	0	0	0	0	0	0
	point228	228	0	0	0	0	0	0	0	0	0	0
	point229	229	0	0	0	0	0	0	0	0	0	0
	point230	230	0	0	0	0	0	0	0	0	0	0
	point231	231	0	0	0	0	0	0	0	0	0	0
	point232	232	0	0	0	0	0	0	0	0	0	0
	point233	233	0	0	0	0	0	0	0	0	0	0
	point234	234	0	0	0	0	0	0	0	0	0	0
	point235	235	0	0	0	0	0	0	0	0	0	0
	point236	236	0	0	0	0	0	0	0	0	0	0
	point237	237	0	0	0	0	0	0	0	0	0	0
	point238	238	0	0	0	0	0	0	0	0	0	0
	point239	239	0	0	0	0	0	0	0	0	0	0
	point240	240	0	0	0	0	0	0	0	0	0	0
	point241	241	0	0	0	0	0	0	0	0	0	0
	point242	242	0	0	0	0	0	0	0	0	0	0
	point243	243	0	0	0	0	0	0	0	0	0	0
	point244	244	0	0	0	0	0	0	0	0	0	0
	point245	245	0	0	0	0	0	0	0	0	0	0
	point246	246	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point247	247	0	0	0	0	0	0	0	0	0	0
	point248	248	0	0	0	0	0	0	0	0	0	0
	point249	249	0	0	0	0	0	0	0	0	0	0
	point250	250	0	0	0	0	0	0	0	0	0	0
	point251	251	0	0	0	0	0	0	0	0	0	0
	point252	252	0	0	0	0	0	0	0	0	0	0
	point253	253	0	0	0	0	0	0	0	0	0	0
	point254	254	0	0	0	0	0	0	0	0	0	0
	point255	255	0	0	0	0	0	0	0	0	0	0
	point256	256	0	0	0	0	0	0	0	0	0	0
	point257	257	0	0	0	0	0	0	0	0	0	0
	point258	258	0	0	0	0	0	0	0	0	0	0
	point259	259	0	0	0	0	0	0	0	0	0	0
	point260	260	0	0	0	0	0	0	0	0	0	0
	point261	261	0	0	0	0	0	0	0	0	0	0
	point262	262	0	0	0	0	0	0	0	0	0	0
	point263	263	0	0	0	0	0	0	0	0	0	0
	point264	264	0	0	0	0	0	0	0	0	0	0
	point265	265	0	0	0	0	0	0	0	0	0	0
	point266	266	0	0	0	0	0	0	0	0	0	0
	point267	267										
Detour-2	point188	188	0	0	0	0	0	0	0	0	0	0
	point187	187	0	0	0	0	0	0	0	0	0	0
	point186	186	0	0	0	0	0	0	0	0	0	0
	point185	185	0	0	0	0	0	0	0	0	0	0
	point184	184	0	0	0	0	0	0	0	0	0	0
	point183	183	0	0	0	0	0	0	0	0	0	0
	point182	182	0	0	0	0	0	0	0	0	0	0
	point181	181	0	0	0	0	0	0	0	0	0	0
	point180	180	0	0	0	0	0	0	0	0	0	0
	point179	179	0	0	0	0	0	0	0	0	0	0
	point178	178	0	0	0	0	0	0	0	0	0	0
	point177	177	0	0	0	0	0	0	0	0	0	0
	point176	176	0	0	0	0	0	0	0	0	0	0
	point175	175	0	0	0	0	0	0	0	0	0	0
	point174	174	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point173	173	0	0	0	0	0	0	0	0	0	0
	point172	172	0	0	0	0	0	0	0	0	0	0
	point171	171	0	0	0	0	0	0	0	0	0	0
	point170	170	0	0	0	0	0	0	0	0	0	0
	point169	169	0	0	0	0	0	0	0	0	0	0
	point168	168	0	0	0	0	0	0	0	0	0	0
	point167	167	0	0	0	0	0	0	0	0	0	0
	point166	166	0	0	0	0	0	0	0	0	0	0
	point165	165	0	0	0	0	0	0	0	0	0	0
	point164	164										
Detour-2	point378	378	2586	35	57	35	242	35	7	35	18	35
	point116	116	2586	35	57	35	242	35	7	35	18	35
	point117	117	2586	35	57	35	242	35	7	35	18	35
	point118	118	2586	35	57	35	242	35	7	35	18	35
	point119	119	2586	35	57	35	242	35	7	35	18	35
	point120	120	2586	35	57	35	242	35	7	35	18	35
	point121	121	2586	35	57	35	242	35	7	35	18	35
	point122	122	2586	35	57	35	242	35	7	35	18	35
	point123	123	2586	35	57	35	242	35	7	35	18	35
	point124	124	2586	35	57	35	242	35	7	35	18	35
	point125	125	2586	35	57	35	242	35	7	35	18	35
	point126	126	2586	35	57	35	242	35	7	35	18	35
	point127	127	2586	35	57	35	242	35	7	35	18	35
	point128	128										
Detour	point268	268	2586	35	57	35	242	35	7	35	18	35
	point86	86	2586	35	57	35	242	35	7	35	18	35
	point87	87	2586	35	57	35	242	35	7	35	18	35
	point88	88	2586	35	57	35	242	35	7	35	18	35
	point284	284	2586	35	57	35	242	35	7	35	18	35
	point285	285	2586	35	57	35	242	35	7	35	18	35
	point286	286	2586	35	57	35	242	35	7	35	18	35
	point287	287	2586	35	57	35	242	35	7	35	18	35
	point310	310	2586	35	57	35	242	35	7	35	18	35
	point311	311	2586	35	57	35	242	35	7	35	18	35
	point312	312	2586	35	57	35	242	35	7	35	18	35
	point313	313	2586	35	57	35	242	35	7	35	18	35

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point314	314	2586	35	57	35	242	35	7	35	18	35
	point315	315	2586	35	57	35	242	35	7	35	18	35
	point316	316	2586	35	57	35	242	35	7	35	18	35
	point317	317	2586	35	57	35	242	35	7	35	18	35
	point318	318	2586	35	57	35	242	35	7	35	18	35
	point319	319	2586	35	57	35	242	35	7	35	18	35
	point320	320	2586	35	57	35	242	35	7	35	18	35
	point321	321	2586	35	57	35	242	35	7	35	18	35
	point322	322	2586	35	57	35	242	35	7	35	18	35
	point323	323	2586	35	57	35	242	35	7	35	18	35
	point324	324	2586	35	57	35	242	35	7	35	18	35
	point325	325	2586	35	57	35	242	35	7	35	18	35
	point326	326	2586	35	57	35	242	35	7	35	18	35
	point327	327	2586	35	57	35	242	35	7	35	18	35
	point328	328	2586	35	57	35	242	35	7	35	18	35
	point329	329	2586	35	57	35	242	35	7	35	18	35
	point219	219	2586	35	57	35	242	35	7	35	18	35
	point218	218	2586	35	57	35	242	35	7	35	18	35
	point217	217	2586	35	57	35	242	35	7	35	18	35
	point216	216	2586	35	57	35	242	35	7	35	18	35
	point215	215	2586	35	57	35	242	35	7	35	18	35
	point214	214	2586	35	57	35	242	35	7	35	18	35
	point213	213	2586	35	57	35	242	35	7	35	18	35
	point212	212	2586	35	57	35	242	35	7	35	18	35
	point211	211	2586	35	57	35	242	35	7	35	18	35
	point210	210	2586	35	57	35	242	35	7	35	18	35
	point209	209	2586	35	57	35	242	35	7	35	18	35
	point208	208	2586	35	57	35	242	35	7	35	18	35
	point207	207	2586	35	57	35	242	35	7	35	18	35
	point206	206	2586	35	57	35	242	35	7	35	18	35
	point205	205	2586	35	57	35	242	35	7	35	18	35
	point204	204	2586	35	57	35	242	35	7	35	18	35
	point203	203	2586	35	57	35	242	35	7	35	18	35
	point202	202	2586	35	57	35	242	35	7	35	18	35
	point201	201	2586	35	57	35	242	35	7	35	18	35
	point200	200	2586	35	57	35	242	35	7	35	18	35

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**<Project Name?>**

	point199	199	2586	35	57	35	242	35	7	35	18	35
	point198	198	2586	35	57	35	242	35	7	35	18	35
	point197	197	2586	35	57	35	242	35	7	35	18	35
	point196	196	2586	35	57	35	242	35	7	35	18	35
	point195	195	2586	35	57	35	242	35	7	35	18	35
	point194	194	2586	35	57	35	242	35	7	35	18	35
	point193	193	2586	35	57	35	242	35	7	35	18	35
	point192	192	2586	35	57	35	242	35	7	35	18	35
	point191	191	2586	35	57	35	242	35	7	35	18	35
	point190	190	2586	35	57	35	242	35	7	35	18	35
	point189	189	2586	35	57	35	242	35	7	35	18	35
	point374	374	2586	35	57	35	242	35	7	35	18	35
	point365	365	2586	35	57	35	242	35	7	35	18	35
	point366	366	2586	35	57	35	242	35	7	35	18	35
	point367	367	2586	35	57	35	242	35	7	35	18	35
	point368	368	2586	35	57	35	242	35	7	35	18	35
	point369	369	2586	35	57	35	242	35	7	35	18	35
	point108	108	2586	35	57	35	242	35	7	35	18	35
	point109	109	2586	35	57	35	242	35	7	35	18	35
	point110	110	2586	35	57	35	242	35	7	35	18	35
	point111	111	2586	35	57	35	242	35	7	35	18	35
	point112	112	2586	35	57	35	242	35	7	35	18	35
	point113	113	2586	35	57	35	242	35	7	35	18	35
	point114	114	2586	35	57	35	242	35	7	35	18	35
	point115	115										
WB I-70-central-2-2-WB I-70-central	point280	280	2690	45	55	45	227	45	7	45	11	45
	point45	45	2690	45	55	45	227	45	7	45	11	45
	point44	44	2690	45	55	45	227	45	7	45	11	45
	point43	43	2690	45	55	45	227	45	7	45	11	45
	point42	42	2690	45	55	45	227	45	7	45	11	45
	point41	41	2690	45	55	45	227	45	7	45	11	45
	point40	40	2690	45	55	45	227	45	7	45	11	45
	point39	39	2690	45	55	45	227	45	7	45	11	45
	point38	38	2690	45	55	45	227	45	7	45	11	45
	point37	37	2690	45	55	45	227	45	7	45	11	45
	point36	36	2690	45	55	45	227	45	7	45	11	45



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**<Project Name?>**

	point35	35	2690	45	55	45	227	45	7	45	11	45
	point34	34	2690	45	55	45	227	45	7	45	11	45
	point33	33	2690	45	55	45	227	45	7	45	11	45
	point32	32	2690	45	55	45	227	45	7	45	11	45
	point31	31	2690	45	55	45	227	45	7	45	11	45
	point30	30	2690	45	55	45	227	45	7	45	11	45
	point29	29	2690	45	55	45	227	45	7	45	11	45
	point28	28	2690	45	55	45	227	45	7	45	11	45
	point27	27	2690	45	55	45	227	45	7	45	11	45
	point26	26	2690	45	55	45	227	45	7	45	11	45
	point270	270	2690	45	55	45	227	45	7	45	11	45
	point271	271	2690	45	55	45	227	45	7	45	11	45
	point283	283	2690	45	55	45	227	45	7	45	11	45
	point274	274	2690	45	55	45	227	45	7	45	11	45
	point275	275	2690	45	55	45	227	45	7	45	11	45
	point276	276										

**INPUT: RECEIVERS**

<Project Name?>

<Organization?>						2 May 2012					
<Analysis By?>						TNM 2.5					
<b>INPUT: RECEIVERS</b>											
<b>PROJECT/CONTRACT:</b>						<Project Name?>					
<b>RUN:</b>						<Run Title?>					

Receiver Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	L <sub>Aeq1h</sub>	L <sub>Aeq1h</sub>	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
R1 - East Idaho	8	1	1,003,650.2	695,781.8	7,522.00	4.92	53.50	66	10.0	7.0	Y
R2 -W Portal 1st on hill	10	1	1,006,089.5	695,466.6	7,438.00	4.92	66.40	66	10.0	7.0	Y
R3 -W Portal 2nd on hill	12	1	1,006,282.3	695,463.5	7,454.00	4.92	66.70	66	10.0	7.0	Y
R4 -W Portal 3rd hill	13	1	1,006,420.8	695,258.0	7,520.00	4.92	64.30	66	10.0	7.0	Y
R5 - HV1	14	1	1,010,477.0	696,657.0	7,360.00	4.92	70.70	66	10.0	7.0	Y
R6 - HV2	15	1	1,010,823.6	696,521.8	7,338.70	4.92	66.50	66	10.0	7.0	Y
R7 - HV3	18	1	1,011,167.8	696,384.7	7,350.00	4.92	70.10	66	10.0	7.0	Y
R8 -HV4	19	1	1,012,139.3	695,909.8	7,302.80	4.92	72.20	66	10.0	7.0	Y
T1 - Trail at Bridge	23	1	1,006,598.7	696,998.9	7,389.00	4.92	76.40	66	10.0	7.0	Y

**INPUT: TERRAIN LINES**

<Project Name?>

<Organization?>			<b>2 May 2012</b>	
<Analysis By?>			<b>TNM 2.5</b>	
<b>INPUT: TERRAIN LINES</b>				
<b>PROJECT/CONTRACT:</b>	<b>&lt;Project Name?&gt;</b>			
<b>RUN:</b>	<b>&lt;Run Title?&gt;</b>			
<b>Terrain Line</b>	<b>Points</b>			
<b>Name</b>	<b>No.</b>	<b>Coordinates (ground)</b>		
		<b>X</b>	<b>Y</b>	<b>Z</b>
		ft	ft	ft
Terrain Line1	1	1,013,240.5	695,651.3	7,280.00
	2	1,013,491.3	697,572.6	8,050.00
Terrain Line2	3	1,009,838.7	696,665.7	7,340.00
	4	1,009,997.6	696,211.5	7,620.00
Terrain Line3	5	1,011,452.2	696,510.5	7,288.00
	6	1,012,190.2	696,036.7	7,280.00
	7	1,013,069.2	695,500.7	7,272.00
Bottom of Wall	8	1,010,258.1	696,824.2	7,334.00
	9	1,010,352.6	696,801.6	7,332.00
	10	1,010,460.3	696,775.2	7,330.00
	11	1,010,509.5	696,762.7	7,330.00
	12	1,010,537.9	696,755.9	7,330.00
	13	1,010,559.3	696,750.8	7,330.00
	14	1,010,610.1	696,738.4	7,330.00
	15	1,010,652.2	696,726.4	7,330.00
	16	1,010,696.2	696,715.7	7,328.00
	17	1,010,730.6	696,707.6	7,328.00
	18	1,010,780.0	696,695.3	7,324.00
	19	1,010,825.7	696,686.2	7,320.00
	20	1,010,896.6	696,666.7	7,312.00
Top of Wall	21	1,010,262.2	696,821.0	7,346.00
	22	1,010,300.4	696,812.1	7,348.00
	23	1,010,352.6	696,799.6	7,350.00
	24	1,010,376.9	696,793.8	7,351.90

**INPUT: TERRAIN LINES**

&lt;Project Name?&gt;

	25	1,010,402.3	696,787.8	7,352.00
	26	1,010,460.3	696,773.2	7,350.00
	27	1,010,509.5	696,760.8	7,348.00
	28	1,010,559.0	696,748.8	7,344.00
	29	1,010,583.5	696,742.9	7,342.00
	30	1,010,629.9	696,731.7	7,338.00
	31	1,010,675.5	696,720.7	7,334.00
	32	1,010,709.9	696,712.4	7,330.00
	33	1,010,862.5	696,675.1	7,316.00
	34	1,010,896.6	696,666.7	7,312.00
Terrain Line9	35	1,006,740.0	696,052.0	7,390.00
	36	1,007,316.0	695,513.0	7,370.00
Terrain Line10	37	1,007,091.3	696,134.7	7,680.00
	38	1,007,197.3	695,799.3	7,560.00
	39	1,007,316.0	695,513.0	7,370.00
e portal	40	1,007,450.6	696,185.0	7,380.00
	41	1,007,316.0	695,513.0	7,370.00
Terrain Line12	42	1,006,650.0	695,939.7	7,370.00
	43	1,006,473.0	695,970.0	7,374.00
	44	1,005,563.0	695,749.0	7,385.00
	45	1,005,188.0	695,477.0	7,390.00
Terrain Line13	46	1,006,457.8	695,875.7	7,404.00
	47	1,006,599.0	695,891.0	7,404.00
Terrain Line14	48	1,006,040.0	695,563.9	7,420.00
	49	1,006,585.0	695,734.0	7,391.00
Terrain Line15	50	1,006,457.8	695,876.7	7,390.00
	51	1,006,599.0	695,892.0	7,390.00
Terrain Line16	52	1,010,643.3	696,680.0	7,338.00
	53	1,011,001.0	696,580.8	7,305.40
	54	1,011,263.5	696,502.7	7,320.80
	55	1,011,629.9	696,244.2	7,295.00
Terrain Line17	56	1,010,807.0	696,613.0	7,340.00
	57	1,010,981.0	696,548.8	7,340.00
	58	1,011,162.7	696,507.5	7,336.00
Terrain Line18	59	1,011,252.7	696,397.5	7,335.00
	60	1,011,129.0	696,202.5	7,371.00

**INPUT: TERRAIN LINES**

Terrain Line19	61	1,003,403.9	695,912.3	7,490.00
	62	1,003,438.9	695,522.6	7,656.00
Terrain Line20	63	1,003,463.1	695,957.5	7,490.00
	64	1,003,666.4	695,901.1	7,530.00
	65	1,003,758.1	695,961.8	7,572.00
	66	1,003,830.4	695,727.8	7,545.00
	67	1,003,856.1	695,588.7	7,578.00
Terrain Line21	68	1,010,606.1	696,661.0	7,340.00
	69	1,010,535.0	696,469.0	7,430.00
Terrain Line22	70	1,011,079.6	696,436.9	7,340.00
	71	1,011,020.3	696,322.0	7,420.00

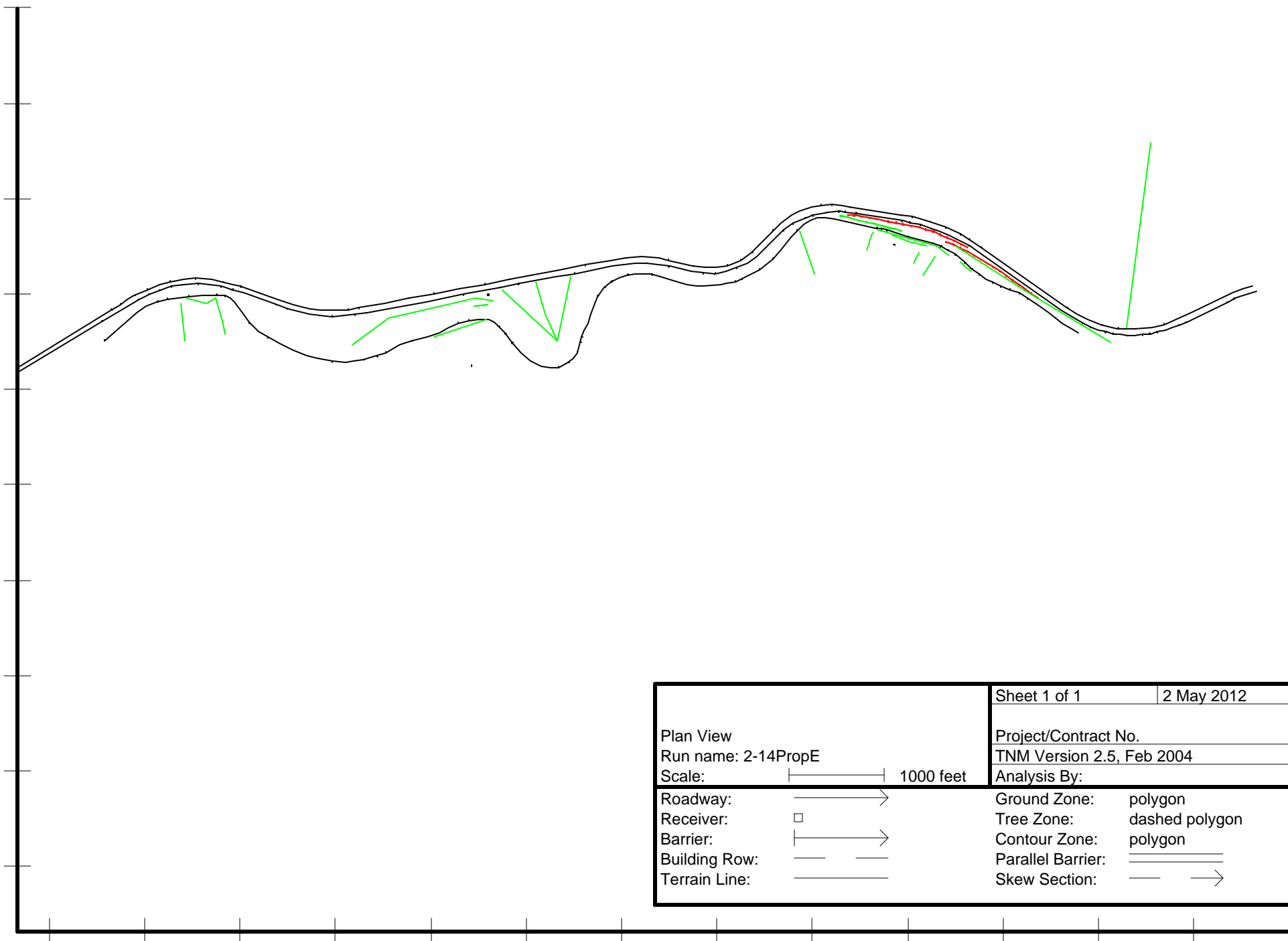
&lt;Project Name?&gt;

**RESULTS: SOUND LEVELS**

<Project Name?>

<Organization?>													2 May 2012	
<Analysis By?>													TNM 2.5	
													Calculated with TNM 2.5	
<b>RESULTS: SOUND LEVELS</b>														
<b>PROJECT/CONTRACT:</b>			<Project Name?>											
<b>RUN:</b>			<Run Title?>											
<b>BARRIER DESIGN:</b>			INPUT HEIGHTS							Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
<b>ATMOSPHERICS:</b>			68 deg F, 50% RH											
<b>Receiver</b>														
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing</b>		<b>With Barrier</b>					
							<b>Calculated</b>	<b>Crit'n</b>	<b>Type Impact</b>	<b>Calculated LAeq1h</b>	<b>Noise Reduction</b>		<b>Calculated minus Goal</b>	
								<b>Sub'l Inc</b>			<b>Calculated</b>	<b>Goal</b>	<b>Goal</b>	
				dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
R1 - East Idaho		8	1	53.5	53.3	66	-0.2	10	----	53.3	0.0	7	-7.0	
R2 -W Portal 1st on hill		10	1	66.4	64.5	66	-1.9	10	----	64.5	0.0	7	-7.0	
R3 -W Portal 2nd on hill		12	1	66.7	65.0	66	-1.7	10	----	65.0	0.0	7	-7.0	
R4 -W Portal 3rd hill		13	1	64.3	63.1	66	-1.2	10	----	63.1	0.0	7	-7.0	
R5 - HV1		14	1	70.7	69.0	66	-1.7	10	Snd Lvl	69.0	0.0	7	-7.0	
R6 - HV2		15	1	66.5	64.7	66	-1.8	10	----	64.7	0.0	7	-7.0	
R7 - HV3		18	1	70.1	68.3	66	-1.8	10	Snd Lvl	68.3	0.0	7	-7.0	
R8 -HV4		19	1	72.2	70.3	66	-1.9	10	Snd Lvl	70.3	0.0	7	-7.0	
T1 - Trail at Bridge		23	1	76.4	53.9	66	-22.5	10	----	53.9	0.0	7	-7.0	
<b>Dwelling Units</b>			<b># DUs</b>	<b>Noise Reduction</b>										
				<b>Min</b>	<b>Avg</b>	<b>Max</b>								
				<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected			9	0.0	0.0	0.0								
All Impacted			3	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								

## Proposed Model Data



		Sheet 1 of 1	2 May 2012
Plan View		Project/Contract No.	
Run name: 2-14PropE		TNM Version 2.5, Feb 2004	
Scale:		Analysis By:	
Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	



**INPUT: ROADWAYS**

<Project Name?>

<Organization?>														
<Analysis By?>														

2 May 2012  
TNM 2.5

**INPUT: ROADWAYS**

**PROJECT/CONTRACT:** <Project Name?>  
**RUN:** <Run Title?>

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway	Width	Points		Coordinates (pavement)			Flow Control			Segment	
Name		Name	No.	X	Y	Z	Control Device	Speed Constraint	Percent Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
WB I-70 eastern	30.0	point66	66	1,014,554.8	696,095.9	7,270.60				Average	
		point65	65	1,014,451.5	696,063.3	7,271.00				Average	
		point64	64	1,014,338.0	696,015.2	7,270.80				Average	
		point63	63	1,013,906.8	695,804.2	7,275.80				Average	
		point62	62	1,013,786.6	695,749.5	7,276.90				Average	
		point61	61	1,013,625.9	695,688.4	7,278.30				Average	
		point60	60	1,013,508.3	695,659.4	7,279.20				Average	
		point59	59	1,013,328.8	695,639.1	7,280.90				Average	
		point58	58	1,013,149.8	695,649.4	7,282.30				Average	
		point57	57	1,012,982.2	695,685.7	7,283.90				Average	
		point56	56	1,012,831.0	695,743.8	7,285.20				Average	
		point55	55	1,012,721.4	695,801.5	7,287.10				Average	
		point54	54	1,012,619.6	695,866.3	7,287.90				Average	
		point53	53	1,011,725.8	696,494.3	7,310.90				Average	
		point52	52	1,011,601.8	696,576.6	7,313.60				Average	
		point51	51	1,011,510.7	696,627.2	7,315.40				Average	
point50	50	1,011,357.8	696,696.5	7,316.40				Average			
point49	49	1,011,191.3	696,758.7	7,321.40				Average			
point48	48	1,011,009.5	696,807.2	7,323.10				Average			
point47	47	1,010,889.9	696,830.6	7,324.60				Average			
point46	46	1,010,361.6	696,914.6	7,334.20							
Frontage	24.0	point164	164	1,012,735.0	695,604.9	7,280.80				Average	
		point165	165	1,012,667.0	695,645.7	7,280.80				Average	
		point166	166	1,012,574.6	695,701.7	7,281.00				Average	
		point167	167	1,012,502.6	695,754.8	7,281.90				Average	

INPUT: ROADWAYS

<Project Name?>

		point168	168	1,012,430.3	695,813.9	7,282.10				Average
		point169	169	1,012,331.1	695,879.9	7,283.90				Average
		point170	170	1,012,212.0	695,960.3	7,286.90				Average
		point171	171	1,012,125.7	696,014.4	7,287.70				Average
		point172	172	1,012,023.4	696,054.1	7,286.10				Average
		point173	173	1,011,928.5	696,085.7	7,285.40				Average
		point174	174	1,011,847.4	696,127.0	7,286.50				Average
		point175	175	1,011,777.8	696,162.4	7,287.10				Average
		point176	176	1,011,707.8	696,208.5	7,289.90				Average
		point177	177	1,011,628.2	696,269.8	7,297.90				
WB I-70-Western	30.0	point279	279	1,006,036.4	696,009.3	7,402.52				Average
		point277	277	1,005,774.8	695,959.8	7,406.58				Average
		point278	278	1,005,513.1	695,910.2	7,410.64				Average
		point25	25	1,005,251.4	695,860.6	7,414.70				Average
		point24	24	1,005,142.8	695,843.8	7,416.80				Average
		point23	23	1,004,997.2	695,835.0	7,419.40				Average
		point22	22	1,004,855.0	695,837.2	7,422.40				Average
		point21	21	1,004,732.2	695,853.2	7,424.80				Average
		point20	20	1,004,569.3	695,892.1	7,428.70				Average
		point19	19	1,004,403.4	695,946.5	7,433.60				Average
		point18	18	1,004,020.3	696,083.6	7,444.40				Average
		point17	17	1,003,945.6	696,107.9	7,446.30				Average
		point16	16	1,003,839.5	696,135.4	7,446.50				Average
		point15	15	1,003,715.9	696,156.6	7,448.80				Average
		point14	14	1,003,553.9	696,166.3	7,451.10				Average
		point13	13	1,003,426.7	696,159.1	7,451.90				Average
		point12	12	1,003,289.1	696,135.9	7,452.70				Average
		point11	11	1,003,171.8	696,103.1	7,453.70				Average
		point10	10	1,003,045.9	696,053.5	7,454.90				Average
		point9	9	1,002,917.8	695,988.5	7,455.60				Average
		point8	8	1,002,838.7	695,942.7	7,455.70				Average
		point7	7	1,002,770.7	695,900.4	7,456.00				Average
		point6	6	1,002,680.4	695,842.1	7,456.40				Average
		point5	5	1,001,405.5	695,053.3	7,468.40				Average
		point4	4	1,001,279.4	694,975.9	7,472.50				Average
		point3	3	1,001,171.6	694,911.1	7,476.60				Average
		point2	2	1,001,042.0	694,840.3	7,483.00				Average
		point1	1	1,000,939.5	694,790.0	7,487.80				
Frontage-2	24.0	point426	426	1,011,628.2	696,269.8	7,297.90				Average

INPUT: ROADWAYS

<Project Name?>

		point178	178	1,011,550.2	696,337.0	7,302.50				Average	
		point179	179	1,011,456.3	696,417.7	7,311.80				Average	
		point180	180	1,011,380.1	696,469.0	7,318.70				Average	
		point181	181	1,011,307.4	696,504.1	7,323.20				Average	
		point182	182	1,011,223.2	696,533.9	7,322.60				Average	
		point183	183	1,010,961.4	696,606.4	7,306.00				Average	
		point184	184	1,010,747.2	696,668.6	7,327.90				Average	
		point185	185	1,010,686.5	696,684.4	7,334.10				Average	
		point186	186	1,010,641.7	696,694.9	7,338.40				Average	
		point187	187	1,010,202.5	696,787.6	7,346.40				Average	
		point188	188	1,010,104.3	696,801.8	7,342.00				Average	
		point189	189	1,010,023.6	696,796.9	7,339.60				Average	
		point190	190	1,009,953.3	696,774.6	7,338.20				Average	
		point191	191	1,009,883.6	696,731.8	7,337.10				Average	
		point192	192	1,009,811.7	696,667.3	7,336.30				Average	
		point193	193	1,009,754.6	696,601.9	7,334.80				Average	
		point194	194	1,009,701.9	696,535.0	7,333.60				Average	
		point195	195	1,009,645.4	696,467.4	7,333.10				Average	
		point196	196	1,009,556.7	696,371.8	7,332.60				Average	
		point197	197	1,009,422.0	696,261.6	7,333.20				Average	
		point198	198	1,009,305.8	696,195.5	7,334.00				Average	
		point199	199	1,009,233.5	696,161.5	7,334.40				Average	
		point200	200	1,009,168.0	696,136.5	7,334.50				Average	
		point201	201	1,009,070.3	696,112.5	7,334.40				Average	
		point202	202	1,009,014.6	696,104.6	7,334.90				Average	
		point203	203	1,008,835.7	696,086.5	7,335.10				Average	
		point204	204	1,008,767.1	696,086.6	7,335.20				Average	
		point205	205	1,008,667.5	696,100.6	7,335.80				Average	
		point206	206	1,008,566.7	696,127.7	7,336.90				Average	
		point207	207	1,008,386.3	696,186.1	7,342.40				Average	
		point208	208	1,008,298.5	696,208.7	7,346.40				Average	
		point209	209	1,008,215.3	696,218.0	7,349.60				Average	
		point210	210	1,008,124.9	696,216.6	7,352.60				Average	
		point211	211	1,008,045.5	696,204.9	7,355.50				Average	
		point212	212	1,007,952.0	696,175.9	7,359.40				Average	
		point213	213	1,007,881.3	696,137.4	7,362.60				Average	
		point214	214	1,007,808.4	696,073.4	7,365.20				Average	
		point215	215	1,007,740.3	695,983.3	7,367.30				Average	
		point216	216	1,007,701.2	695,903.9	7,367.60				Average	

INPUT: ROADWAYS

<Project Name?>

		point217	217	1,007,665.2	695,791.1	7,366.90				Average	
		point218	218	1,007,633.1	695,696.7	7,366.80				Average	
		point219	219	1,007,596.4	695,627.3	7,366.70				Average	
		point220	220	1,007,572.2	695,559.3	7,368.70				Average	
		point221	221	1,007,560.6	695,500.7	7,369.50				Average	
		point222	222	1,007,524.4	695,396.9	7,377.70				Average	
		point223	223	1,007,480.0	695,332.8	7,382.20				Average	
		point224	224	1,007,435.0	695,293.6	7,382.30				Average	
		point225	225	1,007,327.4	695,245.5	7,378.60				Average	
		point226	226	1,007,249.9	695,239.6	7,378.40				Average	
		point227	227	1,007,152.0	695,256.4	7,379.40				Average	
		point228	228	1,007,037.9	695,313.7	7,382.80				Average	
		point229	229	1,006,941.1	695,397.2	7,384.10				Average	
		point230	230	1,006,846.4	695,498.3	7,389.70				Average	
		point231	231	1,006,777.4	695,594.5	7,391.70				Average	
		point232	232	1,006,708.6	695,670.2	7,391.30				Average	
		point233	233	1,006,660.3	695,719.1	7,391.30				Average	
		point234	234	1,006,603.4	695,743.7	7,391.50				Average	
		point235	235	1,006,501.3	695,740.0	7,392.50				Average	
		point236	236	1,006,394.8	695,731.0	7,395.00				Average	
		point237	237	1,006,284.5	695,702.4	7,403.20				Average	
		point238	238	1,006,185.5	695,656.1	7,410.30				Average	
		point239	239	1,006,086.5	695,602.6	7,418.00				Average	
		point240	240	1,005,966.5	695,560.4	7,420.10				Average	
		point241	241	1,005,803.9	695,515.3	7,414.40				Average	
		point242	242	1,005,672.1	695,471.2	7,411.50				Average	
		point243	243	1,005,531.7	695,396.6	7,405.00				Average	
		point244	244	1,005,438.1	695,357.5	7,399.80				Average	
		point245	245	1,005,302.7	695,321.7	7,398.40				Average	
		point246	246	1,005,199.6	695,304.3	7,398.50				Average	
		point247	247	1,005,109.6	695,294.8	7,400.10				Average	
		point248	248	1,004,971.6	695,301.8	7,402.80				Average	
		point249	249	1,004,825.8	695,334.1	7,405.90				Average	
		point250	250	1,004,711.3	695,367.2	7,408.30				Average	
		point251	251	1,004,565.1	695,421.8	7,412.40				Average	
		point252	252	1,004,433.2	695,490.1	7,413.90				Average	
		point253	253	1,004,301.9	695,552.9	7,415.10				Average	
		point254	254	1,004,207.8	695,617.5	7,419.10				Average	
		point255	255	1,004,111.1	695,708.5	7,428.50				Average	

**INPUT: ROADWAYS**

<Project Name?>

		point256	256	1,004,035.6	695,816.7	7,440.30				Average	
		point257	257	1,003,960.4	695,926.5	7,453.10				Average	
		point258	258	1,003,913.2	695,964.3	7,458.70				Average	
		point259	259	1,003,857.4	695,984.7	7,464.60				Average	
		point260	260	1,003,766.8	695,997.1	7,475.10				Average	
		point261	261	1,003,624.4	695,993.6	7,485.40				Average	
		point262	262	1,003,487.1	695,983.7	7,490.30				Average	
		point263	263	1,003,264.7	695,953.9	7,479.70				Average	
		point264	264	1,003,156.7	695,926.9	7,471.10				Average	
		point265	265	1,003,037.2	695,874.9	7,460.80				Average	
		point266	266	1,002,934.5	695,806.1	7,455.60				Average	
		point267	267	1,002,604.8	695,522.0	7,455.30					
EB 50 or 56-2-EB 50 or 56	50.0	point298	298	1,000,942.9	694,753.5	7,481.60				Average	
		point299	299	1,001,039.3	694,799.9	7,476.80				Average	
		point300	300	1,001,172.3	694,872.0	7,470.50				Average	
		point301	301	1,001,361.9	694,986.6	7,463.40				Average	
		point302	302	1,001,578.5	695,111.6	7,461.90				Average	
		point303	303	1,002,586.2	695,732.0	7,456.70				Average	
		point304	304	1,002,966.8	695,954.6	7,453.50				Average	
		point305	305	1,003,076.8	696,007.4	7,452.30				Average	
		point306	306	1,003,186.9	696,050.5	7,451.00				Average	
		point307	307	1,003,303.6	696,083.2	7,450.30				Average	
		point308	308	1,003,426.0	696,103.7	7,449.30				Average	
		point309	309	1,003,585.7	696,110.9	7,447.70				Average	
		point310	310	1,003,705.0	696,102.3	7,446.10				Average	
		point311	311	1,003,824.4	696,082.2	7,444.60				Average	
		point312	312	1,003,941.3	696,051.6	7,443.10				Average	
		point313	313	1,004,055.6	696,013.6	7,441.20				Average	
		point314	314	1,004,398.7	695,891.5	7,433.60				Average	
		point315	315	1,004,511.3	695,854.1	7,431.40				Average	
		point316	316	1,004,626.7	695,821.7	7,429.30				Average	
		point317	317	1,004,744.0	695,797.2	7,426.90				Average	
		point318	318	1,004,856.0	695,781.4	7,424.80				Average	
		point319	319	1,004,977.0	695,775.3	7,422.40				Average	
		point320	320	1,005,096.9	695,779.5	7,419.90				Average	
		point321	321	1,005,214.4	695,791.9	7,416.90				Average	
		point322	322	1,005,333.5	695,810.6	7,413.60				Average	
		point323	323	1,005,567.9	695,852.5	7,406.60				Average	
		point417	417	1,005,954.9	695,926.2	7,400.35				Average	

INPUT: ROADWAYS

<Project Name?>

		point418	418	1,006,341.9	696,000.1	7,394.10				Average	
		point419	419	1,006,728.9	696,073.9	7,387.85				Average	
		point423	423	1,006,922.4	696,110.8	7,384.73				Average	
		point424	424	1,007,309.4	696,184.5	7,378.48				Average	
		point421	421	1,007,502.9	696,221.4	7,375.35				Average	
		point324	324	1,007,889.9	696,295.2	7,369.10				Average	
		point325	325	1,008,009.4	696,314.3	7,364.80				Average	
		point326	326	1,008,130.4	696,325.7	7,360.30				Average	
		point327	327	1,008,247.7	696,326.1	7,356.70				Average	
		point328	328	1,008,362.0	696,314.5	7,353.90				Average	
		point329	329	1,008,484.1	696,292.9	7,352.50				Average	
		point330	330	1,008,718.1	696,239.0	7,351.70				Average	
		point331	331	1,008,839.8	696,222.3	7,351.70				Average	
		point332	332	1,008,959.6	696,221.6	7,351.30				Average	
		point333	333	1,009,078.0	696,239.6	7,350.80				Average	
		point415	415	1,009,191.5	696,278.2	7,350.20				Average	
		point416	416	1,009,294.9	696,330.2	7,349.50				Average	
		point334	334	1,009,396.1	696,401.5	7,348.50				Average	
		point335	335	1,009,451.5	696,453.0	7,347.80				Average	
		point336	336	1,009,561.2	696,569.0	7,345.80				Average	
		point337	337	1,009,676.7	696,671.8	7,344.30				Average	
		point338	338	1,009,776.1	696,737.8	7,343.50				Average	
		point339	339	1,009,843.2	696,772.9	7,342.80				Average	
		point340	340	1,009,905.6	696,799.8	7,341.70				Average	
		point341	341	1,009,976.3	696,824.0	7,340.30				Average	
		point342	342	1,010,061.4	696,845.2	7,338.70				Average	
		point343	343	1,010,127.1	696,856.0	7,337.80				Average	
		point344	344	1,010,252.5	696,863.6	7,336.20				Average	
		point345	345	1,010,313.6	696,861.1	7,335.00				Average	
		point346	346	1,010,434.5	696,847.2	7,331.70				Average	
		point347	347	1,010,909.2	696,765.8	7,327.40				Average	
		point348	348	1,010,991.4	696,749.1	7,326.00				Average	
		point349	349	1,011,093.6	696,724.9	7,324.70				Average	
		point350	350	1,011,210.4	696,690.2	7,322.30				Average	
		point351	351	1,011,293.9	696,660.2	7,320.90				Average	
		point352	352	1,011,393.5	696,618.2	7,318.50				Average	
		point353	353	1,011,502.0	696,564.6	7,315.70				Average	
		point354	354	1,011,606.2	696,504.7	7,312.40				Average	
		point355	355	1,011,707.8	696,438.7	7,310.30				Average	

INPUT: ROADWAYS

<Project Name?>

		point356	356	1,012,563.1	695,834.2	7,288.00				Average	
		point357	357	1,012,696.9	695,748.9	7,286.80				Average	
		point358	358	1,012,793.4	695,694.5	7,286.30				Average	
		point359	359	1,012,875.2	695,656.7	7,285.60				Average	
		point360	360	1,012,950.0	695,629.9	7,284.80				Average	
		point361	361	1,013,026.5	695,608.7	7,284.20				Average	
		point362	362	1,013,104.7	695,592.5	7,283.70				Average	
		point363	363	1,013,173.3	695,582.9	7,283.20				Average	
		point364	364	1,013,252.5	695,577.3	7,282.50				Average	
		point365	365	1,013,332.0	695,577.1	7,281.90				Average	
		point366	366	1,013,411.6	695,582.3	7,281.20				Average	
		point367	367	1,013,490.3	695,593.1	7,280.50				Average	
		point368	368	1,013,568.2	695,608.9	7,279.80				Average	
		point369	369	1,013,644.9	695,629.4	7,279.20				Average	
		point370	370	1,013,720.7	695,654.4	7,278.40				Average	
		point371	371	1,013,794.6	695,683.6	7,277.40				Average	
		point372	372	1,013,867.1	695,715.9	7,276.20				Average	
		point373	373	1,014,294.9	695,925.6	7,272.10				Average	
		point374	374	1,014,366.7	695,959.4	7,271.00				Average	
		point375	375	1,014,412.7	695,979.6	7,270.30				Average	
		point376	376	1,014,601.0	696,039.1	7,268.00					
WB I-70-central-WB I-70-central-2-2	30.0	point280	280	1,010,361.6	696,914.6	7,334.20				Average	
		point45	45	1,010,285.2	696,926.1	7,335.70				Average	
		point44	44	1,010,174.0	696,935.2	7,337.70				Average	
		point43	43	1,010,063.0	696,931.1	7,339.20				Average	
		point42	42	1,009,959.9	696,911.0	7,341.20				Average	
		point41	41	1,009,840.7	696,871.0	7,341.40				Average	
		point40	40	1,009,752.0	696,821.4	7,344.30				Average	
		point39	39	1,009,643.2	696,746.4	7,346.80				Average	
		point38	38	1,009,560.6	696,667.0	7,348.50				Average	
		point37	37	1,009,465.0	696,560.4	7,349.70				Average	
		point36	36	1,009,344.0	696,439.5	7,351.50				Average	
		point35	35	1,009,225.5	696,359.7	7,352.00				Average	
		point34	34	1,009,086.4	696,304.1	7,352.50				Average	
		point33	33	1,008,977.2	696,282.4	7,353.50				Average	
		point32	32	1,008,855.9	696,281.3	7,354.50				Average	
		point31	31	1,008,730.0	696,300.0	7,354.80				Average	
		point30	30	1,008,470.6	696,359.7	7,357.30				Average	
		point29	29	1,008,371.0	696,378.4	7,359.10				Average	

**INPUT: ROADWAYS**

&lt;Project Name?&gt;

		point28	28	1,008,195.0	696,393.5	7,363.80				Average	
		point27	27	1,008,032.3	696,383.9	7,369.20				Average	
		point26	26	1,007,868.1	696,356.3	7,374.10				Average	
		point270	270	1,007,606.4	696,306.8	7,378.16				Average	
		point271	271	1,007,344.8	696,257.2	7,382.22				Average	
		point283	283	1,006,821.4	696,158.1	7,390.34				Average	
		point274	274	1,006,559.8	696,108.5	7,394.40				Average	
		point275	275	1,006,298.1	696,058.9	7,398.46				Average	
		point276	276	1,006,036.4	696,009.3	7,402.52					



INPUT: TRAFFIC FOR LAeq1h Volumes

<Project Name?>

<Organization?>		2 May 2012											
<Analysis By?>		TNM 2.5											
INPUT: TRAFFIC FOR LAeq1h Volumes													
PROJECT/CONTRACT:		<Project Name?>											
RUN:		<Run Title?>											
<b>Roadway</b>	<b>Points</b>												
<b>Name</b>	<b>Name</b>	<b>No.</b>	<b>Segment</b>		<b>MTrucks</b>		<b>HTrucks</b>		<b>Buses</b>		<b>Motorcycles</b>		
			<b>Autos</b>		<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	
					veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
WB I-70 eastern	point66	66	2446	55	50	55	207	55	6	55	10	55	
	point65	65	2446	55	50	55	207	55	6	55	10	55	
	point64	64	2446	55	50	55	207	55	6	55	10	55	
	point63	63	2446	55	50	55	207	55	6	55	10	55	
	point62	62	2446	55	50	55	207	55	6	55	10	55	
	point61	61	2446	55	50	55	207	55	6	55	10	55	
	point60	60	2446	55	50	55	207	55	6	55	10	55	
	point59	59	2446	55	50	55	207	55	6	55	10	55	
	point58	58	2446	55	50	55	207	55	6	55	10	55	
	point57	57	2446	55	50	55	207	55	6	55	10	55	
	point56	56	2446	55	50	55	207	55	6	55	10	55	
	point55	55	2446	55	50	55	207	55	6	55	10	55	
	point54	54	2446	55	50	55	207	55	6	55	10	55	
	point53	53	2446	55	50	55	207	55	6	55	10	55	
	point52	52	2446	55	50	55	207	55	6	55	10	55	
	point51	51	2446	55	50	55	207	55	6	55	10	55	
	point50	50	2446	55	50	55	207	55	6	55	10	55	
	point49	49	2446	55	50	55	207	55	6	55	10	55	
	point48	48	2446	55	50	55	207	55	6	55	10	55	
	point47	47	2446	55	50	55	207	55	6	55	10	55	
	point46	46											
Frontage	point164	164	0	0	0	0	0	0	0	0	0	0	
	point165	165	292	35	0	0	0	0	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point166	166	292	35	0	0	0	0	0	0	0	0
	point167	167	292	35	0	0	0	0	0	0	0	0
	point168	168	292	35	0	0	0	0	0	0	0	0
	point169	169	292	35	0	0	0	0	0	0	0	0
	point170	170	292	35	0	0	0	0	0	0	0	0
	point171	171	292	35	0	0	0	0	0	0	0	0
	point172	172	292	35	0	0	0	0	0	0	0	0
	point173	173	292	35	0	0	0	0	0	0	0	0
	point174	174	292	35	0	0	0	0	0	0	0	0
	point175	175	292	35	0	0	0	0	0	0	0	0
	point176	176	292	35	0	0	0	0	0	0	0	0
	point177	177										
WB I-70-Western	point279	279	3800	60	0	0	0	0	0	0	0	0
	point277	277	3800	60	0	0	0	0	0	0	0	0
	point278	278	3800	60	0	0	0	0	0	0	0	0
	point25	25	3800	60	0	0	0	0	0	0	0	0
	point24	24	3800	60	0	0	0	0	0	0	0	0
	point23	23	3800	60	0	0	0	0	0	0	0	0
	point22	22	3800	60	0	0	0	0	0	0	0	0
	point21	21	3800	60	0	0	0	0	0	0	0	0
	point20	20	3800	60	0	0	0	0	0	0	0	0
	point19	19	3800	60	0	0	0	0	0	0	0	0
	point18	18	3800	60	0	0	0	0	0	0	0	0
	point17	17	3800	60	0	0	0	0	0	0	0	0
	point16	16	3800	60	0	0	0	0	0	0	0	0
	point15	15	3800	60	0	0	0	0	0	0	0	0
	point14	14	3800	60	0	0	0	0	0	0	0	0
	point13	13	3800	60	0	0	0	0	0	0	0	0
	point12	12	3800	60	0	0	0	0	0	0	0	0
	point11	11	3800	60	0	0	0	0	0	0	0	0
	point10	10	3800	60	0	0	0	0	0	0	0	0
	point9	9	3800	60	0	0	0	0	0	0	0	0
	point8	8	3800	60	0	0	0	0	0	0	0	0
	point7	7	3800	60	0	0	0	0	0	0	0	0
	point6	6	3800	60	0	0	0	0	0	0	0	0
	point5	5	3800	60	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point4	4	3800	60	0	0	0	0	0	0	0	0
	point3	3	3800	60	0	0	0	0	0	0	0	0
	point2	2	3800	60	0	0	0	0	0	0	0	0
	point1	1										
Frontage-2	point426	426	292	35	0	0	0	0	0	0	0	0
	point178	178	292	35	0	0	0	0	0	0	0	0
	point179	179	292	35	0	0	0	0	0	0	0	0
	point180	180	292	35	0	0	0	0	0	0	0	0
	point181	181	292	35	0	0	0	0	0	0	0	0
	point182	182	292	35	0	0	0	0	0	0	0	0
	point183	183	292	35	0	0	0	0	0	0	0	0
	point184	184	292	35	0	0	0	0	0	0	0	0
	point185	185	292	35	0	0	0	0	0	0	0	0
	point186	186	292	35	0	0	0	0	0	0	0	0
	point187	187	292	35	0	0	0	0	0	0	0	0
	point188	188	292	35	0	0	0	0	0	0	0	0
	point189	189	292	35	0	0	0	0	0	0	0	0
	point190	190	292	35	0	0	0	0	0	0	0	0
	point191	191	292	35	0	0	0	0	0	0	0	0
	point192	192	292	35	0	0	0	0	0	0	0	0
	point193	193	292	35	0	0	0	0	0	0	0	0
	point194	194	292	35	0	0	0	0	0	0	0	0
	point195	195	292	35	0	0	0	0	0	0	0	0
	point196	196	292	35	0	0	0	0	0	0	0	0
	point197	197	292	35	0	0	0	0	0	0	0	0
	point198	198	292	35	0	0	0	0	0	0	0	0
	point199	199	292	35	0	0	0	0	0	0	0	0
	point200	200	292	35	0	0	0	0	0	0	0	0
	point201	201	292	35	0	0	0	0	0	0	0	0
	point202	202	292	35	0	0	0	0	0	0	0	0
	point203	203	292	35	0	0	0	0	0	0	0	0
	point204	204	292	35	0	0	0	0	0	0	0	0
	point205	205	292	35	0	0	0	0	0	0	0	0
	point206	206	292	35	0	0	0	0	0	0	0	0
	point207	207	292	35	0	0	0	0	0	0	0	0
	point208	208	292	35	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point209	209	292	35	0	0	0	0	0	0	0	0
	point210	210	292	35	0	0	0	0	0	0	0	0
	point211	211	292	35	0	0	0	0	0	0	0	0
	point212	212	292	35	0	0	0	0	0	0	0	0
	point213	213	292	35	0	0	0	0	0	0	0	0
	point214	214	292	35	0	0	0	0	0	0	0	0
	point215	215	292	35	0	0	0	0	0	0	0	0
	point216	216	292	35	0	0	0	0	0	0	0	0
	point217	217	292	35	0	0	0	0	0	0	0	0
	point218	218	292	35	0	0	0	0	0	0	0	0
	point219	219	292	35	0	0	0	0	0	0	0	0
	point220	220	292	35	0	0	0	0	0	0	0	0
	point221	221	292	35	0	0	0	0	0	0	0	0
	point222	222	292	35	0	0	0	0	0	0	0	0
	point223	223	292	35	0	0	0	0	0	0	0	0
	point224	224	292	35	0	0	0	0	0	0	0	0
	point225	225	292	35	0	0	0	0	0	0	0	0
	point226	226	292	35	0	0	0	0	0	0	0	0
	point227	227	292	35	0	0	0	0	0	0	0	0
	point228	228	292	35	0	0	0	0	0	0	0	0
	point229	229	292	35	0	0	0	0	0	0	0	0
	point230	230	292	35	0	0	0	0	0	0	0	0
	point231	231	292	35	0	0	0	0	0	0	0	0
	point232	232	292	35	0	0	0	0	0	0	0	0
	point233	233	292	35	0	0	0	0	0	0	0	0
	point234	234	292	35	0	0	0	0	0	0	0	0
	point235	235	292	35	0	0	0	0	0	0	0	0
	point236	236	292	35	0	0	0	0	0	0	0	0
	point237	237	292	35	0	0	0	0	0	0	0	0
	point238	238	292	35	0	0	0	0	0	0	0	0
	point239	239	292	35	0	0	0	0	0	0	0	0
	point240	240	292	35	0	0	0	0	0	0	0	0
	point241	241	292	35	0	0	0	0	0	0	0	0
	point242	242	292	35	0	0	0	0	0	0	0	0
	point243	243	292	35	0	0	0	0	0	0	0	0
	point244	244	292	35	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point245	245	292	35	0	0	0	0	0	0	0	0
	point246	246	292	35	0	0	0	0	0	0	0	0
	point247	247	292	35	0	0	0	0	0	0	0	0
	point248	248	292	35	0	0	0	0	0	0	0	0
	point249	249	292	35	0	0	0	0	0	0	0	0
	point250	250	292	35	0	0	0	0	0	0	0	0
	point251	251	292	35	0	0	0	0	0	0	0	0
	point252	252	292	35	0	0	0	0	0	0	0	0
	point253	253	292	35	0	0	0	0	0	0	0	0
	point254	254	292	35	0	0	0	0	0	0	0	0
	point255	255	292	35	0	0	0	0	0	0	0	0
	point256	256	292	35	0	0	0	0	0	0	0	0
	point257	257	292	35	0	0	0	0	0	0	0	0
	point258	258	292	35	0	0	0	0	0	0	0	0
	point259	259	292	35	0	0	0	0	0	0	0	0
	point260	260	292	35	0	0	0	0	0	0	0	0
	point261	261	292	35	0	0	0	0	0	0	0	0
	point262	262	292	35	0	0	0	0	0	0	0	0
	point263	263	292	35	0	0	0	0	0	0	0	0
	point264	264	292	35	0	0	0	0	0	0	0	0
	point265	265	292	35	0	0	0	0	0	0	0	0
	point266	266	292	35	0	0	0	0	0	0	0	0
	point267	267										
EB 50 or 56-2-EB 50 or 56	point298	298	3526	55	77	55	329	55	9	55	25	55
	point299	299	3526	55	77	55	329	55	9	55	25	55
	point300	300	3526	55	77	55	329	55	9	55	25	55
	point301	301	3526	55	77	55	329	55	9	55	25	55
	point302	302	3526	55	77	55	329	55	9	55	25	55
	point303	303	3526	55	77	55	329	55	9	55	25	55
	point304	304	3526	55	77	55	329	55	9	55	25	55
	point305	305	3526	55	77	55	329	55	9	55	25	55
	point306	306	3526	55	77	55	329	55	9	55	25	55
	point307	307	3526	55	77	55	329	55	9	55	25	55
	point308	308	3526	55	77	55	329	55	9	55	25	55
	point309	309	3526	55	77	55	329	55	9	55	25	55
	point310	310	3526	55	77	55	329	55	9	55	25	55

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point311	311	3526	55	77	55	329	55	9	55	25	55
	point312	312	3526	55	77	55	329	55	9	55	25	55
	point313	313	3526	55	77	55	329	55	9	55	25	55
	point314	314	3526	55	77	55	329	55	9	55	25	55
	point315	315	3526	55	77	55	329	55	9	55	25	55
	point316	316	3526	55	77	55	329	55	9	55	25	55
	point317	317	3526	55	77	55	329	55	9	55	25	55
	point318	318	3526	55	77	55	329	55	9	55	25	55
	point319	319	3526	55	77	55	329	55	9	55	25	55
	point320	320	3526	55	77	55	329	55	9	55	25	55
	point321	321	3526	55	77	55	329	55	9	55	25	55
	point322	322	3526	55	77	55	329	55	9	55	25	55
	point323	323	3526	55	77	55	329	55	9	55	25	55
	point417	417	3526	55	77	55	329	55	9	55	25	55
	point418	418	3526	55	77	55	329	55	9	55	25	55
	point419	419	3526	55	77	55	329	55	9	55	25	55
	point423	423	3526	55	77	55	329	55	9	55	25	55
	point424	424	3526	55	77	55	329	55	9	55	25	55
	point421	421	3526	55	77	55	329	55	9	55	25	55
	point324	324	3526	55	77	55	329	55	9	55	25	55
	point325	325	3526	55	77	55	329	55	9	55	25	55
	point326	326	3526	55	77	55	329	55	9	55	25	55
	point327	327	3526	55	77	55	329	55	9	55	25	55
	point328	328	3526	55	77	55	329	55	9	55	25	55
	point329	329	3526	55	77	55	329	55	9	55	25	55
	point330	330	3526	55	77	55	329	55	9	55	25	55
	point331	331	3526	55	77	55	329	55	9	55	25	55
	point332	332	3526	55	77	55	329	55	9	55	25	55
	point333	333	3526	55	77	55	329	55	9	55	25	55
	point415	415	3526	55	77	55	329	55	9	55	25	55
	point416	416	3526	55	77	55	329	55	9	55	25	55
	point334	334	3526	55	77	55	329	55	9	55	25	55
	point335	335	3526	55	77	55	329	55	9	55	25	55
	point336	336	3526	55	77	55	329	55	9	55	25	55
	point337	337	3526	55	77	55	329	55	9	55	25	55
	point338	338	3526	55	77	55	329	55	9	55	25	55

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**<Project Name?>**

	point339	339	3526	55	77	55	329	55	9	55	25	55
	point340	340	3526	55	77	55	329	55	9	55	25	55
	point341	341	3526	55	77	55	329	55	9	55	25	55
	point342	342	3526	55	77	55	329	55	9	55	25	55
	point343	343	3526	55	77	55	329	55	9	55	25	55
	point344	344	3526	55	77	55	329	55	9	55	25	55
	point345	345	3526	55	77	55	329	55	9	55	25	55
	point346	346	3526	55	77	55	329	55	9	55	25	55
	point347	347	3526	55	77	55	329	55	9	55	25	55
	point348	348	3526	55	77	55	329	55	9	55	25	55
	point349	349	3526	55	77	55	329	55	9	55	25	55
	point350	350	3526	55	77	55	329	55	9	55	25	55
	point351	351	3526	55	77	55	329	55	9	55	25	55
	point352	352	3526	55	77	55	329	55	9	55	25	55
	point353	353	3526	55	77	55	329	55	9	55	25	55
	point354	354	3526	55	77	55	329	55	9	55	25	55
	point355	355	3526	55	77	55	329	55	9	55	25	55
	point356	356	3526	55	77	55	329	55	9	55	25	55
	point357	357	3526	55	77	55	329	55	9	55	25	55
	point358	358	3526	55	77	55	329	55	9	55	25	55
	point359	359	3526	55	77	55	329	55	9	55	25	55
	point360	360	3526	55	77	55	329	55	9	55	25	55
	point361	361	3526	55	77	55	329	55	9	55	25	55
	point362	362	3526	55	77	55	329	55	9	55	25	55
	point363	363	3526	55	77	55	329	55	9	55	25	55
	point364	364	3526	55	77	55	329	55	9	55	25	55
	point365	365	3526	55	77	55	329	55	9	55	25	55
	point366	366	3526	55	77	55	329	55	9	55	25	55
	point367	367	3526	55	77	55	329	55	9	55	25	55
	point368	368	3526	55	77	55	329	55	9	55	25	55
	point369	369	3526	55	77	55	329	55	9	55	25	55
	point370	370	3526	55	77	55	329	55	9	55	25	55
	point371	371	3526	55	77	55	329	55	9	55	25	55
	point372	372	3526	55	77	55	329	55	9	55	25	55
	point373	373	3526	55	77	55	329	55	9	55	25	55
	point374	374	3526	55	77	55	329	55	9	55	25	55

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point375	375	3526	55	77	55	329	55	9	55	25	55
	point376	376										
WB I-70-central-WB I-70-central-2-2	point280	280	2690	45	55	45	227	45	7	45	11	45
	point45	45	2690	45	55	45	227	45	7	45	11	45
	point44	44	2690	45	55	45	227	45	7	45	11	45
	point43	43	2690	45	55	45	227	45	7	45	11	45
	point42	42	2690	45	55	45	227	45	7	45	11	45
	point41	41	2690	45	55	45	227	45	7	45	11	45
	point40	40	2690	45	55	45	227	45	7	45	11	45
	point39	39	2690	45	55	45	227	45	7	45	11	45
	point38	38	2690	45	55	45	227	45	7	45	11	45
	point37	37	2690	45	55	45	227	45	7	45	11	45
	point36	36	2690	45	55	45	227	45	7	45	11	45
	point35	35	2690	45	55	45	227	45	7	45	11	45
	point34	34	2690	45	55	45	227	45	7	45	11	45
	point33	33	2690	45	55	45	227	45	7	45	11	45
	point32	32	2690	45	55	45	227	45	7	45	11	45
	point31	31	2690	45	55	45	227	45	7	45	11	45
	point30	30	2690	45	55	45	227	45	7	45	11	45
	point29	29	2690	45	55	45	227	45	7	45	11	45
	point28	28	2690	45	55	45	227	45	7	45	11	45
	point27	27	2690	45	55	45	227	45	7	45	11	45
	point26	26	2690	45	55	45	227	45	7	45	11	45
	point270	270	2690	45	55	45	227	45	7	45	11	45
	point271	271	2690	45	55	45	227	45	7	45	11	45
	point283	283	2690	45	55	45	227	45	7	45	11	45
	point274	274	2690	45	55	45	227	45	7	45	11	45
	point275	275	2690	45	55	45	227	45	7	45	11	45
	point276	276										



**INPUT: RECEIVERS**

<Project Name?>

<Organization?>						2 May 2012					
<Analysis By?>						TNM 2.5					
<b>INPUT: RECEIVERS</b>											
PROJECT/CONTRACT:	<Project Name?>										
RUN:	<Run Title?>										

Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	L <sub>Aeq1h</sub>	L <sub>Aeq1h</sub>	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
R1 - East Idaho	8	1	1,003,650.2	695,781.8	7,522.00	4.92	53.50	66	10.0	7.0	
R2 -W Portal 1st on hill	10	1	1,006,089.5	695,466.6	7,438.00	4.92	66.40	66	10.0	7.0	
R3 -W Portal 2nd on hill	12	1	1,006,282.3	695,463.5	7,454.00	4.92	66.70	66	10.0	7.0	
R4 -W Portal 3rd hill	13	1	1,006,420.8	695,258.0	7,520.00	4.92	64.30	66	10.0	7.0	
R5 - HV1	14	1	1,010,477.0	696,657.0	7,360.00	4.92	70.70	66	10.0	7.0	Y
R6 - HV2	15	1	1,010,823.6	696,521.8	7,338.70	4.92	66.50	66	10.0	7.0	Y
R7 - HV3	18	1	1,011,167.8	696,384.7	7,350.00	4.92	70.10	66	10.0	7.0	Y
R8 -HV4	19	1	1,012,139.3	695,909.8	7,302.80	4.92	72.20	66	10.0	7.0	Y
T1 - Trail west portal	23	1	1,006,598.7	695,998.9	7,389.00	4.92	76.40	66	10.0	7.0	

**INPUT: TERRAIN LINES**

<Project Name?>

<Organization?>			<b>2 May 2012</b>	
<Analysis By?>			<b>TNM 2.5</b>	
<b>INPUT: TERRAIN LINES</b>				
<b>PROJECT/CONTRACT:</b>	<b>&lt;Project Name?&gt;</b>			
<b>RUN:</b>	<b>&lt;Run Title?&gt;</b>			
<b>Terrain Line</b>	<b>Points</b>			
<b>Name</b>	<b>No.</b>	<b>Coordinates (ground)</b>		
		<b>X</b>	<b>Y</b>	<b>Z</b>
		ft	ft	ft
Terrain Line1	1	1,013,240.5	695,651.3	7,280.00
	2	1,013,491.3	697,572.6	8,050.00
Terrain Line2	3	1,009,838.7	696,665.7	7,340.00
	4	1,009,997.6	696,211.5	7,620.00
Terrain Line3	5	1,011,452.2	696,510.5	7,288.00
	6	1,012,190.2	696,036.7	7,280.00
	7	1,013,069.2	695,500.7	7,272.00
Bottom of Wall	8	1,010,258.1	696,824.2	7,334.00
	9	1,010,352.6	696,801.6	7,332.00
	10	1,010,460.3	696,775.2	7,330.00
	11	1,010,509.5	696,762.7	7,330.00
	12	1,010,537.9	696,755.9	7,330.00
	13	1,010,559.3	696,750.8	7,330.00
	14	1,010,610.1	696,738.4	7,330.00
	15	1,010,652.2	696,726.4	7,330.00
	16	1,010,696.2	696,715.7	7,328.00
	17	1,010,730.6	696,707.6	7,328.00
	18	1,010,780.0	696,695.3	7,324.00
	19	1,010,825.7	696,686.2	7,320.00
	20	1,010,896.6	696,666.7	7,312.00
Top of Wall	21	1,010,262.2	696,821.0	7,346.00
	22	1,010,300.4	696,812.1	7,348.00
	23	1,010,352.6	696,799.6	7,350.00
	24	1,010,376.9	696,793.8	7,351.90

**INPUT: TERRAIN LINES**

&lt;Project Name?&gt;

	25	1,010,402.3	696,787.8	7,352.00
	26	1,010,460.3	696,773.2	7,350.00
	27	1,010,509.5	696,760.8	7,348.00
	28	1,010,559.0	696,748.8	7,344.00
	29	1,010,583.5	696,742.9	7,342.00
	30	1,010,629.9	696,731.7	7,338.00
	31	1,010,675.5	696,720.7	7,334.00
	32	1,010,709.9	696,712.4	7,330.00
	33	1,010,862.5	696,675.1	7,316.00
	34	1,010,896.6	696,666.7	7,312.00
Terrain Line9	35	1,006,740.0	696,052.0	7,390.00
	36	1,007,316.0	695,513.0	7,370.00
Terrain Line10	37	1,007,091.3	696,134.7	7,680.00
	38	1,007,197.3	695,799.3	7,560.00
	39	1,007,316.0	695,513.0	7,370.00
e portal	40	1,007,450.6	696,185.0	7,380.00
	41	1,007,316.0	695,513.0	7,370.00
Terrain Line12	42	1,006,650.0	695,939.7	7,370.00
	43	1,006,473.0	695,970.0	7,374.00
	44	1,005,563.0	695,749.0	7,385.00
	45	1,005,188.0	695,477.0	7,390.00
Terrain Line13	46	1,006,457.8	695,875.7	7,404.00
	47	1,006,599.0	695,891.0	7,404.00
Terrain Line14	48	1,006,040.0	695,563.9	7,420.00
	49	1,006,585.0	695,734.0	7,391.00
Terrain Line15	50	1,006,457.8	695,876.7	7,390.00
	51	1,006,599.0	695,892.0	7,390.00
Terrain Line16	52	1,010,643.3	696,680.0	7,338.00
	53	1,011,001.0	696,580.8	7,305.40
	54	1,011,263.5	696,502.7	7,320.80
	72	1,011,324.6	696,459.6	7,316.50
	73	1,011,385.6	696,416.5	7,312.20
Terrain Line17	56	1,010,807.0	696,613.0	7,340.00
	57	1,010,981.0	696,548.8	7,340.00
	58	1,011,162.7	696,507.5	7,336.00
Terrain Line18	59	1,011,252.7	696,397.5	7,335.00

**INPUT: TERRAIN LINES**

&lt;Project Name?&gt;

	60	1,011,129.0	696,202.5	7,371.00
Terrain Line19	61	1,003,403.9	695,912.3	7,490.00
	62	1,003,438.9	695,522.6	7,656.00
Terrain Line20	63	1,003,463.1	695,957.5	7,490.00
	64	1,003,666.4	695,901.1	7,530.00
	65	1,003,758.1	695,961.8	7,572.00
	66	1,003,830.4	695,727.8	7,545.00
	67	1,003,856.1	695,588.7	7,578.00
Terrain Line21	84	1,010,600.2	696,645.0	7,347.50
	79	1,010,594.2	696,629.0	7,355.00
	80	1,010,582.4	696,597.0	7,370.00
	81	1,010,570.6	696,565.0	7,385.00
	82	1,010,558.7	696,533.0	7,400.00
	83	1,010,546.9	696,501.0	7,415.00
	69	1,010,535.0	696,469.0	7,430.00
Terrain Line22	70	1,011,079.6	696,436.9	7,340.00
	71	1,011,020.3	696,322.0	7,420.00
Terrain Line16-2-2	78	1,011,510.8	696,333.4	7,303.60
	76	1,011,568.8	696,287.2	7,299.30
	55	1,011,629.9	696,244.2	7,295.00

INPUT: BARRIERS

<Project Name?>

<Organization?>	2 May 2012
<Analysis By?>	TNM 2.5
INPUT: BARRIERS	
PROJECT/CONTRACT:	<Project Name?>
RUN:	<Run Title?>

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	\$ per Unit Area	\$ per Unit Vol.	Top Width	Run:Rise	\$ per Unit Length			X	Y	Z	at Point	Seg	Ht	Perturbs	On	Important
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft				
Barrier2	W	0.00	20.00	45.00				0.00	point13	13	1,010,348.4	696,828.6	7,333.61	6.00	2.00	7	3		
									point16	16	1,010,407.6	696,822.8	7,332.68	6.00	2.00	7	3		
									point20	20	1,010,486.5	696,809.7	7,331.57	6.00	2.00	7	3		
									point24	24	1,010,565.3	696,796.0	7,330.94	6.00	2.00	7	3		
									point28	28	1,010,644.2	696,782.8	7,330.30	6.00	2.00	7	3		
									point34	34	1,010,762.6	696,762.9	7,329.50	6.00	2.00	7	3		
									point38	38	1,010,841.4	696,749.3	7,328.66	6.00	2.00	7	3		
									point42	42	1,010,920.1	696,734.8	7,327.05	6.00	2.00	7	3		
									point46	46	1,010,998.4	696,718.9	7,321.73	6.00	2.00	7	3		
									point50	50	1,011,076.3	696,700.4	7,321.43	6.00	2.00	7	3		
									point54	54	1,011,153.2	696,678.8	7,321.29	6.00	2.00	7	3		
									point58	58	1,011,229.3	696,654.1	7,319.62	6.00	2.00	7	3		
									point62	62	1,011,304.1	696,625.9	7,310.43	6.00	2.00	7	3		
									point66	66	1,011,377.7	696,594.5	7,294.25	6.00	2.00	7	3		
									point70	70	1,011,449.8	696,559.9	7,289.81	6.00	2.00	7	3		
									point81	81	1,011,520.5	696,522.3	7,298.21	6.00	2.00	7	3		
									point76	76	1,011,581.4	696,486.7	7,310.90	6.00					
Barrier4	W	0.00	20.00	45.00				0.00	point83	83	1,011,365.5	696,545.2	7,310.44	6.00	2.00	7	3		
									point87	87	1,011,440.2	696,516.5	7,291.58	6.00	2.00	7	3		
									point91	91	1,011,513.5	696,484.4	7,288.90	6.00	2.00	7	3		
									point95	95	1,011,585.3	696,449.2	7,298.62	6.00	2.00	7	3		
									point99	99	1,011,655.6	696,411.1	7,308.99	6.00	2.00	7	3		
									point103	103	1,011,724.3	696,370.0	7,308.83	6.00	2.00	7	3		
									point107	107	1,011,791.5	696,326.6	7,307.52	6.00	2.00	7	3		
									point111	111	1,011,858.3	696,282.6	7,305.77	6.00	2.00	7	3		
									point115	115	1,011,925.2	696,238.7	7,304.07	6.00	2.00	7	3		
									point119	119	1,011,991.9	696,194.6	7,302.09	6.00	2.00	7	3		
									point123	123	1,012,057.3	696,148.5	7,299.91	6.00	2.00	7	3		
									point127	127	1,012,122.6	696,102.3	7,297.59	6.00	2.00	7	3		
									point131	131	1,012,187.9	696,056.1	7,295.28	6.00	2.00	7	3		
									point135	135	1,012,253.2	696,009.9	7,292.88	6.00	2.00	7	3		
									point139	139	1,012,317.0	695,965.0	7,290.93	6.00					

**RESULTS: BARRIER DESCRIPTIONS**

<Project Name?>

<Organization?>				2 May 2012						
<Analysis By?>				TNM 2.5						

**RESULTS: BARRIER DESCRIPTIONS**

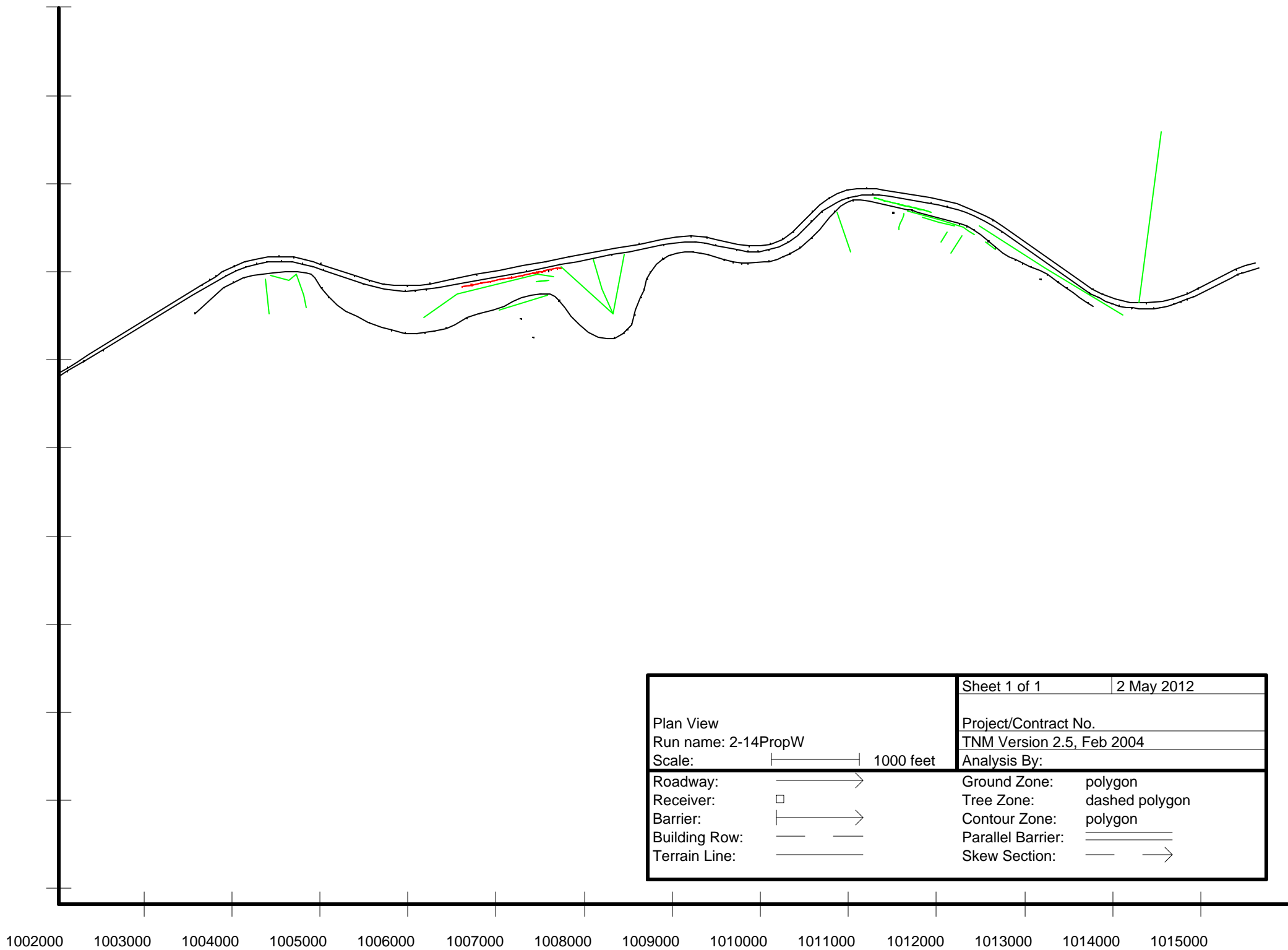
<b>PROJECT/CONTRACT:</b>	<Project Name?>									
<b>RUN:</b>	<Run Title?>									
<b>BARRIER DESIGN:</b>	roadway barrier									

Barriers											
Name	Type	Heights along Barrier			Length	If Wall Area	If Berm Volume	Top Width	Run:Rise		Cost
		Min	Avg	Max							
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	\$	
Barrier4	W	16.00	16.18	18.00	878	14207				639333	
Barrier2	W	16.00	18.87	20.00	1059	19987				899394	
									Total Cost:	1538726	

**RESULTS: SOUND LEVELS**

<Project Name?>

<Organization?>		2 May 2012										
<Analysis By?>		TNM 2.5										
		Calculated with TNM 2.5										
<b>RESULTS: SOUND LEVELS</b>												
<b>PROJECT/CONTRACT:</b>		<Project Name?>										
<b>RUN:</b>		<Run Title?>										
<b>BARRIER DESIGN:</b>		roadway barrier										
<b>ATMOSPHERICS:</b>		68 deg F, 50% RH										
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.												
<b>Receiver</b>												
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing Calculated</b>	<b>Crit'n Sub'l Inc</b>	<b>Type Impact</b>	<b>With Barrier Calculated LAeq1h</b>	<b>Noise Reduction Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>
			dB	dB	dB	dB	dB		dB	dB	dB	dB
R8 -HV4	19	1	72.2	73.3	66	1.1	10	Snd Lvl	68.4	4.9	7	-2.1
R7 - HV3	18	1	70.1	71.1	66	1.0	10	Snd Lvl	67.1	4.0	7	-3.0
R6 - HV2	15	1	66.5	67.9	66	1.4	10	Snd Lvl	59.4	8.5	7	1.5
R5 - HV1	14	1	70.7	71.4	66	0.7	10	Snd Lvl	66.4	5.0	7	-2.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		4	4.0	5.6	8.5							
All Impacted		4	4.0	5.6	8.5							
All that meet NR Goal		1	8.5	8.5	8.5							



		Sheet 1 of 1	2 May 2012
Plan View		Project/Contract No.	
Run name: 2-14PropW		TNM Version 2.5, Feb 2004	
Scale:		Analysis By:	
Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	



INPUT: ROADWAYS

<Project Name?>

<Organization?>						2 May 2012					
<Analysis By?>						TNM 2.5					
INPUT: ROADWAYS							Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA				
PROJECT/CONTRACT:	<Project Name?>										
RUN:	<Run Title?>										

Roadway Name	Width	Points Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
WB I-70 eastern	30.0	point66	66	1,014,554.8	696,095.9	7,270.60				Average	
		point65	65	1,014,451.5	696,063.3	7,271.00				Average	
		point64	64	1,014,338.0	696,015.2	7,270.80				Average	
		point63	63	1,013,906.8	695,804.2	7,275.80				Average	
		point62	62	1,013,786.6	695,749.5	7,276.90				Average	
		point61	61	1,013,625.9	695,688.4	7,278.30				Average	
		point60	60	1,013,508.3	695,659.4	7,279.20				Average	
		point59	59	1,013,328.8	695,639.1	7,280.90				Average	
		point58	58	1,013,149.8	695,649.4	7,282.30				Average	
		point57	57	1,012,982.2	695,685.7	7,283.90				Average	
		point56	56	1,012,831.0	695,743.8	7,285.20				Average	
		point55	55	1,012,721.4	695,801.5	7,287.10				Average	
		point54	54	1,012,619.6	695,866.3	7,287.90				Average	
		point53	53	1,011,725.8	696,494.3	7,310.90				Average	
		point52	52	1,011,601.8	696,576.6	7,313.60				Average	
		point51	51	1,011,510.7	696,627.2	7,315.40				Average	
		point50	50	1,011,357.8	696,696.5	7,316.40				Average	
		point49	49	1,011,191.3	696,758.7	7,321.40				Average	
		point48	48	1,011,009.5	696,807.2	7,323.10				Average	
point47	47	1,010,889.9	696,830.6	7,324.60				Average			
point46	46	1,010,361.6	696,914.6	7,334.20							
Frontage	24.0	point164	164	1,012,735.0	695,604.9	7,280.80				Average	
		point165	165	1,012,667.0	695,645.7	7,280.80				Average	
		point166	166	1,012,574.6	695,701.7	7,281.00				Average	
		point167	167	1,012,502.6	695,754.8	7,281.90				Average	

**INPUT: ROADWAYS**

<Project Name?>

		point168	168	1,012,430.3	695,813.9	7,282.10				Average
		point169	169	1,012,331.1	695,879.9	7,283.90				Average
		point170	170	1,012,212.0	695,960.3	7,286.90				Average
		point171	171	1,012,125.7	696,014.4	7,287.70				Average
		point172	172	1,012,023.4	696,054.1	7,286.10				Average
		point173	173	1,011,928.5	696,085.7	7,285.40				Average
		point174	174	1,011,847.4	696,127.0	7,286.50				Average
		point175	175	1,011,777.8	696,162.4	7,287.10				Average
		point176	176	1,011,707.8	696,208.5	7,289.90				Average
		point177	177	1,011,628.2	696,269.8	7,297.90				
WB I-70-Western	30.0	point279	279	1,006,036.4	696,009.3	7,402.52				Average
		point277	277	1,005,774.8	695,959.8	7,406.58				Average
		point278	278	1,005,513.1	695,910.2	7,410.64				Average
		point25	25	1,005,251.4	695,860.6	7,414.70				Average
		point24	24	1,005,142.8	695,843.8	7,416.80				Average
		point23	23	1,004,997.2	695,835.0	7,419.40				Average
		point22	22	1,004,855.0	695,837.2	7,422.40				Average
		point21	21	1,004,732.2	695,853.2	7,424.80				Average
		point20	20	1,004,569.3	695,892.1	7,428.70				Average
		point19	19	1,004,403.4	695,946.5	7,433.60				Average
		point18	18	1,004,020.3	696,083.6	7,444.40				Average
		point17	17	1,003,945.6	696,107.9	7,446.30				Average
		point16	16	1,003,839.5	696,135.4	7,446.50				Average
		point15	15	1,003,715.9	696,156.6	7,448.80				Average
		point14	14	1,003,553.9	696,166.3	7,451.10				Average
		point13	13	1,003,426.7	696,159.1	7,451.90				Average
		point12	12	1,003,289.1	696,135.9	7,452.70				Average
		point11	11	1,003,171.8	696,103.1	7,453.70				Average
		point10	10	1,003,045.9	696,053.5	7,454.90				Average
		point9	9	1,002,917.8	695,988.5	7,455.60				Average
		point8	8	1,002,838.7	695,942.7	7,455.70				Average
		point7	7	1,002,770.7	695,900.4	7,456.00				Average
		point6	6	1,002,680.4	695,842.1	7,456.40				Average
		point5	5	1,001,405.5	695,053.3	7,468.40				Average
		point4	4	1,001,279.4	694,975.9	7,472.50				Average
		point3	3	1,001,171.6	694,911.1	7,476.60				Average
		point2	2	1,001,042.0	694,840.3	7,483.00				Average
		point1	1	1,000,939.5	694,790.0	7,487.80				
Frontage-2	24.0	point426	426	1,011,628.2	696,269.8	7,297.90				Average

INPUT: ROADWAYS

<Project Name?>

		point178	178	1,011,550.2	696,337.0	7,302.50				Average	
		point179	179	1,011,456.3	696,417.7	7,311.80				Average	
		point180	180	1,011,380.1	696,469.0	7,318.70				Average	
		point181	181	1,011,307.4	696,504.1	7,323.20				Average	
		point182	182	1,011,223.2	696,533.9	7,322.60				Average	
		point183	183	1,010,961.4	696,606.4	7,306.00				Average	
		point184	184	1,010,747.2	696,668.6	7,327.90				Average	
		point185	185	1,010,686.5	696,684.4	7,334.10				Average	
		point186	186	1,010,641.7	696,694.9	7,338.40				Average	
		point187	187	1,010,202.5	696,787.6	7,346.40				Average	
		point188	188	1,010,104.3	696,801.8	7,342.00				Average	
		point189	189	1,010,023.6	696,796.9	7,339.60				Average	
		point190	190	1,009,953.3	696,774.6	7,338.20				Average	
		point191	191	1,009,883.6	696,731.8	7,337.10				Average	
		point192	192	1,009,811.7	696,667.3	7,336.30				Average	
		point193	193	1,009,754.6	696,601.9	7,334.80				Average	
		point194	194	1,009,701.9	696,535.0	7,333.60				Average	
		point195	195	1,009,645.4	696,467.4	7,333.10				Average	
		point196	196	1,009,556.7	696,371.8	7,332.60				Average	
		point197	197	1,009,422.0	696,261.6	7,333.20				Average	
		point198	198	1,009,305.8	696,195.5	7,334.00				Average	
		point199	199	1,009,233.5	696,161.5	7,334.40				Average	
		point200	200	1,009,168.0	696,136.5	7,334.50				Average	
		point201	201	1,009,070.3	696,112.5	7,334.40				Average	
		point202	202	1,009,014.6	696,104.6	7,334.90				Average	
		point203	203	1,008,835.7	696,086.5	7,335.10				Average	
		point204	204	1,008,767.1	696,086.6	7,335.20				Average	
		point205	205	1,008,667.5	696,100.6	7,335.80				Average	
		point206	206	1,008,566.7	696,127.7	7,336.90				Average	
		point207	207	1,008,386.3	696,186.1	7,342.40				Average	
		point208	208	1,008,298.5	696,208.7	7,346.40				Average	
		point209	209	1,008,215.3	696,218.0	7,349.60				Average	
		point210	210	1,008,124.9	696,216.6	7,352.60				Average	
		point211	211	1,008,045.5	696,204.9	7,355.50				Average	
		point212	212	1,007,952.0	696,175.9	7,359.40				Average	
		point213	213	1,007,881.3	696,137.4	7,362.60				Average	
		point214	214	1,007,808.4	696,073.4	7,365.20				Average	
		point215	215	1,007,740.3	695,983.3	7,367.30				Average	
		point216	216	1,007,701.2	695,903.9	7,367.60				Average	

INPUT: ROADWAYS

<Project Name?>

		point217	217	1,007,665.2	695,791.1	7,366.90				Average	
		point218	218	1,007,633.1	695,696.7	7,366.80				Average	
		point219	219	1,007,596.4	695,627.3	7,366.70				Average	
		point220	220	1,007,572.2	695,559.3	7,368.70				Average	
		point221	221	1,007,560.6	695,500.7	7,369.50				Average	
		point222	222	1,007,524.4	695,396.9	7,377.70				Average	
		point223	223	1,007,480.0	695,332.8	7,382.20				Average	
		point224	224	1,007,435.0	695,293.6	7,382.30				Average	
		point225	225	1,007,327.4	695,245.5	7,378.60				Average	
		point226	226	1,007,249.9	695,239.6	7,378.40				Average	
		point227	227	1,007,152.0	695,256.4	7,379.40				Average	
		point228	228	1,007,037.9	695,313.7	7,382.80				Average	
		point229	229	1,006,941.1	695,397.2	7,384.10				Average	
		point230	230	1,006,846.4	695,498.3	7,389.70				Average	
		point231	231	1,006,777.4	695,594.5	7,391.70				Average	
		point232	232	1,006,708.6	695,670.2	7,391.30				Average	
		point233	233	1,006,660.3	695,719.1	7,391.30				Average	
		point234	234	1,006,603.4	695,743.7	7,391.50				Average	
		point235	235	1,006,501.3	695,740.0	7,392.50				Average	
		point236	236	1,006,394.8	695,731.0	7,395.00				Average	
		point237	237	1,006,284.5	695,702.4	7,403.20				Average	
		point238	238	1,006,185.5	695,656.1	7,410.30				Average	
		point239	239	1,006,086.5	695,602.6	7,418.00				Average	
		point240	240	1,005,966.5	695,560.4	7,420.10				Average	
		point241	241	1,005,803.9	695,515.3	7,414.40				Average	
		point242	242	1,005,672.1	695,471.2	7,411.50				Average	
		point243	243	1,005,531.7	695,396.6	7,405.00				Average	
		point244	244	1,005,438.1	695,357.5	7,399.80				Average	
		point245	245	1,005,302.7	695,321.7	7,398.40				Average	
		point246	246	1,005,199.6	695,304.3	7,398.50				Average	
		point247	247	1,005,109.6	695,294.8	7,400.10				Average	
		point248	248	1,004,971.6	695,301.8	7,402.80				Average	
		point249	249	1,004,825.8	695,334.1	7,405.90				Average	
		point250	250	1,004,711.3	695,367.2	7,408.30				Average	
		point251	251	1,004,565.1	695,421.8	7,412.40				Average	
		point252	252	1,004,433.2	695,490.1	7,413.90				Average	
		point253	253	1,004,301.9	695,552.9	7,415.10				Average	
		point254	254	1,004,207.8	695,617.5	7,419.10				Average	
		point255	255	1,004,111.1	695,708.5	7,428.50				Average	

INPUT: ROADWAYS

<Project Name?>

		point256	256	1,004,035.6	695,816.7	7,440.30				Average	
		point257	257	1,003,960.4	695,926.5	7,453.10				Average	
		point258	258	1,003,913.2	695,964.3	7,458.70				Average	
		point259	259	1,003,857.4	695,984.7	7,464.60				Average	
		point260	260	1,003,766.8	695,997.1	7,475.10				Average	
		point261	261	1,003,624.4	695,993.6	7,485.40				Average	
		point262	262	1,003,487.1	695,983.7	7,490.30				Average	
		point263	263	1,003,264.7	695,953.9	7,479.70				Average	
		point264	264	1,003,156.7	695,926.9	7,471.10				Average	
		point265	265	1,003,037.2	695,874.9	7,460.80				Average	
		point266	266	1,002,934.5	695,806.1	7,455.60				Average	
		point267	267	1,002,604.8	695,522.0	7,455.30					
EB 50 or 56-2-EB 50 or 56	50.0	point298	298	1,000,942.9	694,753.5	7,481.60				Average	
		point299	299	1,001,039.3	694,799.9	7,476.80				Average	
		point300	300	1,001,172.3	694,872.0	7,470.50				Average	
		point301	301	1,001,361.9	694,986.6	7,463.40				Average	
		point302	302	1,001,578.5	695,111.6	7,461.90				Average	
		point303	303	1,002,586.2	695,732.0	7,456.70				Average	
		point304	304	1,002,966.8	695,954.6	7,453.50				Average	
		point305	305	1,003,076.8	696,007.4	7,452.30				Average	
		point306	306	1,003,186.9	696,050.5	7,451.00				Average	
		point307	307	1,003,303.6	696,083.2	7,450.30				Average	
		point308	308	1,003,426.0	696,103.7	7,449.30				Average	
		point309	309	1,003,585.7	696,110.9	7,447.70				Average	
		point310	310	1,003,705.0	696,102.3	7,446.10				Average	
		point311	311	1,003,824.4	696,082.2	7,444.60				Average	
		point312	312	1,003,941.3	696,051.6	7,443.10				Average	
		point313	313	1,004,055.6	696,013.6	7,441.20				Average	
		point314	314	1,004,398.7	695,891.5	7,433.60				Average	
		point315	315	1,004,511.3	695,854.1	7,431.40				Average	
		point316	316	1,004,626.7	695,821.7	7,429.30				Average	
		point317	317	1,004,744.0	695,797.2	7,426.90				Average	
		point318	318	1,004,856.0	695,781.4	7,424.80				Average	
		point319	319	1,004,977.0	695,775.3	7,422.40				Average	
		point320	320	1,005,096.9	695,779.5	7,419.90				Average	
		point321	321	1,005,214.4	695,791.9	7,416.90				Average	
		point322	322	1,005,333.5	695,810.6	7,413.60				Average	
		point323	323	1,005,567.9	695,852.5	7,406.60				Average	
		point417	417	1,005,954.9	695,926.2	7,400.35				Average	

INPUT: ROADWAYS

<Project Name?>

		point418	418	1,006,341.9	696,000.1	7,394.10				Average	
		point419	419	1,006,728.9	696,073.9	7,387.85				Average	
		point423	423	1,006,922.4	696,110.8	7,384.73				Average	
		point424	424	1,007,309.4	696,184.5	7,378.48				Average	
		point421	421	1,007,502.9	696,221.4	7,375.35				Average	
		point324	324	1,007,889.9	696,295.2	7,369.10				Average	
		point325	325	1,008,009.4	696,314.3	7,364.80				Average	
		point326	326	1,008,130.4	696,325.7	7,360.30				Average	
		point327	327	1,008,247.7	696,326.1	7,356.70				Average	
		point328	328	1,008,362.0	696,314.5	7,353.90				Average	
		point329	329	1,008,484.1	696,292.9	7,352.50				Average	
		point330	330	1,008,718.1	696,239.0	7,351.70				Average	
		point331	331	1,008,839.8	696,222.3	7,351.70				Average	
		point332	332	1,008,959.6	696,221.6	7,351.30				Average	
		point333	333	1,009,078.0	696,239.6	7,350.80				Average	
		point415	415	1,009,191.5	696,278.2	7,350.20				Average	
		point416	416	1,009,294.9	696,330.2	7,349.50				Average	
		point334	334	1,009,396.1	696,401.5	7,348.50				Average	
		point335	335	1,009,451.5	696,453.0	7,347.80				Average	
		point336	336	1,009,561.2	696,569.0	7,345.80				Average	
		point337	337	1,009,676.7	696,671.8	7,344.30				Average	
		point338	338	1,009,776.1	696,737.8	7,343.50				Average	
		point339	339	1,009,843.2	696,772.9	7,342.80				Average	
		point340	340	1,009,905.6	696,799.8	7,341.70				Average	
		point341	341	1,009,976.3	696,824.0	7,340.30				Average	
		point342	342	1,010,061.4	696,845.2	7,338.70				Average	
		point343	343	1,010,127.1	696,856.0	7,337.80				Average	
		point344	344	1,010,252.5	696,863.6	7,336.20				Average	
		point345	345	1,010,313.6	696,861.1	7,335.00				Average	
		point346	346	1,010,434.5	696,847.2	7,331.70				Average	
		point347	347	1,010,909.2	696,765.8	7,327.40				Average	
		point348	348	1,010,991.4	696,749.1	7,326.00				Average	
		point349	349	1,011,093.6	696,724.9	7,324.70				Average	
		point350	350	1,011,210.4	696,690.2	7,322.30				Average	
		point351	351	1,011,293.9	696,660.2	7,320.90				Average	
		point352	352	1,011,393.5	696,618.2	7,318.50				Average	
		point353	353	1,011,502.0	696,564.6	7,315.70				Average	
		point354	354	1,011,606.2	696,504.7	7,312.40				Average	
		point355	355	1,011,707.8	696,438.7	7,310.30				Average	

INPUT: ROADWAYS

<Project Name?>

		point356	356	1,012,563.1	695,834.2	7,288.00				Average	
		point357	357	1,012,696.9	695,748.9	7,286.80				Average	
		point358	358	1,012,793.4	695,694.5	7,286.30				Average	
		point359	359	1,012,875.2	695,656.7	7,285.60				Average	
		point360	360	1,012,950.0	695,629.9	7,284.80				Average	
		point361	361	1,013,026.5	695,608.7	7,284.20				Average	
		point362	362	1,013,104.7	695,592.5	7,283.70				Average	
		point363	363	1,013,173.3	695,582.9	7,283.20				Average	
		point364	364	1,013,252.5	695,577.3	7,282.50				Average	
		point365	365	1,013,332.0	695,577.1	7,281.90				Average	
		point366	366	1,013,411.6	695,582.3	7,281.20				Average	
		point367	367	1,013,490.3	695,593.1	7,280.50				Average	
		point368	368	1,013,568.2	695,608.9	7,279.80				Average	
		point369	369	1,013,644.9	695,629.4	7,279.20				Average	
		point370	370	1,013,720.7	695,654.4	7,278.40				Average	
		point371	371	1,013,794.6	695,683.6	7,277.40				Average	
		point372	372	1,013,867.1	695,715.9	7,276.20				Average	
		point373	373	1,014,294.9	695,925.6	7,272.10				Average	
		point374	374	1,014,366.7	695,959.4	7,271.00				Average	
		point375	375	1,014,412.7	695,979.6	7,270.30				Average	
		point376	376	1,014,601.0	696,039.1	7,268.00					
WB I-70-central-WB I-70-central-2-2	30.0	point280	280	1,010,361.6	696,914.6	7,334.20				Average	
		point45	45	1,010,285.2	696,926.1	7,335.70				Average	
		point44	44	1,010,174.0	696,935.2	7,337.70				Average	
		point43	43	1,010,063.0	696,931.1	7,339.20				Average	
		point42	42	1,009,959.9	696,911.0	7,341.20				Average	
		point41	41	1,009,840.7	696,871.0	7,341.40				Average	
		point40	40	1,009,752.0	696,821.4	7,344.30				Average	
		point39	39	1,009,643.2	696,746.4	7,346.80				Average	
		point38	38	1,009,560.6	696,667.0	7,348.50				Average	
		point37	37	1,009,465.0	696,560.4	7,349.70				Average	
		point36	36	1,009,344.0	696,439.5	7,351.50				Average	
		point35	35	1,009,225.5	696,359.7	7,352.00				Average	
		point34	34	1,009,086.4	696,304.1	7,352.50				Average	
		point33	33	1,008,977.2	696,282.4	7,353.50				Average	
		point32	32	1,008,855.9	696,281.3	7,354.50				Average	
		point31	31	1,008,730.0	696,300.0	7,354.80				Average	
		point30	30	1,008,470.6	696,359.7	7,357.30				Average	
		point29	29	1,008,371.0	696,378.4	7,359.10				Average	

**INPUT: ROADWAYS**

&lt;Project Name?&gt;

		point28	28	1,008,195.0	696,393.5	7,363.80				Average	
		point27	27	1,008,032.3	696,383.9	7,369.20				Average	
		point26	26	1,007,868.1	696,356.3	7,374.10				Average	
		point270	270	1,007,606.4	696,306.8	7,378.16				Average	
		point271	271	1,007,344.8	696,257.2	7,382.22				Average	
		point283	283	1,006,821.4	696,158.1	7,390.34				Average	
		point274	274	1,006,559.8	696,108.5	7,394.40				Average	
		point275	275	1,006,298.1	696,058.9	7,398.46				Average	
		point276	276	1,006,036.4	696,009.3	7,402.52					



INPUT: TRAFFIC FOR LAeq1h Volumes

<Project Name?>

<Organization?>		2 May 2012										
<Analysis By?>		TNM 2.5										
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:		<Project Name?>										
RUN:		<Run Title?>										
Roadway	Points											
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
WB I-70 eastern	point66	66	2351	55	52	55	220	55	6	55	16	55
	point65	65	2351	55	52	55	220	55	6	55	16	55
	point64	64	2351	55	52	55	220	55	6	55	16	55
	point63	63	2351	55	52	55	220	55	6	55	16	55
	point62	62	2351	55	52	55	220	55	6	55	16	55
	point61	61	2351	55	52	55	220	55	6	55	16	55
	point60	60	2351	55	52	55	220	55	6	55	16	55
	point59	59	2351	55	52	55	220	55	6	55	16	55
	point58	58	2351	55	52	55	220	55	6	55	16	55
	point57	57	2351	55	52	55	220	55	6	55	16	55
	point56	56	2351	55	52	55	220	55	6	55	16	55
	point55	55	2351	55	52	55	220	55	6	55	16	55
	point54	54	2351	55	52	55	220	55	6	55	16	55
	point53	53	2351	55	52	55	220	55	6	55	16	55
	point52	52	2351	55	52	55	220	55	6	55	16	55
	point51	51	2351	55	52	55	220	55	6	55	16	55
	point50	50	2351	55	52	55	220	55	6	55	16	55
	point49	49	2351	55	52	55	220	55	6	55	16	55
	point48	48	2351	55	52	55	220	55	6	55	16	55
	point47	47	2351	55	52	55	220	55	6	55	16	55
	point46	46										
Frontage	point164	164	0	0	0	0	0	0	0	0	0	0
	point165	165	292	35	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point166	166	292	35	0	0	0	0	0	0	0	0
	point167	167	292	35	0	0	0	0	0	0	0	0
	point168	168	292	35	0	0	0	0	0	0	0	0
	point169	169	292	35	0	0	0	0	0	0	0	0
	point170	170	292	35	0	0	0	0	0	0	0	0
	point171	171	292	35	0	0	0	0	0	0	0	0
	point172	172	292	35	0	0	0	0	0	0	0	0
	point173	173	292	35	0	0	0	0	0	0	0	0
	point174	174	292	35	0	0	0	0	0	0	0	0
	point175	175	292	35	0	0	0	0	0	0	0	0
	point176	176	292	35	0	0	0	0	0	0	0	0
	point177	177										
WB I-70-Western	point279	279	2233	60	49	60	209	60	6	60	16	60
	point277	277	2233	60	49	60	209	60	6	60	16	60
	point278	278	2233	60	49	60	209	60	6	60	16	60
	point25	25	2233	60	49	60	209	60	6	60	16	60
	point24	24	2233	60	49	60	209	60	6	60	16	60
	point23	23	2233	60	49	60	209	60	6	60	16	60
	point22	22	2233	60	49	60	209	60	6	60	16	60
	point21	21	2233	60	49	60	209	60	6	60	16	60
	point20	20	2233	60	49	60	209	60	6	60	16	60
	point19	19	2233	60	49	60	209	60	6	60	16	60
	point18	18	2233	60	49	60	209	60	6	60	16	60
	point17	17	2233	60	49	60	209	60	6	60	16	60
	point16	16	2233	60	49	60	209	60	6	60	16	60
	point15	15	2233	60	49	60	209	60	6	60	16	60
	point14	14	2233	60	49	60	209	60	6	60	16	60
	point13	13	2233	60	49	60	209	60	6	60	16	60
	point12	12	2233	60	49	60	209	60	6	60	16	60
	point11	11	2233	60	49	60	209	60	6	60	16	60
	point10	10	2233	60	49	60	209	60	6	60	16	60
	point9	9	2233	60	49	60	209	60	6	60	16	60
	point8	8	2233	60	49	60	209	60	6	60	16	60
	point7	7	2233	60	49	60	209	60	6	60	16	60
	point6	6	2233	60	49	60	209	60	6	60	16	60
	point5	5	2233	60	49	60	209	60	6	60	16	60

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point4	4	2233	60	49	60	209	60	6	60	16	60
	point3	3	2233	60	49	60	209	60	6	60	16	60
	point2	2	2233	60	49	60	209	60	6	60	16	60
	point1	1										
Frontage-2	point426	426	292	35	0	0	0	0	0	0	0	0
	point178	178	292	35	0	0	0	0	0	0	0	0
	point179	179	292	35	0	0	0	0	0	0	0	0
	point180	180	292	35	0	0	0	0	0	0	0	0
	point181	181	292	35	0	0	0	0	0	0	0	0
	point182	182	292	35	0	0	0	0	0	0	0	0
	point183	183	292	35	0	0	0	0	0	0	0	0
	point184	184	292	35	0	0	0	0	0	0	0	0
	point185	185	292	35	0	0	0	0	0	0	0	0
	point186	186	292	35	0	0	0	0	0	0	0	0
	point187	187	292	35	0	0	0	0	0	0	0	0
	point188	188	292	35	0	0	0	0	0	0	0	0
	point189	189	292	35	0	0	0	0	0	0	0	0
	point190	190	292	35	0	0	0	0	0	0	0	0
	point191	191	292	35	0	0	0	0	0	0	0	0
	point192	192	292	35	0	0	0	0	0	0	0	0
	point193	193	292	35	0	0	0	0	0	0	0	0
	point194	194	292	35	0	0	0	0	0	0	0	0
	point195	195	292	35	0	0	0	0	0	0	0	0
	point196	196	292	35	0	0	0	0	0	0	0	0
	point197	197	292	35	0	0	0	0	0	0	0	0
	point198	198	292	35	0	0	0	0	0	0	0	0
	point199	199	292	35	0	0	0	0	0	0	0	0
	point200	200	292	35	0	0	0	0	0	0	0	0
	point201	201	292	35	0	0	0	0	0	0	0	0
	point202	202	292	35	0	0	0	0	0	0	0	0
	point203	203	292	35	0	0	0	0	0	0	0	0
	point204	204	292	35	0	0	0	0	0	0	0	0
	point205	205	292	35	0	0	0	0	0	0	0	0
	point206	206	292	35	0	0	0	0	0	0	0	0
	point207	207	292	35	0	0	0	0	0	0	0	0
	point208	208	292	35	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point209	209	292	35	0	0	0	0	0	0	0	0
	point210	210	292	35	0	0	0	0	0	0	0	0
	point211	211	292	35	0	0	0	0	0	0	0	0
	point212	212	292	35	0	0	0	0	0	0	0	0
	point213	213	292	35	0	0	0	0	0	0	0	0
	point214	214	292	35	0	0	0	0	0	0	0	0
	point215	215	292	35	0	0	0	0	0	0	0	0
	point216	216	292	35	0	0	0	0	0	0	0	0
	point217	217	292	35	0	0	0	0	0	0	0	0
	point218	218	292	35	0	0	0	0	0	0	0	0
	point219	219	292	35	0	0	0	0	0	0	0	0
	point220	220	292	35	0	0	0	0	0	0	0	0
	point221	221	292	35	0	0	0	0	0	0	0	0
	point222	222	292	35	0	0	0	0	0	0	0	0
	point223	223	292	35	0	0	0	0	0	0	0	0
	point224	224	292	35	0	0	0	0	0	0	0	0
	point225	225	292	35	0	0	0	0	0	0	0	0
	point226	226	292	35	0	0	0	0	0	0	0	0
	point227	227	292	35	0	0	0	0	0	0	0	0
	point228	228	292	35	0	0	0	0	0	0	0	0
	point229	229	292	35	0	0	0	0	0	0	0	0
	point230	230	292	35	0	0	0	0	0	0	0	0
	point231	231	292	35	0	0	0	0	0	0	0	0
	point232	232	292	35	0	0	0	0	0	0	0	0
	point233	233	292	35	0	0	0	0	0	0	0	0
	point234	234	292	35	0	0	0	0	0	0	0	0
	point235	235	292	35	0	0	0	0	0	0	0	0
	point236	236	292	35	0	0	0	0	0	0	0	0
	point237	237	292	35	0	0	0	0	0	0	0	0
	point238	238	292	35	0	0	0	0	0	0	0	0
	point239	239	292	35	0	0	0	0	0	0	0	0
	point240	240	292	35	0	0	0	0	0	0	0	0
	point241	241	292	35	0	0	0	0	0	0	0	0
	point242	242	292	35	0	0	0	0	0	0	0	0
	point243	243	292	35	0	0	0	0	0	0	0	0
	point244	244	292	35	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point245	245	292	35	0	0	0	0	0	0	0	0
	point246	246	292	35	0	0	0	0	0	0	0	0
	point247	247	292	35	0	0	0	0	0	0	0	0
	point248	248	292	35	0	0	0	0	0	0	0	0
	point249	249	292	35	0	0	0	0	0	0	0	0
	point250	250	292	35	0	0	0	0	0	0	0	0
	point251	251	292	35	0	0	0	0	0	0	0	0
	point252	252	292	35	0	0	0	0	0	0	0	0
	point253	253	292	35	0	0	0	0	0	0	0	0
	point254	254	292	35	0	0	0	0	0	0	0	0
	point255	255	292	35	0	0	0	0	0	0	0	0
	point256	256	292	35	0	0	0	0	0	0	0	0
	point257	257	292	35	0	0	0	0	0	0	0	0
	point258	258	292	35	0	0	0	0	0	0	0	0
	point259	259	292	35	0	0	0	0	0	0	0	0
	point260	260	292	35	0	0	0	0	0	0	0	0
	point261	261	292	35	0	0	0	0	0	0	0	0
	point262	262	292	35	0	0	0	0	0	0	0	0
	point263	263	292	35	0	0	0	0	0	0	0	0
	point264	264	292	35	0	0	0	0	0	0	0	0
	point265	265	292	35	0	0	0	0	0	0	0	0
	point266	266	292	35	0	0	0	0	0	0	0	0
	point267	267										
EB 50 or 56-2-EB 50 or 56	point298	298	3526	55	77	55	329	55	9	55	25	55
	point299	299	3526	55	77	55	329	55	9	55	25	55
	point300	300	3526	55	77	55	329	55	9	55	25	55
	point301	301	3526	55	77	55	329	55	9	55	25	55
	point302	302	3526	55	77	55	329	55	9	55	25	55
	point303	303	3526	55	77	55	329	55	9	55	25	55
	point304	304	3526	55	77	55	329	55	9	55	25	55
	point305	305	3526	55	77	55	329	55	9	55	25	55
	point306	306	3526	55	77	55	329	55	9	55	25	55
	point307	307	3526	55	77	55	329	55	9	55	25	55
	point308	308	3526	55	77	55	329	55	9	55	25	55
	point309	309	3526	55	77	55	329	55	9	55	25	55
	point310	310	3526	55	77	55	329	55	9	55	25	55

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**<Project Name?>**

	point311	311	3526	55	77	55	329	55	9	55	25	55
	point312	312	3526	55	77	55	329	55	9	55	25	55
	point313	313	3526	55	77	55	329	55	9	55	25	55
	point314	314	3526	55	77	55	329	55	9	55	25	55
	point315	315	3526	55	77	55	329	55	9	55	25	55
	point316	316	3526	55	77	55	329	55	9	55	25	55
	point317	317	3526	55	77	55	329	55	9	55	25	55
	point318	318	3526	55	77	55	329	55	9	55	25	55
	point319	319	3526	55	77	55	329	55	9	55	25	55
	point320	320	3526	55	77	55	329	55	9	55	25	55
	point321	321	3526	55	77	55	329	55	9	55	25	55
	point322	322	3526	55	77	55	329	55	9	55	25	55
	point323	323	3526	55	77	55	329	55	9	55	25	55
	point417	417	3526	55	77	55	329	55	9	55	25	55
	point418	418	3526	55	77	55	329	55	9	55	25	55
	point419	419	3526	55	77	55	329	55	9	55	25	55
	point423	423	3526	55	77	55	329	55	9	55	25	55
	point424	424	3526	55	77	55	329	55	9	55	25	55
	point421	421	3526	55	77	55	329	55	9	55	25	55
	point324	324	3526	55	77	55	329	55	9	55	25	55
	point325	325	3526	55	77	55	329	55	9	55	25	55
	point326	326	3526	55	77	55	329	55	9	55	25	55
	point327	327	3526	55	77	55	329	55	9	55	25	55
	point328	328	3526	55	77	55	329	55	9	55	25	55
	point329	329	3526	55	77	55	329	55	9	55	25	55
	point330	330	3526	55	77	55	329	55	9	55	25	55
	point331	331	3526	55	77	55	329	55	9	55	25	55
	point332	332	3526	55	77	55	329	55	9	55	25	55
	point333	333	3526	55	77	55	329	55	9	55	25	55
	point415	415	3526	55	77	55	329	55	9	55	25	55
	point416	416	3526	55	77	55	329	55	9	55	25	55
	point334	334	3526	55	77	55	329	55	9	55	25	55
	point335	335	3526	55	77	55	329	55	9	55	25	55
	point336	336	3526	55	77	55	329	55	9	55	25	55
	point337	337	3526	55	77	55	329	55	9	55	25	55
	point338	338	3526	55	77	55	329	55	9	55	25	55

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point339	339	3526	55	77	55	329	55	9	55	25	55
	point340	340	3526	55	77	55	329	55	9	55	25	55
	point341	341	3526	55	77	55	329	55	9	55	25	55
	point342	342	3526	55	77	55	329	55	9	55	25	55
	point343	343	3526	55	77	55	329	55	9	55	25	55
	point344	344	3526	55	77	55	329	55	9	55	25	55
	point345	345	3526	55	77	55	329	55	9	55	25	55
	point346	346	3526	55	77	55	329	55	9	55	25	55
	point347	347	3526	55	77	55	329	55	9	55	25	55
	point348	348	3526	55	77	55	329	55	9	55	25	55
	point349	349	3526	55	77	55	329	55	9	55	25	55
	point350	350	3526	55	77	55	329	55	9	55	25	55
	point351	351	3526	55	77	55	329	55	9	55	25	55
	point352	352	3526	55	77	55	329	55	9	55	25	55
	point353	353	3526	55	77	55	329	55	9	55	25	55
	point354	354	3526	55	77	55	329	55	9	55	25	55
	point355	355	3526	55	77	55	329	55	9	55	25	55
	point356	356	3526	55	77	55	329	55	9	55	25	55
	point357	357	3526	55	77	55	329	55	9	55	25	55
	point358	358	3526	55	77	55	329	55	9	55	25	55
	point359	359	3526	55	77	55	329	55	9	55	25	55
	point360	360	3526	55	77	55	329	55	9	55	25	55
	point361	361	3526	55	77	55	329	55	9	55	25	55
	point362	362	3526	55	77	55	329	55	9	55	25	55
	point363	363	3526	55	77	55	329	55	9	55	25	55
	point364	364	3526	55	77	55	329	55	9	55	25	55
	point365	365	3526	55	77	55	329	55	9	55	25	55
	point366	366	3526	55	77	55	329	55	9	55	25	55
	point367	367	3526	55	77	55	329	55	9	55	25	55
	point368	368	3526	55	77	55	329	55	9	55	25	55
	point369	369	3526	55	77	55	329	55	9	55	25	55
	point370	370	3526	55	77	55	329	55	9	55	25	55
	point371	371	3526	55	77	55	329	55	9	55	25	55
	point372	372	3526	55	77	55	329	55	9	55	25	55
	point373	373	3526	55	77	55	329	55	9	55	25	55
	point374	374	3526	55	77	55	329	55	9	55	25	55

**INPUT: TRAFFIC FOR LAeq1h Volumes**

<Project Name?>

	point375	375	3526	55	77	55	329	55	9	55	25	55
	point376	376										
WB I-70-central-WB I-70-central-2-2	point280	280	2690	45	55	45	227	45	7	45	11	45
	point45	45	2690	45	55	45	227	45	7	45	11	45
	point44	44	2690	45	55	45	227	45	7	45	11	45
	point43	43	2690	45	55	45	227	45	7	45	11	45
	point42	42	2690	45	55	45	227	45	7	45	11	45
	point41	41	2690	45	55	45	227	45	7	45	11	45
	point40	40	2690	45	55	45	227	45	7	45	11	45
	point39	39	2690	45	55	45	227	45	7	45	11	45
	point38	38	2690	45	55	45	227	45	7	45	11	45
	point37	37	2690	45	55	45	227	45	7	45	11	45
	point36	36	2690	45	55	45	227	45	7	45	11	45
	point35	35	2690	45	55	45	227	45	7	45	11	45
	point34	34	2690	45	55	45	227	45	7	45	11	45
	point33	33	2690	45	55	45	227	45	7	45	11	45
	point32	32	2690	45	55	45	227	45	7	45	11	45
	point31	31	2690	45	55	45	227	45	7	45	11	45
	point30	30	2690	45	55	45	227	45	7	45	11	45
	point29	29	2690	45	55	45	227	45	7	45	11	45
	point28	28	2690	45	55	45	227	45	7	45	11	45
	point27	27	2690	45	55	45	227	45	7	45	11	45
	point26	26	2690	45	55	45	227	45	7	45	11	45
	point270	270	2690	45	55	45	227	45	7	45	11	45
	point271	271	2690	45	55	45	227	45	7	45	11	45
	point283	283	2690	45	55	45	227	45	7	45	11	45
	point274	274	2690	45	55	45	227	45	7	45	11	45
	point275	275	2690	45	55	45	227	45	7	45	11	45
	point276	276										





**INPUT: TERRAIN LINES**

<Project Name?>

<Organization?>			<b>2 May 2012</b>	
<Analysis By?>			<b>TNM 2.5</b>	
<b>INPUT: TERRAIN LINES</b>				
<b>PROJECT/CONTRACT:</b>	<b>&lt;Project Name?&gt;</b>			
<b>RUN:</b>	<b>&lt;Run Title?&gt;</b>			
<b>Terrain Line</b>	<b>Points</b>			
<b>Name</b>	<b>No.</b>	<b>Coordinates (ground)</b>		
		<b>X</b>	<b>Y</b>	<b>Z</b>
		ft	ft	ft
Terrain Line1	1	1,013,240.5	695,651.3	7,280.00
	2	1,013,491.3	697,572.6	8,050.00
Terrain Line2	3	1,009,838.7	696,665.7	7,340.00
	4	1,009,997.6	696,211.5	7,620.00
Terrain Line3	5	1,011,452.2	696,510.5	7,288.00
	6	1,012,190.2	696,036.7	7,280.00
	7	1,013,069.2	695,500.7	7,272.00
Bottom of Wall	8	1,010,258.1	696,824.2	7,334.00
	9	1,010,352.6	696,801.6	7,332.00
	10	1,010,460.3	696,775.2	7,330.00
	11	1,010,509.5	696,762.7	7,330.00
	12	1,010,537.9	696,755.9	7,330.00
	13	1,010,559.3	696,750.8	7,330.00
	14	1,010,610.1	696,738.4	7,330.00
	15	1,010,652.2	696,726.4	7,330.00
	16	1,010,696.2	696,715.7	7,328.00
	17	1,010,730.6	696,707.6	7,328.00
	18	1,010,780.0	696,695.3	7,324.00
	19	1,010,825.7	696,686.2	7,320.00
	20	1,010,896.6	696,666.7	7,312.00
Top of Wall	21	1,010,262.2	696,821.0	7,346.00
	22	1,010,300.4	696,812.1	7,348.00
	23	1,010,352.6	696,799.6	7,350.00
	24	1,010,376.9	696,793.8	7,351.90

**INPUT: TERRAIN LINES**

&lt;Project Name?&gt;

	25	1,010,402.3	696,787.8	7,352.00
	26	1,010,460.3	696,773.2	7,350.00
	27	1,010,509.5	696,760.8	7,348.00
	28	1,010,559.0	696,748.8	7,344.00
	29	1,010,583.5	696,742.9	7,342.00
	30	1,010,629.9	696,731.7	7,338.00
	31	1,010,675.5	696,720.7	7,334.00
	32	1,010,709.9	696,712.4	7,330.00
	33	1,010,862.5	696,675.1	7,316.00
	34	1,010,896.6	696,666.7	7,312.00
Terrain Line9	35	1,006,740.0	696,052.0	7,390.00
	36	1,007,316.0	695,513.0	7,370.00
Terrain Line10	37	1,007,091.3	696,134.7	7,680.00
	38	1,007,197.3	695,799.3	7,560.00
	39	1,007,316.0	695,513.0	7,370.00
e portal	40	1,007,450.6	696,185.0	7,380.00
	41	1,007,316.0	695,513.0	7,370.00
Terrain Line12	42	1,006,650.0	695,939.7	7,370.00
	43	1,006,473.0	695,970.0	7,374.00
	44	1,005,563.0	695,749.0	7,385.00
	45	1,005,188.0	695,477.0	7,390.00
Terrain Line13	46	1,006,457.8	695,875.7	7,404.00
	47	1,006,599.0	695,891.0	7,404.00
Terrain Line14	48	1,006,040.0	695,563.9	7,420.00
	49	1,006,585.0	695,734.0	7,391.00
Terrain Line15	50	1,006,457.8	695,876.7	7,390.00
	51	1,006,599.0	695,892.0	7,390.00
Terrain Line16	52	1,010,643.3	696,680.0	7,338.00
	53	1,011,001.0	696,580.8	7,305.40
	54	1,011,263.5	696,502.7	7,320.80
	72	1,011,324.6	696,459.6	7,316.50
	73	1,011,385.6	696,416.5	7,312.20
Terrain Line17	56	1,010,807.0	696,613.0	7,340.00
	57	1,010,981.0	696,548.8	7,340.00
	58	1,011,162.7	696,507.5	7,336.00
Terrain Line18	59	1,011,252.7	696,397.5	7,335.00

**INPUT: TERRAIN LINES**

&lt;Project Name?&gt;

	60	1,011,129.0	696,202.5	7,371.00
Terrain Line19	61	1,003,403.9	695,912.3	7,490.00
	62	1,003,438.9	695,522.6	7,656.00
Terrain Line20	63	1,003,463.1	695,957.5	7,490.00
	64	1,003,666.4	695,901.1	7,530.00
	65	1,003,758.1	695,961.8	7,572.00
	66	1,003,830.4	695,727.8	7,545.00
	67	1,003,856.1	695,588.7	7,578.00
Terrain Line21	84	1,010,600.2	696,645.0	7,347.50
	79	1,010,594.2	696,629.0	7,355.00
	80	1,010,582.4	696,597.0	7,370.00
	81	1,010,570.6	696,565.0	7,385.00
	82	1,010,558.7	696,533.0	7,400.00
	83	1,010,546.9	696,501.0	7,415.00
	69	1,010,535.0	696,469.0	7,430.00
Terrain Line22	70	1,011,079.6	696,436.9	7,340.00
	71	1,011,020.3	696,322.0	7,420.00
Terrain Line16-2-2	78	1,011,510.8	696,333.4	7,303.60
	76	1,011,568.8	696,287.2	7,299.30
	55	1,011,629.9	696,244.2	7,295.00

INPUT: BARRIERS

<Project Name?>

<Organization?>	2 May 2012
<Analysis By?>	TNM 2.5

INPUT: BARRIERS

PROJECT/CONTRACT: <Project Name?>  
 RUN: <Run Title?>

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	\$ per Unit	\$ per Unit	Top Width	Run:Rise	\$ per Unit			X	Y	Z	at Point	Seg	Ht	Perturbs	On	Important
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft				
Barrier9	W	0.00	20.00	45.00				0.00	point1	279	1,005,622.2	695,826.3	7,404.31	6.00	2.00	7	3		
									point2	280	1,005,728.0	695,845.8	7,402.28	6.00	2.00	7	3		
									point3	281	1,005,836.4	695,865.7	7,399.75	6.00	2.00	7	3		
									point4	282	1,005,944.7	695,886.5	7,398.39	6.00	2.00	7	3		
									point5	283	1,006,053.0	695,907.3	7,397.03	6.00	2.00	7	3		
									point6	290	1,006,175.9	695,930.8	7,395.38	6.00	2.00	7	3		
									point7	284	1,006,298.7	695,954.2	7,393.72	6.00	2.00	7	3		
									point8	285	1,006,423.6	695,977.9	7,392.01	6.00	2.00	7	3		
									point291	291	1,006,444.4	695,981.8	7,391.72	6.00	2.00	7	3		
									point292	292	1,006,465.2	695,985.8	7,391.44	6.00	2.00	7	3		
									point293	293	1,006,486.0	695,989.8	7,391.15	6.00	2.00	7	3		
									point294	294	1,006,506.8	695,993.7	7,390.87	6.00	2.00	7	3		
									point295	295	1,006,527.6	695,997.7	7,390.58	6.00	2.00	7	3		
									point12	286	1,006,548.4	696,001.6	7,390.30	6.00	2.00	7	3		
									point9	287	1,006,622.5	696,015.6	7,390.32	6.00	2.00	7	3		
									point10	288	1,006,696.6	696,029.7	7,390.34	6.00	2.00	7	3		
									point296	296	1,006,718.5	696,034.0	7,390.25	6.00	2.00	7	3		
									point11	289	1,006,740.4	696,038.4	7,390.17	6.00					

**RESULTS: BARRIER DESCRIPTIONS**

<Project Name?>

<Organization?>				2 May 2012						
<Analysis By?>				TNM 2.5						

**RESULTS: BARRIER DESCRIPTIONS**

<b>PROJECT/CONTRACT:</b>	<Project Name?>									
<b>RUN:</b>	<Run Title?>									
<b>BARRIER DESIGN:</b>	Trail									

Barriers										
Name	Type	Heights along Barrier			Length	If Wall Area	If Berm Volume	Top Width	Run:Rise	Cost
		Min	Avg	Max						
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	\$
Barrier9	W	6.00	6.00	6.00	194	1166				52477
									Total Cost:	52477

**RESULTS: SOUND LEVELS**

<Project Name?>

<Organization?>													2 May 2012	
<Analysis By?>													TNM 2.5	
													Calculated with TNM 2.5	
<b>RESULTS: SOUND LEVELS</b>														
<b>PROJECT/CONTRACT:</b>			<Project Name?>											
<b>RUN:</b>			<Run Title?>											
<b>BARRIER DESIGN:</b>			INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.					
<b>ATMOSPHERICS:</b>			68 deg F, 50% RH											
<b>Receiver</b>														
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing</b>		<b>With Barrier</b>					
							<b>Calculated</b>	<b>Crit'n</b>	<b>Type Impact</b>	<b>Calculated LAeq1h</b>	<b>Noise Reduction</b>		<b>Calculated minus Goal</b>	
								<b>Sub'l Inc</b>			<b>Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>	
				dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
R1 - East Idaho		8	1	53.5	54.1	66	0.6	10	----	54.1	0.0	7	-7.0	
R2 -W Portal 1st on hill		10	1	66.4	68.1	66	1.7	10	Snd Lvl	67.2	0.9	7	-6.1	
R3 -W Portal 2nd on hill		12	1	66.7	67.7	66	1.0	10	Snd Lvl	67.3	0.4	7	-6.6	
R4 -W Portal 3rd hill		13	1	64.3	65.4	66	1.1	10	----	65.3	0.1	7	-6.9	
R5 - HV1		14	1	70.7	71.5	66	0.8	10	Snd Lvl	71.5	0.0	7	-7.0	
R6 - HV2		15	1	66.5	67.9	66	1.4	10	Snd Lvl	67.9	0.0	7	-7.0	
R7 - HV3		18	1	70.1	71.1	66	1.0	10	Snd Lvl	71.1	0.0	7	-7.0	
R8 -HV4		19	1	72.2	73.3	66	1.1	10	Snd Lvl	73.3	0.0	7	-7.0	
T1 - Trail west portal		23	1	76.4	78.6	66	2.2	10	Snd Lvl	70.3	8.3	7	1.3	
<b>Dwelling Units</b>			<b># DUs</b>	<b>Noise Reduction</b>										
				<b>Min</b>	<b>Avg</b>	<b>Max</b>								
				<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected			9	0.0	1.1	8.3								
All Impacted			7	0.0	1.4	8.3								
All that meet NR Goal			1	8.3	8.3	8.3								

**Appendix C**  
**Owner Abatement Survey**





March 26, 2012

Kevin O'Malley, Chair  
Clear Creek County Board of Commissioners  
P.O. Box 2000  
Georgetown, Co 80444

RE: I-70 Twin Tunnels Noise Abatement Mitigation Desires Survey for Scott Lancaster Trail

The Federal Highway Administration, in cooperation with the Colorado Department of Transportation (CDOT), is preparing an Environmental Assessment for proposed changes to the eastbound lanes of I-70 and the eastbound bore of the Twin Tunnels between MP 241 and MP 244 in Clear Creek County, Colorado. The Twin Tunnels area is one of the most congested locations along the I-70 Mountain Corridor. Improvements are necessary to improve safety, operations, and travel time reliability in the eastbound direction of I-70 in the project area.

The Scott Lancaster Trail crosses Clear Creek at the Scott Lancaster Trail Bridge near the Twin Tunnels west portal. The trail in this area is very close to mainline I-70 travel lanes and is impacted by highway generated traffic noise. The trail is identified under the CDOT Noise Analysis and Abatement Guidelines (2011) as a Noise Abatement Criteria C for noise sensitive special uses, including parks, recreational areas and trails, with a noise level impact threshold of 66 dBA or more. The current noise level at the trail bridge is approximately 77 decibels (dBA). The 2035 noise level predicted from future traffic volumes, speeds, and highway (and tunnel) configuration is 79 dBA. This noise level is well above the impact threshold for a recreational trail.

When an impacted noise sensitive site is identified within the project area, a mitigation analysis must be conducted to assess whether noise abatement measures, such as a noise barrier or berm, could be implemented to reduce noise levels to the affected site. Federal regulations require that a noise abatement measure must pass tests for both feasibility and reasonableness to be built on a federally funded project.

Feasibility of abatement addresses the physical constructability of an acoustically effective noise barrier at a particular site. These criteria include:

- Does the proposed mitigation measure provide at least 5 dBA of noise reduction to

- a front row receptor?
- Are there any “fatal flaw” safety or maintenance issues involved with the proposed mitigation measure?
- Are there any obvious engineering constructability issues with the proposed mitigation measure?

Reasonableness of abatement evaluates the combination of economic and social factors associated with noise abatement measures. Three reasonableness criteria must be satisfied:

- Does the proposed mitigation measure provide a minimum of 7 dBA for one impacted receptor associated with the abatement measure?
- Is the proposed abatement measure cost-reasonable? Is the cost benefit index no more than \$6,800 per receptor per decibel of reduction?
- What is the simple majority desire of abatement benefited owners and residents?

A noise mitigation analysis was conducted for the impacted Scott Lancaster Trail. The results indicate that a wall 200 feet long and six feet high adjacent to the Scott Lancaster Trail bridge provides a noise-shadow effect for the area, reducing noise levels by 8 dBA at the bridge location. Please see location of proposed noise barrier noted by green line on aerial photograph of the west portal area below. No “fatal flaw” constructability or maintenance concerns were identified, thus meeting the feasibility criteria. However, the six-foot tall noise wall could create contextual visual concerns by potentially limiting the recreational view shed.



The wall was estimated to cost \$52,000 and resulted in a cost benefit index of \$6,500 per receptor per decibel reduction. This wall meets the 7dBA noise reduction design goal and

is considered to be an acoustically effective noise barrier with reasonable cost benefit. This completes two of the three required reasonableness tests.

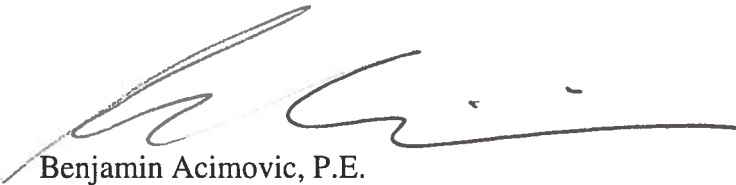
According to the CDOT Noise Analysis and Abatement Guidelines (2011) the owner and resident (in the case of a dwelling unit or business) of a "benefited" property will be solicited to vote on the decision to build or not build the identified abatement measure. A "benefited" property is one that receives 5 dBA or more noise reduction resulting from the mitigation. For Scott Lancaster Trail, the trail only has an owner by jurisdictional authority, the Clear Creek County Board of County Commissioners, and is allowed one consensus vote regarding the decision to either build or not build a noise barrier at the identified mitigation location near the Scott Lancaster Trail Bridge over Clear Creek at the west Twin Tunnels portal.

CDOT respectfully requests your preliminary recommendation to build a noise mitigation at the identified location. A final decision will be requested of the Commission during the project's final design phase. The decision should be communicated by March 30, 2012 by a written response to Colorado Department of Transportation.

Sincerely,

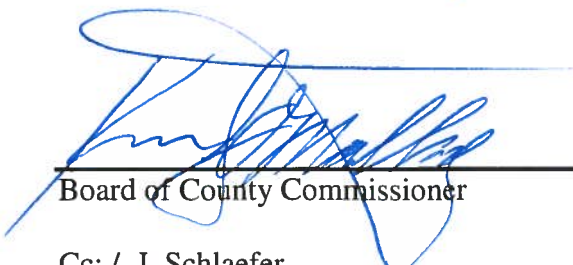


David J Singer  
CDOT I-70 Mountain Corridor Environmental Program Manager



Benjamin Acimovic, P.E.  
CDOT Twin Tunnel Project Manager

The BOCC recommends:  does not recommend:



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Board of County Commissioner

Cc: / J. Schlaefer