

Route US 29 Bypass

Albemarle County, Virginia

PROJECT 6029-002-F22, PE-101

RUVA-002-001, PE-101



Final Design Noise Report

Prepared by
Parsons Brinckerhoff Quade & Douglas, Inc.

Prepared for
Virginia Department of Transportation

FEBRUARY 1997

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1. INTRODUCTION

The Virginia Department of Transportation (VDOT) is designing the Route 29 Bypass in Albemarle County, just outside of the city limits of Charlottesville. The six-mile Bypass will be a four-lane, limited access highway to take through traffic from existing Route 29 and reduce congestion for local traffic. Located west of Route 29, the southern end of the Bypass will intersect the Route 29/250 bypass in the vicinity of St. Anne's Belfield School and includes a connection into the University of Virginia's North Grounds. As part of the project, the Route 29/250 bypass will be realigned. At its northern end the Bypass will re-connect with existing Route 29 approximately one-half mile north of the South Fork of the Rivanna River. No intermediate interchanges are proposed on the new Bypass. The alignment is shown in Figure 1. Note that two alternatives are being considered through the Stillhouse Mountain area - the Central alignment and the Eastern alignment.

A noise analysis was performed to determine the effect of the proposed Bypass on noise levels at sensitive land uses along the project corridor. A field survey to determine ambient noise levels in the project corridor was performed. Ambient noise levels and predicted noise levels, with and without the Bypass, were compared to determine traffic noise impacts. Where traffic noise impacts were predicted, the value of abatement measures for reducing or eliminating noise impacts was examined.

This report describes analysis findings and contains background material pertinent to discussion of those findings. A discussion of fundamental concepts of roadway noise is included, along with descriptions of the Federal Highway Administration (FHWA) Noise Abatement Criteria and noise prediction model, and the VDOT *State Noise Abatement Policy* (January 1, 1997).

Traffic noise impacts were determined using the current procedures for the abatement of highway traffic noise and construction noise, appearing as Part 772 of Title 23 of the *Code of Federal Regulations*.

2. FUNDAMENTAL CONCEPTS OF ROADWAY NOISE

2.1 GENERATION OF SOUND

Sounds exist in our environment at all times. Some sounds are necessary or desirable for our communication or pleasure, some are unnoticed, and some are unwanted or disturbing. Table 1 illustrates sounds that bombard us daily and shows the corresponding decibel level (dB). By definition, unwanted sounds are called noise. The following subsections provide a background for some of the concepts and terminology of sound and noise.

Sound is a disturbance that propagates as a wave through air, causing air particles to vibrate. Although the generating motion and the resultant motion of the air particles are very small, a sound wave can propagate over several miles. Three basic parameters of environmental noise play major roles in determining human subjective response. These parameters are:

- Intensity or level
- Frequency spectrum and how it is heard
- Time-varying character.

Table 1
Hearing: Sounds that Bombard Us Daily

D E C I B E L S	140	Shotgun blast, jet 30.5 meters (100 feet) away at take-off Motor test chamber	Pain Human hearing pain threshold
	130	-----	
	120	Firecrackers Severe thunder, pneumatic jackhammer Hockey crowd Amplified rock music	Uncomfortably loud
	110	-----	
	100	Textile loom Subway train, elevated train, farm tractor Power lawn mower, newspaper press Heavy city traffic, noisy factory	Loud
	90	-----	
	80	Diesel truck 65 kph (40 mph) 15.2 meters (50 feet) away Crowded restaurant, garbage disposal Average factory, vacuum cleaner Passenger car 80.5 kph (50 mph) 15.2 meters (50 feet) away	Moderately loud
	70	-----	
	60	Quiet typewriter Singing birds, window air conditioner Quiet automobile Normal conversation, average office	Quiet
	50	-----	
	Household refrigerator Quiet office	Very quiet	
40	-----		
30	Average home Dripping faucet Whisper 1.5 meters (5 feet) away		
20	Light rainfall, rustle of leaves Whisper	Average persons' threshold of hearing Just audible	
10	-----		
0		Threshold for acute hearing	

Sources: World Book Encyclopedia, Rand McNally Atlas of the Human Body, encyclopedia Americana
 Industrial Noise and Hearing Conversation* by J.B. Olishifski and E. R. Harford
 (Researched by N. Jane Hunt and published in the Chicago Tribune in an illustrated
 graphic by Tom Heinz.)

2.2 INTENSITY OR LEVEL

The first parameter of environmental noise, intensity, or level is quantified in decibels (dB). The range of pressure variations that the human ear can detect is tremendous; however, to describe sound in terms of pressure variations would be very cumbersome because of the great range of amplitudes that is involved. Therefore, a compressed scale was devised based upon the logarithm of the mean square pressure. The decibel or dB is the unit of this compressed scale. By using these units, the range of normally encountered sounds can be expressed as 20 to 140 dB rather than as 1 to 1,000,000.

2.3 FREQUENCY AND A-WEIGHTED SOUND LEVEL

The second parameter of environmental noise that can be quantified is frequency. As a sound wave passes a point, the air pressure alternately rises and falls. Each time the pressure rises and falls, it completes one cycle. The number of cycles per second (called Hertz, Hz) is the unit in which frequency is expressed.

Frequency is observed subjectively as the tone or pitch of a sound. The human ear can detect a wide range of frequencies: from about 20 to 17,000 Hz. The low frequencies (20 to 500 Hz) have a low-pitched, or bass, sound. The mid-frequencies range from roughly 500 to 3,000 Hz, where most speech information is carried. High frequencies are from 3,000 to 17,000 Hz.

The most commonly used measure of noise level is the A-weighted sound level (dBA). From many experiments with human listeners, scientists have found that the human ear is more sensitive to midrange frequencies than it is to either low or very high frequencies. At the same sound level, midrange frequencies are therefore heard as louder than low or very high frequencies. This characteristic of the human ear is taken into account by adjusting or weighting the spectrum of the measured sound level for the sensitivity of human hearing. The A-weighted sound level is a measure of sound intensity with weighted frequency characteristics that correspond to human subjective response to noise. The A-weighted sound level is accepted by acousticians as a proper noise impact unit for traffic noise.

An understanding of the following relationships is helpful in providing a subjective impression of changes in the A-weighted sound level:

1. Except in carefully controlled laboratory experiments, an increase of only 1 dB in A-weighted level cannot be perceived.
2. Outside of the laboratory, a 3 dB increase in A-weighted level is considered a just-noticeable difference.
3. A change in A-weighted level of at least 5 dB is required before any significant change in the noise level in a community would be perceived.

A 10 dB increase in A-weighted level is subjectively heard as approximately a doubling in loudness, independent of the existing noise level.

Table 1 illustrates the relationship of decibels and common everyday sounds. The degree of disturbance or annoyance of unwanted sound depends on the amount of intruding noise, the relationship to background noise and the type of activity occurring when the noise is heard.

2.4 SOUND LEVEL DESCRIPTORS

The third basic parameter of environmental noise is its time-varying character. The sound level from any roadway fluctuates from moment to moment as time passes. These fluctuations constitute the time-varying properties of roadway noise.

A common descriptor for environmental noise is L_{eq} , which is defined as the continuous A-weighted sound level that in a given time period contains the same energy as the actual time-varying sound during that period.

Another frequently used descriptor is L_{10} , which is the A-weighted sound level that is exceeded 10 percent of the time a noise is sampled. An L_{10} of 60 dBA means that the sound level was above 60 dBA only 10 percent of the time. Other statistical descriptors include L_{50} (the sound level exceeded 50 percent of the time) and L_{90} (the sound level exceeded 90 percent of the time).

The sound level descriptor used in this study is L_{eq} . L_{eq} has been shown to be a particularly stable descriptor for traffic noise assessment. L_{eq} is typically evaluated over a one-hour period, and is denoted as $L_{eq}(h)$. All noise levels determined in this study are $L_{eq}(h)$.

3. NOISE ABATEMENT CRITERIA

Part 772 of Title 23 of the *Code of Federal Regulations* contains the noise regulations promulgated by the FHWA. The regulations require that a noise analysis be conducted for all highway projects. Noise sensitive land uses and activities in the vicinity of highway projects must be identified and anticipated noise levels must be computed for the noise-sensitive areas on the basis of expected design hour or worst case conditions. The regulations contain noise abatement criteria (Table 2) considered by FHWA to be upper limits of acceptable noise levels for exterior land uses and outdoor activities and for certain interior uses. Noise levels are to be predicted to determine the need for noise abatement measures for existing developed land. Measures to meet the noise abatement criteria are to be implemented on all projects to the extent that reasonable opportunities exist to control noise. Factors associated with 23 CFR 772 important to this project are:

- FHWA authorizes the use of federal funds for noise abatement whenever a traffic noise impact can be identified, provided that the measures reduce the noise impact and the overall benefits exceed the overall adverse social, economic, and environmental effects.
- A noise impact can exist when the predicted traffic noise levels approach or exceed the noise abatement criteria; or the predicted traffic noise levels substantially exceed the existing levels.
- The noise abatement criteria in the standards represent a balancing between that which is desirable and that which may be achievable; noise impacts can occur even though the noise abatement criteria are achieved.
- The values in Table 2 should be viewed as maximum acceptable values, with the recognition that in many cases the achievement of lower noise levels would result in even greater benefits to the community. Highway agencies are urged by FHWA to strive for noise levels below those listed in Table 2, if they can be achieved at reasonable cost and without undue difficulty, and where the benefits appear to clearly outweigh the costs and efforts required.

Table 2
Noise Abatement Criteria

Hourly A-Weighted Sound Level - decibels (dBA)

<i>Activity Category</i>	<i>L_{eq}(h)</i>	<i>Description of Activity Category</i>
A	57 (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 serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
C	72 (Exterior)	Developed lands, properties or activities not included in Categories A or B above.
D	--	Undeveloped lands
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

Source: Part 772 of Title 23 of the *Code of Federal Regulations*.

- While the noise abatement criteria apply to lands which are developed, the standards indicate that highway agencies may consider the desirability of applying them to certain undeveloped lands which are likely to be developed. In addition, highway agencies are to furnish local officials with approximate generalized noise levels for various distances from the highway improvements and other information to assist and encourage local governments to develop and implement programs (such as zoning or subdivision control) to protect against future development which is incompatible with the expected noise levels along the highway.

The above conditions do not apply to the areas that have limited human use, or where lower noise levels would result in little benefit. The exterior noise abatement criteria apply to outdoor areas that have regular human use and where a lowered noise level would be of benefit to the public. The values do not apply to the entire tracts where the activity is based, but only to portions on which the activity normally occurs.

Interior noise abatement criteria apply to indoor activities for those parcels where exterior activities on a tract are either remote from the highway or shielded in some manner so that the exterior activities will not be significantly affected by the noise, but the interior activities will. Interior noise level prediction may be computed by subtracting the standard noise reduction factors applicable to the building in question from the predicted levels.

The criteria do not guarantee the elimination of annoyance or disturbance from traffic noise, even in those situations where noise abatement criteria are met. As indicated earlier, they represent the upper limit of acceptable average noise levels and they indicate when noise abatement should be considered. Occasional peak noises, such as those which occur from the passage of a few trucks per hour, will not be fully controlled. The reduction of these occasional noise peaks (and current reduction of annoyance) will come when the appropriate agencies provide for reduction of vehicle source noise levels, both through improved vehicle noise emission standards and enforcement of maximum operating noise limits. However, if applied, the criteria of Table 2 can ensure that noise is given proper consideration in the development of highway projects.

The FHWA provides no criteria for determining when the predicted noise levels "substantially" exceed existing levels. However, the VDOT *State Noise Abatement Policy* defines approaching or exceeding as any activity category land use with a predicted noise level within 1 dBA of its criteria. Substantial increases are defined as an L_{eq} increase of 10 dBA or more for the future year over the existing ambient L_{eq} level.

In addition, the VDOT *State Noise Abatement Policy* states that undeveloped lands are to be treated as developed lands if a proposed land use development plan has been approved by the local jurisdiction prior to the date of approval of the project alignment by the Commonwealth Transportation Board.

4. EXISTING CONDITIONS

4.1 PROJECT AREA LAND USE

The Bypass alignment traverses primarily rolling terrain in Albemarle County. Steep terrain is encountered in the Stillhouse Mountain area. Existing land use in the project area is primarily residential. Non-residential land uses at the southern end include the University of Virginia's Darden School Complex in the North Grounds, St. Anne's Belfield School, and several businesses along the Route 29/250 bypass. At the northern end, non-residential land uses include a hotel, several small industrial businesses, and retail facilities. Along the route, there are two schools close to the alignment, a church at the intersection of Hydraulic and Rio Roads, and several businesses on the west side of Rio Road.

4.2 AMBIENT NOISE MEASUREMENTS

A noise measurement survey was conducted in the project area in June, 1996 and January, 1997 to document existing (ambient) noise levels. Sites selected were representative of noise sensitive receptors within the project area. Figure 1 shows the 14 measurement sites. Table 3 lists the locations where measurements were made and the corresponding measured L_{eq} . At those sites where there was noise from existing roads, traffic counts were taken during the measurements. At the other sites, background noise was measured to document non-traffic generated noise levels in the project area.

The locations were selected so that there were no or minimal buffers or barriers between the roadway and receptor. Noise measurements were recorded for 20 minute periods. The noise meter used for this project was a Type-I Noise Level Analyzer B&K/2230. Accessories included a B&K/4231 calibrator, and a B&K/1565 microphone and windshield. The microphone was placed five feet above the ground.

**Table 3
Noise Measurement Results**

Site #	Nearest Roadway	Distance from			Traffic (vph)			Estimated		Measured $L_{eq}(h)$	Calculated $L_{eq}(h)$	Difference $L_{eq}(h)$
		Centerline of Near Lane (m)	A	MT		HT	Speed (kph)					
				MT	HT							
M1	29/250 Bypass	30	234	15	18	90	64.5	65.4	0.9			
M2	N/A	N/A	N/A	N/A	N/A	N/A	51.1	N/A	N/A			
M3	Massie Rd.	15	200	4	2	56	59.3	58.0	-1.3			
M4	29/250 Bypass	75	435	17	20	90	62.3	60.7	-1.6			
M5	N/A	N/A	N/A	N/A	N/A	N/A	48.4	N/A	N/A			
M6	Hydraulic Rd.	10	189	6	0	70	65.4	63.5	-1.9			
M7	& Lambs Rd.	10	40	1	1	70	49.3	49.5	0.2			
M8	Lambs Rd.	20	42	0	0	70	62.8	63.3	0.5			
M9	Hydraulic Rd.	20	630	8	7	70	53.8	N/A	N/A			
M10	N/A	N/A	N/A	N/A	N/A	N/A	62.1	64.1	2.0			
M11	Rio Rd.	20	740	10	9	70	49.0	N/A	N/A			
M12	N/A	N/A	N/A	N/A	N/A	N/A	48.5	N/A	N/A			
M13	N/A	N/A	N/A	N/A	N/A	N/A	50.5	N/A	N/A			
M14	N/A	N/A	N/A	N/A	N/A	N/A	56.2	N/A	N/A			

Note:

1. Only those roads contributing noise at a particular site are included under Nearest Roadway.
2. Traffic count (vehicles per hour) refers to time of measurement. A= automobiles, MT = medium trucks, HT = heavy trucks
3. At sites M2, M5, M9, M11, M12, M13 and M14 traffic count at time of measurement was insignificant.
4. Noise level at site M14 affected by noise from the River.

At those sites which experienced traffic noise, the traffic conditions during the field measurements were used with a traffic noise prediction model (described below) to calculate existing noise levels for comparison with the measured levels. This procedure was done to confirm the prediction model would provide accurate results for the project area. The model output is in Appendix A. The calculated noise levels ranged between 0.2 to 2.0 dBA of the measured noise levels for these locations. Differences between measured and calculated levels are small enough that they can be attributed to "bunching" of vehicles, stop-and-go traffic movements, and actual vehicle speeds versus the computer's "evenly spaced" vehicles and single vehicle speed.

5. PREDICTION OF FUTURE NOISE LEVELS

5.1 MODEL

The procedure used to predict future traffic noise levels was the noise Barrier Cost Reduction (BCR) procedure, STAMINA 2.0 and OPTIMA (revised March 1983). This procedure is based upon the *FHWA Highway Traffic Noise Prediction Model* (FHWA-RD-77-108). Model results take into account the number and type of vehicles on the roadway, their speeds, the physical characteristics of the road (curves, hills, depressed, elevated, etc.), receptor location and height, and, if applicable, barrier type, barrier ground elevation, and barrier top elevation.

5.2 SCREENING PROCESS TO DETERMINE IMPACT LOCATION

The STAMINA 2.0 computer model was utilized to determine the number of land uses (by type) that would be exposed to noise levels approaching or exceeding the FHWA noise abatement criteria during the peak hour in the 2022 design year. Those land uses where a substantial noise increase would occur also were determined.

5.3 ASSUMPTIONS

All significant existing natural or manmade barriers were modeled. Where applicable, noise attenuation resulting from the type of surface or other physical characteristics of the area (mainly alpha values and shielding factors) between the roadway and receptor was taken into account.

Highway-related noise predictions were made for 1996 and 2022 worst-case traffic conditions with and without the project. The truck percentages for the Route 29 Bypass are three for heavy trucks and four percent for medium trucks. On other roads in the project area the truck percentage varies from one to four percent for heavy trucks, and one to four percent for medium trucks. These percentages were utilized when modeling all scenarios.

5.4 PROCESS

The roadway system was modeled using a Cartesian coordinate system for roadways and receptors. The model takes into consideration the vertical and horizontal alignments of different roadway segments, as well as the elevation of the receptors. Because of limitations in the number of receptors and roads that can be included in a single STAMINA computer file, four files were required to accommodate all receptors. In addition, two files were prepared for each set of receptors to account for all the roads. The results for each receptor and roadway set (shown in

Appendices, B, C, D and E) then were combined (logarithmically) to obtain the total L_{eq} using the equation:

$$\text{Total } L_{eq} = 10 \times \log (10^{0.1 \times L_{eq}(\text{File 1})} + 10^{0.1 \times L_{eq}(\text{File 2})})$$

The modeling results were used to determine worst-case noise levels at the noise sensitive land uses within the project area.

6. ANALYSIS FINDINGS

6.1 PROJECT IMPACT

A total of 134 sites were modeled to represent the typical land use pattern of the study area. These sites, shown in Figure 2, were residences, schools, businesses, and churches approximately of the proposed Bypass and associated improvements. Table 4A and 4B present for the 134 sites the ambient noise level for existing conditions and the predicted year 2022 noise level with and without the introduction of the project. Appendix B contains the detailed results for existing conditions, Appendix C contains the results for the No-Build scenario, and Appendices D and E contain the results for the project (the Central and Eastern alignments respectively). Note that the STAMINA results for the ambient and No-Build conditions are used in Table 4A and 4B only for those sites that are or will experience traffic noise. At all other locations, field measurements determined that noise levels are and will continue to be between 48 and 49 dBA. Table 4B shows results for the Stillhouse Mountain area only for the Eastern alignment. At all other locations, Table 4A results apply.

These tables indicate that the FHWA NAC of 67 dBA for Category B activities would be approached (within 1 dBA) or exceeded at 26 residences (two of which are trailers) with the project. The maximum noise level at an impacted residence is estimated to be 73 dBA (site 109). These impacts are at locations that are either (a) in very close proximity to the Bypass, or (b) locations near Route 29/250 bypass (the latter primarily impacted by traffic on that road).

Fifteen residences abutting the north side of Route 29/250 bypass in Canterbury Hills exceed or approach the FHWA NAC of 67 dBA. However, because the Route 29 Bypass will divert traffic from the Route 29/250 bypass, noise levels will not increase over ambient levels and in some cases will decrease (for those residences located closer to the future Bypass interchange since the Route 29/250 bypass will be realigned away from these residences. This also explains why the four residences in Canterbury Hills nearest to the Bypass (sites 42 to 45) will not experience a significant increase in noise levels. Under the No-Build scenario, noise levels actually will increase for all the 15 residences abutting the north side of Route 29/250 bypass as a result of continued growth in traffic on Route 29/250 bypass.

No residences through the Colthurst Farms subdivision will experience noise levels exceeding or approaching the FHWA NAC of 67 dBA under either alternative, since: a) those residences that would be most impacted have been or are proposed to be acquired by VDOT and b) both alignments are in relatively deep cuts through this area.

Other residences that will be impacted by exceeding or approaching the FHWA NAC of 67 dBA are typically sites within 60 meters of the Bypass, and, excluding those acquired or proposed to be acquired by VDOT, are identified as follows:

~197 feet

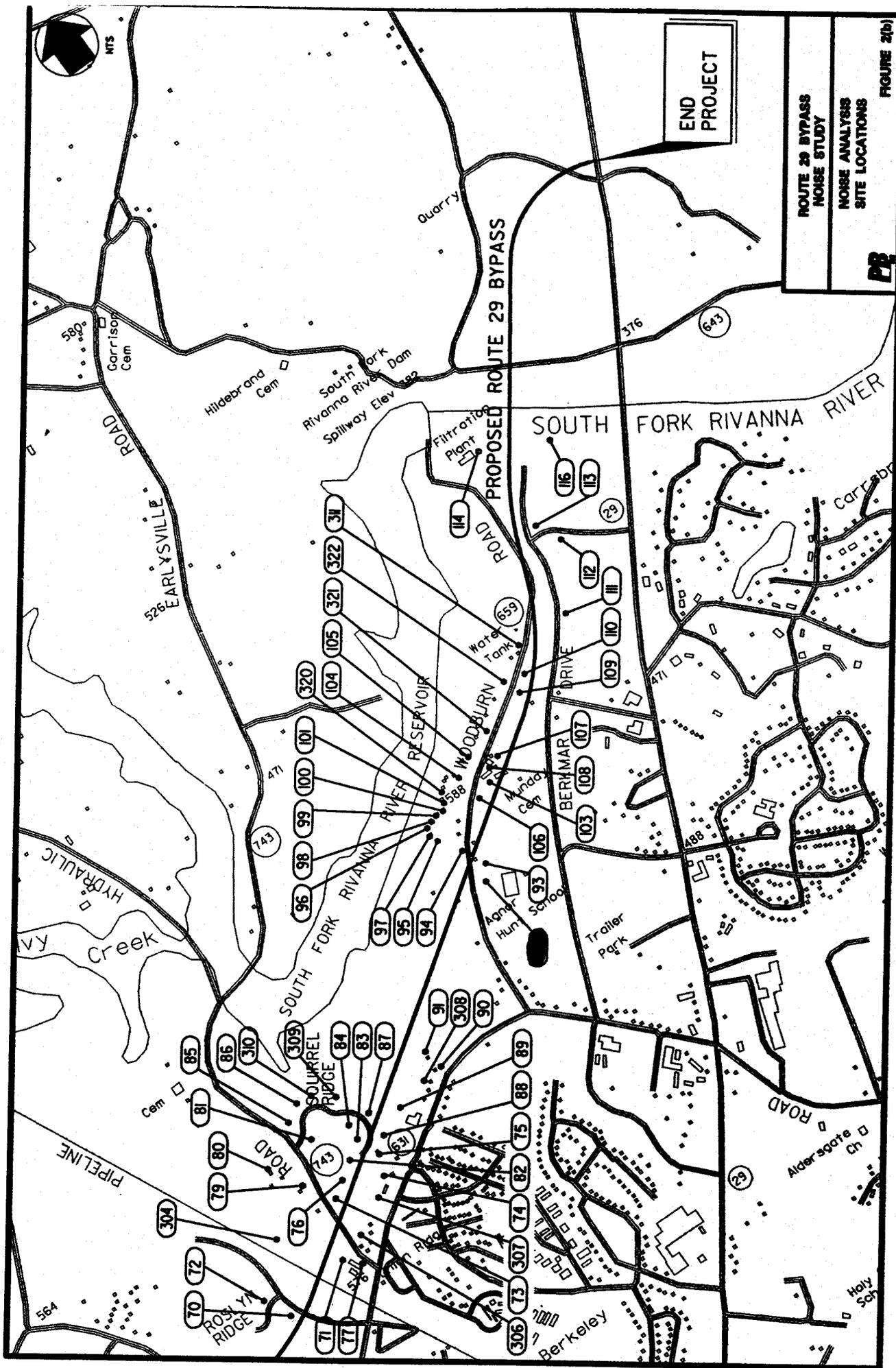


ROUTE 29 BYPASS
NOISE STUDY

NOISE ANALYSIS
SITE LOCATIONS

FIGURE 2(a)

EP



END PROJECT

ROUTE 29 BYPASS
NOISE STUDY
NOISE ANALYSIS
SITE LOCATIONS

PR

FIGURE 2(b)

Table 4A
Traffic Noise Exposures (L_{eq}) - Central Alignment

Site #	Land Use	FHWA Activity Category	Existing Noise Level L_{eq} (h)	Year 2022			
				Projected Noise Levels		Noise Level Change	
				Build L_{eq} (h)	No-Build L_{eq} (h)	Build L_{eq} (h)	No-Build L_{eq} (h)
1	Apartments	B	60	63	62	3	2
2	Apartments	B	58	61	60	3	2
3	Apartments	B	53	62	54	9	2
4	Apartments	B	53	60	54	7	2
5	Apartments	B	52	57	54	5	2
6	University	B	54	60	56	6	2
7	Apartments	B	53	57	55	4	2
8	University	B	56	60	58	4	2
9	Residence	B	52	58	54	6	2
10	Apartments	B	56	59	58	3	2
11	Apartments	B	58	61	60	3	2
12	Residence	B	53	57	54	5	2
13	School	B	67	64	69	-4	2
14	School	B	60	61	61	1	2
15	School	B	57	60	59	3	2
16	University	B	58	60	59	3	2
17	School	B	62	61	64	-1	2
18	Residence	B	68	68	70	0	2
19	Residence	B	66	66	68	0	2
20	Residence	B	66	66	67	0	2
21	Residence	B	67	68	69	0	2
22	Residence	B	65	65	66	0	2
23	Residence	B	68	68	69	0	2
24	Residence	B	64	64	66	0	2
25	Residence	B	66	66	68	-1	2
26	Residence	B	66	66	68	0	2
27	Residence	B	66	66	68	0	2
28	Residence	B	68	67	69	0	2
29	Residence	B	66	66	68	-1	2
30	Residence	B	67	67	69	-1	2
31	Residence	B	68	68	70	-1	2
32	Residence	B	66	65	68	-1	2
33	Residence	B	68	65	70	-3	2
34	Residence	B	69	67	71	-2	2
35	Residence	B	69	67	71	-2	2
36	Residence	B	70	67	71	-2	2
37	Residence	B	67	65	69	-2	2
38	Business	C	70	72	72	2	2
39	Business	C	71	73	73	2	2
40	Business	C	71	73	73	2	2

Site #	Land Use	FHWA Activity Category	Existing Noise Level L _{eq} (h)	Year 2022			
				Projected Noise Levels		Noise Level Change	
				Build L _{eq} (h)	No-Build L _{eq} (h)	Build L _{eq} (h)	No-Build L _{eq} (h)
41	2 Businesses (includes approved Ivy Commons office bldg)	C	70	70	71	1	2
42	Residence	B	62	62	63	1	2
43	Residence	B	60	61	62	1	2
44	Residence	B	57	60	59	3	2
45	Residence	B	56	59	57	4	2
46	Residence	B	48	56	48	7	0
47/318	Residence	B	48	57	48	8	0
48	Residence	B	48	54	48	5	0
49	Residence	B	48	54	48	5	0
50/316	Residence	B	48 To be acquired ¹				
51	Residence	B	48	65	48	16	0
52	Residence	B	48	60	48	11	0
53	Residence	B	48	57	48	9	0
313	Residence	B	48 To be acquired ¹				
315	Residence	B	48 To be acquired ¹ (including tennis court, R314)				
317	Residence	B	48 To be acquired ¹				
54	Residence	B	51	57	53	6	2
55	Residence	B	53	60	55	7	2
56	Residence	B	48	57	53	9	5
57	Residence	B	48 Acquired ²				
58	Residence	B	48	72	48	24	0
59	Residence	B	48	64	48	16	0
60	Residence	B	48	67	48	19	0
61	Residence	B	48 Acquired ²				
62	Residence	B	48 To be acquired ¹				
63	Residence	B	48	67	48	19	0
300	Residence (5)	B	48	62	48	14	0
64	Residence	B	48 Acquired ²				
65	School Playgrounds (2)	B	48	64	48	16	0
66	Residence	B	49 Acquired ²				
67	Residence	B	50	63	51	13	1
68	Residence	B	50	58	51	8	1
69	Residence	B	50	60	51	10	1
301	Residence	B	48	59	48	10	0
302	Residence	B	48	59	48	11	0
303	Residence	B	50	61	53	11	2

Site #	Land Use	FHWA Activity Category	Existing Noise Level L _{eq} (h)	Year 2022			
				Projected Noise Levels		Noise Level Change	
				Build L _{eq} (h)	No-Build L _{eq} (h)	Build L _{eq} (h)	No-Build L _{eq} (h)
319	Residence	B	48	59	48	10	0
70	Residence	B	51	Acquired ²			
71	Church (Bypass side)	B	56	61	58	5	2
77	Church (Hydraulic Rd side)	B	61	64	63	3	2
72	Residence	B	49	57	51	8	1
73	Residence	B	63	70	64	7	2
74	Residence	B	56	Acquired ²			
75	Residence	B	55	Acquired ²			
76	Residence	B	56	65	57	10	2
77	Residence	B	61	64	63	3	2
79	Residence	B	64	67	66	3	2
80	Residence	B	59	63	61	3	2
81	Residence	B	61	64	63	3	2
82	Residence	B	55	62	57	7	2
83	Residence	B	54	61	56	7	2
84	Residence	B	55	60	57	5	2
85	Residence	B	61	64	63	3	2
86	Residence	B	56	59	57	4	2
87	Residence	B	52	69	54	17	2
88	Business Business (rear)	B	54	64	56	11	2
89	Residence	B	54	67	56	13	2
90	Residence	B	61	65	63	4	2
91	Residence	B	53	64	55	11	2
304	Residence	B	52	61	54	9	2
306	Trailer	B	64	67	65	3	2
307	Trailer Park/ Business (rear)	B/C	58	63	60	5	2
308	Residences	B	60	64	62	4	2
309	Residence	B	50	61	52	11	2
310	Residence	B	48	58	49	10	2
92	Foundation	B	48	64	48	16	0
93	Residence	B	49	65	49	16	0
94	Residence	B	49	65	49	16	0
95	Residence	B	49	61	49	12	0
96	Residence	B	49	58	49	9	0
97	Residence	B	49	59	49	10	0
98	Residence	B	49	58	49	9	0

Site #	Land Use	FHWA Activity Category	Existing Noise Level $L_{eq}(h)$	Year 2022			
				Projected Noise Levels		Noise Level Change	
				Build $L_{eq}(h)$	No-Build $L_{eq}(h)$	Build $L_{eq}(h)$	No-Build $L_{eq}(h)$
99	Residence	B	49	57	49	8	0
100	Residence ³	B	49	57	49	8	0
101	Residence ³ School	B	49	57	49	8	0
102 ²	Playground	B	49	62	49	13	0
103	Business	C	49	70	49	21	0
104	Residence ³	B	49	62	49	13	0
105	Residence ⁴	B	52	61	53	9	1
106	Trailer	B	50	66	50	16	0
107	Business	C	49	71	49	22	0
108	Business	C	50	66	50	16	0
109	Residence	B	50	73	50	23	0
110	Residence	B	50	72	50	22	0
311	Residence ⁴	B	60	68	60	8	0
320	Residence ³	B	49	55	49	6	0
321	Residence ⁴	B	55	62	55	7	0
322	Residence ⁴	B	53	63	53	10	0
111	Business	C	50	66	50	16	0
112	Business	C	50	64	50	14	0
113	Business	C	50	69	50	19	0
114	Business	C	56	61	56	5	0
116	Hotel	B	56	59	56	3	0

General Notes:

1. Numbers are not consecutive. Refer to Figure 2 for locations of sites.
2. Noise level changes may not compute directly from the table because of rounding.
3. At sites not experiencing traffic noise, ambient (existing) and No-Build noise levels are from measurements.
4. Ambient and No-Build noise levels at sites 114 and 116 are affected by noise from the River.
5. Sites 50 and 316 are the front and rear of the same residence respectively.
6. Site 318 is identical to 47 in the STAMINA output.
7. Site 312 represents an electrical substation. It was modeled in the STAMINA output but is not included in the above table.

Footnotes:

- ¹Residences that are proposed to be acquired by the Virginia Department of Transportation.
- ²Residences that have been acquired by the Virginia Department of Transportation.
- ³Sites 100,101,104,and 320 represent a total of 22 residential units.
- ⁴Sites 105, 311, 321 322 represent a total of 9 residences.

Table 4B
Traffic Noise Exposures (L_{eq}) - Eastern Alignment (Stillhouse Mountain Area Only)

Site #	Land Use	FHWA Activity Category	Existing Noise Level L_{eq} (h)	Year 2022			
				Projected Noise Levels		Noise Level Change	
				Build L_{eq} (h)	No-Build L_{eq} (h)	Build L_{eq} (h)	No-Build L_{eq} (h)
46	Residence	B	48	55	48	6	0
47/318	Residence	B	48	58	48	10	0
48	Residence	B	48	54	48	5	0
49	Residence	B	48	54	48	6	0
50/316	Residence	B	48 Acquired ²				
51	Residence	B	48	63	48	15	0
52	Residence	B	48	56	48	8	0
53	Residence	B	48	56	48	7	0
313	Residence	B	48 To be acquired ¹				
314	Tennis court with residence (315)	B	48	59	48	11	0
315	Residence	B	48	58	48	10	0
317	Residence	B	48	65	48	16	0

General Notes:

1. Numbers are not consecutive. Refer to Figure 2 for locations of sites.
2. Noise level changes may not compute directly from the table because of rounding.
3. At sites not experiencing traffic noise, ambient (existing) and No-Build noise levels are from measurements.
4. Sites 50 and 316 are the front and rear of the same residence respectively.
5. Site 318 is identical to 47 in the STAMINA output.

Footnotes:

- ¹Residences that are proposed to be acquired by the Virginia Department of Transportation.
²Residences that have been acquired by the Virginia Department of Transportation.

- Three residences in the Montvue subdivision (sites 58, 60, and 63). Site 58 will experience noise levels in excess of 70 dBA.
- Two residences in the Squirrel Ridge subdivision (sites 73 and 87). Site 73 will experience a noise level of 70 dBA.
- One residence on the south side of Hydraulic Road and west of the Bypass (site 79). Because of its proximity to Hydraulic Road, the No-Build level at the site will be only one dBA less (66 dBA compared to 67 dBA with the Bypass).
- A trailer on the north side of Hydraulic Road and west of the Bypass (site 306). Because of its proximity to Hydraulic Road, the No-Build level at the site will be only two dBA less (65 dBA compared to 67 dBA with the Bypass)
- A trailer and two residences located between Woodburn Road and the Bypass (sites 106, 109, and 110). The two residences will experience noise levels in excess of 70 dBA.
- A residence located on the west side of Woodburn Road close to the water tower (site 311).

The expected noise level increase (decrease) from ambient to 2022 with the project is included in Table 4A and 4B. Noise level changes for Category B activities range from -4 to 24 dBA. Table 4A also indicates that, with the Central alignment, 33 sites (including one trailer) will experience a substantial increase (10 dBA or more) in traffic noise levels with the project. Table 4B shows that with the Eastern alignment, four rather than two sites will be impacted in the Colthurst Farms subdivision, resulting in total of 35. With the Central alignment, 11 sites will experience an increase of 15 dBA or more. Twelve will be impacted with the Eastern alignment.

Substantial increases can be expected since the Bypass is entirely on new alignment through areas where, in most locations, existing (ambient) noise levels are very low. Increases at locations that are currently near and experience noise from a road are expectedly lower. Sites that are impacted include:

- Two residences in the Colthurst Farms subdivision with the Central alignment (sites 51 and 52). Site 51 will experience an increase of 15 dBA or more. With the Eastern alignment, four residences in the Colthurst Farms subdivision (site 47, 51, 315 including the tennis court, and 317). Sites 51 and 317 will experience an increase of 15 dBA or more.
- Nine residences in the Montvue subdivision (sites 58, 59, 60, 63, 300 and four sites not modeled). Four sites (58, 59, 60, and 63) will experience an increase of 15 dBA or more. Note that sites 58, 60, and 63 will also exceed or approach the FHWA NAC of 67 dBA. For those residences not modeled, the impacts have been projected by applying the results of a noise contour analysis. These include two additional residences in Magnolia Drive (one on the south side, one on the north side), and two additional residences towards the end of Montvue Drive (one on the south side, one on the north side).
- Three residences on Lambs Road west of the Bypass (sites 67, 69, and 301).
- Two residences in Gardencourt (between Lambs Road and Roslyn Ridge Road) east of the Bypass (sites 302 and 303).
- One residence in the Roslyn Ridge subdivision (site 319).

- Four residences in the Squirrel Ridge subdivision (sites 76, 87, 309, and 310). Site 87 will experience an increase of 15 dBA or more, and also will also exceed the FHWA NAC of 67 dBA
- One residence between Rio Road and the Bypass (site 91).
- One residence on the north side of Woodburn Road and east of the Bypass (site 93). This site will experience an increase of 15 dBA or more.
- Three units in the first complex of (six) residential units on the west side of Woodburn Road east of the Bypass (sites 94, 95, and 97). Site 94 experience an increase of 15 dBA or more.
- Two units in the second complex of 22 residential units on the west side of Woodburn Road east of the Bypass (site 104).
- Two residences on the west side of Woodburn Road between the second complex of residential units and the water tower (represented by site 322).
- A trailer and two residences located between Woodburn Road and the Bypass (sites 106, 109, and 110). All three sites will experience an increase of 15 dBA or more, and all three will also exceed or approach the FHWA NAC of 67 dBA.

No non-residential land uses included in the FHWA Category B activities (e.g., schools, parks, and churches) will experience noise levels exceeding or approaching the FHWA NAC of 67 dBA. However, the outer edges of the playing fields of the Jack Jouett Middle School and the Mary Greer Elementary School (represented by site 65) will experience a substantial increase (10 dBA or more) in traffic noise levels with the project. The play facilities at the Agnor-Hurt Elementary School on Woodburn Road (site 102, east of the Bypass) also will experience a substantial increase in noise level with the project.

Interior noise levels have also been considered for schools and churches, since activities in these facilities are considered to be particularly sensitive to noise. All of these facilities within the project area are air conditioned and therefore windows can be closed year round. Projected interior noise levels with closed windows at all of these locations (which from studies are known to be 20 dBA less than the exterior noise level) are less than the interior NAC (52 dBA).

The FHWA NAC of 72 dBA for Category C activities would be approached or exceeded at four businesses. Three are located around the Route 29/250 bypass/Old Ivy Road interchange (sites 38, 39, and 40), and will experience the same impacts under the Build and No-Build scenarios. The maximum noise level is estimated to be 73 dBA at sites 39 and 40. Site 107 (on Woodburn Road) is also impacted.

Eight businesses will be impacted by experiencing a noise level increase in excess of 10 dBA because of their close proximity to the Bypass and low ambient noise levels:

- Sites 88 and 89 between the Bypass and Rio Road.
- Sites 103, 107 and 108 located between Woodburn Road and the Bypass. Two of these are housed in metal garages, and one in a masonry garage.
- Sites 111, 112, 113 on Berkmar Road (112 and 113 are the rear or side of the Wal-Mart and Sam's Club stores, respectively).

A review of approved land use development plans identified only one future development that could be impacted by the project. This is a commercial development, Ivy Commons, at the interchange of Route 29/250 bypass and Ivy Road. This site is adjacent to and represented by site 41 and will not be impacted.

No Category A activities exist in the project area. In summary, the following impacts are projected:

- The FHWA NAC of 67 dBA for Category B activities will be approached or exceeded at 26 residences (two of which are trailers) with both alignments. Of these, seven also will experience a substantial increase (10 dBA or more).
- Substantial increases (10 dBA or more) will be experienced at 33 residences (one of which is a trailer) with the Central alignment. Of these, seven also will approach or exceed the FHWA NAC (the same seven indicated above).
- Substantial increases (10 dBA or more) will be experienced at 35 residences (one of which is a trailer) with the Eastern alignment. Of these, seven also will approach or exceed the FHWA NAC (the same seven indicated above).
- The FHWA NAC of 67 dBA for Category B activities will be approached or exceeded at three school outdoor playing facilities.
- The FHWA NAC of 72 dBA for Category C activities will be approached or exceeded at four businesses with both alignments. Of these, one also will experience a substantial increase (10 dBA or more).
- Substantial increases (10 dBA or more) will be experienced at eight businesses with both alignments. Of these, one also will approach or exceed the FHWA NAC (the same site as indicated above).

In total there are 66 and 68 sites impacted for the Central and Eastern alignments, respectively, i.e.:

- 52 and 54 residences are impacted for the Central and Eastern alignments, respectively,
- 3 school, playground facilities are impacted, and
- 11 businesses are impacted.

General 67 dBA and 72 dBA noise contours (distance from the edge of pavement where these noise levels associated with the FHWA Noise Abatement Criteria would occur) also were determined for Route 29 Bypass from modeling results. The contour calculations are presented in Table 5. This information is provided to assist local authorities in preventing or discouraging future development of noise sensitive activities within this area of effect.

Table 5
Approximate Noise Levels at Various Distances

Distance from Roadway ¹		Noise Level ²
Fe	(meters)	(dBA)
33	10	76
66	20	72
99	30	70
131	40	68
164	50	67
197	60	66
230	70	65
262	80	64
295	90	63
328	100	62
656	200	58

Approaches NAC at ~200'

¹Center of nearest Route 29 Bypass roadway (i.e. northbound or southbound roads)

²Applies to typical conditions only. Does not account for impacts from other noise sources (e.g., nearby roads).

6.2 PROJECT NOISE ABATEMENT

For proposed federal roadway projects, the FHWA requires that States consider noise abatement measures for receptors when a) the predicted design year noise levels approach or exceed those values shown for the appropriate activity category of the FHWA Noise Abatement Criteria (Table 2), with approach values being 1 dBA less than shown in the table, or b) the predicted design year noise levels substantially exceed existing noise levels.

The following paragraphs address the applicability of various noise abatement techniques at the sites where FHWA requires that noise abatement be considered (several of these meet both criteria). This information is summarized in Table 6. The techniques addressed are:

- Changes in the highway alignment selection
- Traffic system management measures
- Noise barriers

6.2.1 Highway Alignment Selection

Alignment selection involves the horizontal or vertical orientation of the proposed improvements in such a way as to minimize impacts and costs. The selection of alternative alignments for noise abatement purposes must consider the balance between noise impacts and other engineering and environmental parameters. For noise abatement, horizontal alignment selection is primarily a matter of siting the roadway at a sufficient distance from noise sensitive areas. Changes in the vertical alignment can also sometimes be effective in limiting noise impacts, particularly by minimizing grades and lowering the road.

**Table 6
Impacted Locations and Abatement Feasibility**

Receptor #	FHWA Activity Category	Primary Affecting Roadway	Year 2022, Alternatives				Noise Abatement Measures
			Build		No-Build		
			Exceed or App. FHWA Criteria	Substantial Increase	Exceed App. FHWA Criteria	Substantial Increase	
Central Alignment							
18	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
19	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
20	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
21	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
23	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
25	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
26	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
27	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
28	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
29	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
30	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
31	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
34	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
35	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
36	B	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
38	C	29/250 Bypass	Yes	No	Yes	No	Noise barrier evaluated
39	C	29/250 Bypass	Yes	No	Yes	No	Business
40	C	29/250 Bypass	Yes	No	Yes	No	Business
51	B	Route 29	No	Yes	No	No	Business
52	B	Route 29	No	Yes	No	No	Isolated residence - not cost-effective
58	B	Route 29	Yes	Yes	No	No	Isolated residence - not cost-effective
59	B	Route 29	No	Yes	No	No	Noise barrier evaluated
60	B	Route 29	Yes	Yes	No	No	Noise barrier evaluated
63	B	Route 29	Yes	Yes	No	No	Noise barrier evaluated
300 (5 res.)	B	Route 29	No	Yes	No	No	Noise barrier evaluated

Year 2022, Alternatives

Receptor #	FHWA Activity Category	Primary Affecting Roadway	Year 2022, Alternatives				Noise Abatement Measures
			Build		No-Build		
			Exceed or FHWA Criteria	Substantial Increase	Exceed App. FHWA Criteria	Substantial Increase	
65 (2 schools)	B	Route 29	No	Yes	No	No	School playgrounds - not cost-effective
67	B	Route 29	No	Yes	No	No	3 residences (67, 69, 301) - not cost-effective
69	B	Route 29	No	Yes	No	No	3 residences (67, 69, 301) - not cost-effective
301	B	Route 29	No	Yes	No	No	3 residences (67, 69, 301) - not cost-effective
302	B	Route 29	No	Yes	No	No	Isolated residence - not cost-effective
303	B	Route 29	No	Yes	No	No	Isolated residence - not cost-effective
319	B	Route 29	No	Yes	No	No	Isolated residence - not cost-effective
73	B	Route 29	Yes	No	No	No	Isolated residence - not cost-effective
76	B	Route 29	No	Yes	No	No	Noise barrier evaluated
79	B	Route 29	No	Yes	No	No	Noise barrier evaluated
87	B	Route 29	Yes	No	Yes	No	Isolated residence - not cost-effective
88	C	Route 29	Yes	Yes	No	No	Noise barrier evaluated
89	C	Route 29	No	Yes	No	No	Business
306	B	Route 29	Yes	No	No	No	Business
309	B	Route 29	No	No	No	No	Isolated residence - not cost-effective
310	B	Route 29	No	Yes	No	No	Noise barrier evaluated
91	B	Route 29	No	Yes	No	No	Noise barrier evaluated
93	B	Route 29	No	Yes	No	No	Isolated residence - not cost-effective
94	B	Route 29	No	Yes	No	No	Isolated residence - not cost-effective
95	B	Route 29	No	Yes	No	No	Noise barrier evaluated
97	B	Route 29	No	Yes	No	No	Noise barrier evaluated
102	B	Route 29	No	Yes	No	No	Noise barrier evaluated
103	C	Route 29	No	Yes	No	No	School playground - not cost-effective
104 (2 res.)	B	Route 29	No	Yes	No	No	Business
106	B	Route 29	Yes	Yes	No	No	Noise barrier evaluated
107	C	Route 29	Yes	Yes	No	No	Noise barrier evaluated
108	C	Route 29	No	Yes	No	No	Business

Year 2022, Alternatives

FHWA Activity Category	Primary Affecting Roadway	Build		No-Build		Noise Abatement Measures	
		Exceed or FHWA Criteria	Substantial Increase	Exceed or FHWA Criteria	Substantial Increase		
109	B	Route 29	Yes	Yes	No	No	Noise barrier evaluated
110	B	Route 29	Yes	Yes	No	No	Noise barrier evaluated
311	B	Route 29	Yes	No	No	No	Noise barrier evaluated
322 (2 res)	B	Route 29	No	Yes	No	No	Noise barrier evaluated
111	C	Route 29	No	Yes	No	No	Business
112	C	Route 29	No	Yes	No	No	Business
113	C	Route 29	No	Yes	No	No	Business

Eastern Alignment - Stillhouse Mountain Area

47/318	B	Route 29	No	Yes	No	No	Isolated residence - not cost-effective
51	B	Route 29	No	Yes	No	No	Isolated residence - not cost-effective
315/314	B	Route 29	No	Yes	No	No	Isolated residence - not cost-effective
317	B	Route 29	No	Yes	No	No	Isolated residence - not cost-effective

The project corridor location was determined as a result of transportation planning and an environmental impact study in which potential noise impacts, among other factors, was considered. The design process has evaluated alternative horizontal and vertical alignments within the project corridor. In selecting the final horizontal and vertical alignment, noise impacts have been balanced with engineering, environmental and cost criteria.

In particular, the grades through the Stillhouse Mountain area were minimized to reduce potential noise impacts, as well as for engineering reasons. This has resulted in deeper cuts (which typically reduce noise impacts) and higher costs. However, noise impacts will be one factor considered in the selection of the preferred alternative through this area.

The elevation of the roadway has generally been kept below the elevation of the adjacent topography and properties to the greatest extent possible to minimize noise and visual impacts. In addition, the horizontal alignment has been kept away from residences and schools where possible to reduce noise impacts. The horizontal alignment was also modified to take advantage of natural barriers such as the knoll north of Roslyn Ridge Road.

6.2.2 Traffic System Management Measures

Traffic system management measures that limit vehicle type, speed, volume and time of operations are often effective noise abatement measures.

Past project experience has shown that a reduction in the speed limit of 10 mph (16 kph) would result in a noise level reduction of approximately 1 to 2 dBA. Because most people cannot detect a noise reduction of up to 3 dBA, it is not considered a viable noise abatement measure. This and other traffic system management measures, including the prohibition of truck operations, are not considered to be consistent with the project's objective of providing a high-speed, controlled-access facility. Thus, no traffic management measures are considered feasible or reasonable for noise abatement purposes.

6.2.3 Noise Barriers

Noise barrier reduce noise levels by blocking the sound path between a roadway and noise sensitive areas. This measure is used most often on high-speed, limited or controlled-access facilities where noise levels are high and there is adequate space for continuous barriers. Noise barriers may be constructed from a variety of materials, either individually or combined, including concrete, wood, or metal, and earth and vegetation if space is available.

Because FHWA Noise Abatement Criteria were met for the 2022 design year at 66 sites for the Central alignment (68 for the Eastern alignment), a noise barrier evaluation was conducted for these receptors. The evaluation was accomplished in two steps. First, a qualitative barrier evaluation was performed for each affected receptor that considered each receptor's FHWA NAC activity category, source-receptor relationships, affected land use densities, and the ability to have continuous barriers. The qualitative evaluation asked if a noise barrier would meet a series of criteria established by VDOT. The criteria include in part:

- Do the existing noise levels meet FHWA Noise Abatement Criteria?
- Can the barrier be built given the topography of the location?
- Is the receptor isolated? Isolated is defined as only one or two sensitive land uses at a single location.

- Can a continuous barrier be built?
- Is the affected receptor a business?

The affected sites and their respective qualitative evaluations are presented in Table 6. The qualitative evaluation eliminated most of the affected sites from further consideration for a barrier. However, the qualitative evaluation determined that barriers could be feasible for certain affected receptors. These were subsequently quantitatively analyzed to ascertain if barriers would be cost-effective to protect these receptors. Cost-effectiveness criteria include, in part:

- Does the affected receptor receive a minimum of 5 dBA of noise reduction with the barrier?
- Does the cost per protected residential property exceed \$30,000? (A typical cost of \$172 per square meter of wall was assumed for all calculations.)

The VDOT *State Noise Abatement Policy* also directs that: a) the cost-effectiveness determination for non-residential properties be considered on a case by case basis, and that b) third party funding may be considered where the cost-effectiveness criteria is not achieved.

Following is a summary of the evaluation of potential noise barriers (refer to Appendix E for the OPTIMA model results):

- Canterbury Hills - a range of barriers along the north side of Route 29/250 bypass and the westbound off-ramp to the Route 29 Bypass (Ramp C), up to 810 meters in length (Sta. 4213+40 to Sta. 4221+70) and up to 5.5 meters high was modeled, to protect the 15 impacted residences abutting the Route 29/250 bypass. The most efficient barrier would be the maximum length and height tested, costing \$766,000, and would reduce noise levels by a minimum of 5 dBA at 12 of the 15 impacted residences. At \$64,000 per protected residence, the barrier would not be cost-effective. Note also that noise levels at all 15 residences would be higher without the project.
- Montvue - a range of barriers up to 515 meters in length (Sta. 183+40 to Sta. 188+30) and up to 5.0 meters high was modeled to protect the nine impacted residences on the east side of the Bypass. The most efficient barrier would be 435 meters long and 5.0 meters high, would cost \$374,000 and would reduce noise levels by a minimum of 5 dBA at four of the nine impacted residences. At \$93,500 per protected residence, the barrier would not be cost-effective.
- Squirrel Ridge - a range of barriers up to 300 meters in length (Sta. 216+05 to Sta. 218+90) and up to 5.0 meters high was modeled to protect the six impacted residences on the west side of the Bypass and north of Hydraulic Road. The most efficient barrier would be the maximum length with a varying height, would cost \$140,000, and would reduce noise levels by a minimum of 5 dBA at one of the six impacted residences. At \$140,000 per protected residence, the barrier would not be cost-effective.
- Woodburn Road - a range of barriers up to 170 and 750 meters in length on the south and north side of the Woodburn Road crossing of the Bypass respectively (Sta. 229+00 to Sta. 230+55, and Sta. 230+70 to Sta. 237+95 respectively), and up to 8.5 meters high was modeled to protect the ten impacted residences on the west side of the Bypass. The most efficient barrier on the south side would be 170 meters long and 5.0 meters high, costing \$146,000, and reduce noise levels by a minimum of 5 dBA at one residence only. At \$146,000 per protected residence, the barrier would not be cost-effective. On the north side, the most efficient barrier would be 270 meters long and 3.0 meters high, would cost

\$140,000, and would reduce noise levels by a minimum of 5 dBA at two residences only. At \$70,000 per protected residence, the barrier would not be cost-effective.

7. CONSTRUCTION NOISE

In response to the FHWA requirements that land use activities which may be affected by noise from construction of a highway section be identified and that correct plans and specifications be prepared to minimize or eliminate adverse construction noise impacts, VDOT has issued special provisions for noise control (refer to Table 7). These specifications require that the construction operations be performed in such a manner that the maximum allowable construction noise levels are not exceeded. The maximum allowable construction noise levels specified in Table 7 are not applicable to blasting operations or pile driving operations performed between 7 am and 7 pm.

Construction activities will result in noise impacts in areas immediately adjacent to the construction site. Noise impacts are generally greatest during the clearing and site preparation phases. Noise levels from heavy earth-moving equipment are typically 80 to 90 dBA at a distance of 50 feet.

Most of the noise sensitive receptors will be affected during construction. Noise mitigation measures that will be considered include: the scheduling of construction operations to minimize interfaces with noise-sensitive activities, restricting heavy truck access to streets and to specific time of operations, and ensuring that all construction equipment has mufflers and other appropriate noise-reduction devices. Application of these measures will significantly reduce expected impacts.

Table 7
Maximum Allowable Construction Noise Levels

<i>Distance from right-of-way line to point of reception (feet/meters)</i>	<i>Maximum Allowable Noise Levels for Residences, Hospitals, Nursing Homes, Schools, Churches, Libraries, Offices, Parks, Picnic Areas, Reception Areas, Playgrounds, and Active Sports Areas (dBA)</i>		<i>Maximum Allowable Levels for Commercial and Industrial Areas (dBA)</i>
	<i>6 am to 8 pm</i>	<i>8 pm to 6 am</i>	<i>All Times</i>
0-53/0-16.3	88	73	93
54-59/16.4-18.1	87	72	92
60-67/18.2-20.5	86	71	91
68-75/20.6-22.9	85	70	90
76-84/23.0-25.7	84	69	89
85-94/25.8-28.8	83	68	88
95-106/28.9-32.4	82	67	87
107-119/32.5-36.4	81	66	86
120-133/36.5-40.6	80	65	85
134-149/40.7-45.5	79	64	84
150-167/45.6-51.0	78	63	83
168-188/51.1-57.4	77	62	82
189-211/57.5-64.4	76	61	81
212-239/64.5-72.9	75	60	80
240-272/73.0-83.0	74	59	79
273-308/83.1-94.0	73	58	78
309-334/94.1-101.9	73	57	77
335-375/102.0-114.4	71	56	76
376-421/114.5-128.3	70	55	75

Source: Virginia Department of Transportation
Metric conversions are approximate only.

APPENDIX A

STAMINA PRINTOUT FOR MEASUREMENT SITES

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 02/06/97 14:10:16
 INPUT FILE - m1.in
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

M1 CALIBRATION FOR US 29 BYPASS
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 US 250 BYPASS SB

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	234.	90.
HT	18.	90.
MT	15.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
250SB_1	500.	502.	100.	1
250SB_2	2500.	502.	100.	1

ROADWAY 2 US 250 NORTHBOUND

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	375.	90.
HT	6.	90.
MT	18.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
US29NB_1	500.	500.	100.	1
US29NB_2	2500.	500.	100.	1

1

RECEIVERS

-----COORDINATES-----			
	X	Y	Z
M1	1500.	533.	100.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .5

2 * .5

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .0

2 * .0

1

RECEIVER	LEQ(H)	L10
M1	65.4	68.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1
	63.0
2	1
	61.8

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 02/06/97 14:29:22
 INPUT FILE - m3.in
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

M3 CALIBRATION FOR US 29 BYPASS
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 MASSIE ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	200.	56.
HT	2.	56.
MT	4.	56.

0

-----COORDINATES-----

	X	Y	Z	GRADE
MAS1	500.	500.	100.	1
MAS2	2500.	500.	100.	1

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
M3	1500.	515.	100.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .5

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .0

1

RECEIVER	LEQ(H)	L10
M3	58.0	60.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1
	58.0

1

STAMINA 2.0/BCR
FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 02/06/97 14:17:00
INPUT FILE - m4.in
(INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

M4 CALIBRATION FOR US 29 BYPASS
PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 US 250 BYPASS SB

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	435.	90.
HT	20.	90.
MT	17.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
250SB_1	500.	502.	100.	1
250SB_2	2500.	502.	100.	1

ROADWAY 2 US 250 NORTHBOUND

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	525.	90.
HT	8.	90.
MT	20.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
US29NB_1	500.	500.	100.	1
US29NB_2	2500.	500.	100.	1

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
M4	1500.	578.	100.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .5
2 * .5

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .0
2 * .0

1

RECEIVER	LEQ(H)	L10
M4	60.7	64.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1	58.2
2	1	57.2

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 02/06/97 14:43:41
 INPUT FILE - m6.in
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

M6 CALIBRATION FOR US 29 BYPASS
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 HYDRAULIC WEST OF ROSLYN RIDGE

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	189.	70.
HT	1.	70.
MT	6.	70.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
HYD1	500.	500.	100.	1
HYD2	2500.	500.	100.	1

OROADWAY 2 LAMBS ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	40.	70.
HT	1.	70.
MT	1.	70.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
LAMB_S	1520.	501.	100.	0
LAMB_N	1520.	1000.	100.	0

1

RECEIVERS

-----COORDINATES-----			
	X	Y	Z
M6	1510.	510.	100.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .5
2 * .5

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .0
2 * .0

1

RECEIVER	LEQ(H)	L10
M6	63.5	65.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1
	62.6
2	1
	56.3

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 02/06/97 14:45:09
 INPUT FILE - m7.in
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

M7 CALIBRATION FOR US 29 BYPASS
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 LAMBS ROAD

	VEHICLE TYPE	VEHICLES/HOUR	SPEED		
	CARS	42.	70.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
LAM1	500.	500.	100.	1	
LAM2	2500.	500.	100.	1	

1

RECEIVERS

	-----COORDINATES-----		
	X	Y	Z
M7	1500.	520.	100.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .5

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .0

1

RECEIVER	LEQ(H)	L10
M7	49.5	52.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1

1

49.5

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 02/06/97 14:46:30
 INPUT FILE - m8.in
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

M8 CALIBRATION FOR US 29 BYPASS
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 HYDRAULIC ROAD NEAR SQUIRREL RIDGE

	VEHICLE TYPE	VEHICLES/HOUR	SPEED		
	CARS	630.	70.		
	HT	7.	70.		
	MT	8.	70.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
	HYD_1	500.	500.	100.	1
	HYD_2	2500.	500.	100.	1

1

RECEIVERS

	-----COORDINATES-----		
	X	Y	Z
M8	1500.	520.	100.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .5

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .0

1

RECEIVER	LEQ(H)	L10
M8	63.3	66.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1
	63.3

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 02/06/97 14:47:49
 INPUT FILE - m10.in
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

M10 CALIBRATION FOR US 29 BYPASS
 PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 RIO ROAD NORTH OF HYDRAULIC

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	740.	70.
HT	9.	70.
MT	10.	70.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
RIO_1	500.	500.	100.	1
RIO_2	2500.	500.	100.	1

1

RECEIVERS

-----COORDINATES-----			
	X	Y	Z
M10	1500.	520.	100.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .5

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .0

1

RECEIVER	LEQ(H)	L10
M10	64.1	67.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1
	64.1

APPENDIX B

STAMINA PRINTOUT FOR 1996 NOISE LEVELS

NOTE:

THE RESULTS FOR EACH RECEPTOR ARE CONTAINED IN TWO STAMINA PRINTOUTS (ONE FOR EACH SET OF ROADS) AND MUST BE COMBINED (REFER SECTION 5.4 IN REPORT).

THE FOLLOWING RECEPTORS DO NOT CURRENTLY EXPERIENCE TRAFFIC NOISE. MEASURED NOISE LEVELS APPLY AT THESE SITES:

46, 47/318, 48, 49, 50/316, 51, 52, 53, 313, 314, 315, 317, 318, 56, 57, 58, 59, 60, 61, 62, 63, 300, 64, 65, 301, 302, 319, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 107, 108, 320, 109, 110, 111, 112, 113, 114, 116

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/30/97 15:07:04
 INPUT FILE - 1-39PM_1.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN EXISTING ** RECEIVERS R1-R39 ** ROAD SET #1 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 Massie Rd.

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	380.	56.
HT	4.	56.
MT	4.	56.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
I1	498983.	190641.	178.	1
I2	498935.	190545.	177.	1

OROADWAY 2 North Grounds Connector A

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	310.	50.
HT	5.	50.
MT	4.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A1	499008.	190362.	175.	1
A2	499010.	190422.	176.	1
A3	499000.	190461.	177.	1
A4	498949.	190524.	178.	1

OROADWAY 3 North Grounds Connector B

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	320.	50.
HT	5.	50.

	MT	4.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B1	499004.	190362.	175.	0
B2	499006.	190422.	176.	0
B3	498997.	190460.	177.	0
B4	498945.	190518.	178.	0

ROADWAY 4 ROUTE 250 D

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D0	499702.	191313.	151.	1
D1	499405.	191234.	161.	1
D2	499296.	191205.	162.	1

ROADWAY 5 ROUTE 250 E

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E0	499699.	191325.	151.	1
E1	499402.	191247.	161.	1
E2	499293.	191219.	162.	1

ROADWAY 6 US 29 A1

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498384.	191582.	204.	0
A16	498327.	191713.	203.	1
A17	498302.	191973.	201.	1
A18	498293.	192173.	194.	1
A19	498328.	192371.	186.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

OROADWAY 7 US 29 Aii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A25	498959.	193591.	144.	0
A26	499050.	193746.	143.	0
A27	499248.	193915.	150.	0
A28	499391.	193973.	159.	0
A29	499647.	193996.	161.	0
A30	500026.	194064.	161.	0
A31	500144.	194098.	162.	0
A32	500318.	194124.	166.	0
A33	500630.	194201.	172.	0
A34	500770.	194309.	172.	1
A35	500919.	194448.	168.	1
A36	501055.	194544.	161.	1
A37	501271.	194666.	155.	1
A38	501441.	194770.	158.	1

OROADWAY 8 US 29 Aiii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A38	501441.	194770.	158.	0
A39	501584.	194914.	162.	0
A40	501749.	195110.	168.	0
A41	501873.	195195.	170.	0
A42	502086.	195281.	173.	0
A43	502262.	195347.	173.	0
A44	502438.	195437.	171.	1
A45	502645.	195605.	164.	1
A46	502758.	195744.	161.	1
A47	502866.	195961.	151.	1
A48	502976.	196182.	143.	1
A49	503099.	196365.	137.	1
A50	503297.	196697.	135.	1

OROADWAY 9 US 29 Bi

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE

B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498395.	191589.	204.	1
B16	498339.	191716.	203.	0
B17	498314.	191973.	201.	0
B18	498306.	192173.	194.	0
B19	498340.	192368.	186.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

ROADWAY 10 US 29 Bii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B25	498982.	193577.	147.	1
B26	499053.	193696.	148.	1
B27	499148.	193798.	153.	1
B28	499311.	193905.	157.	1
B29	499644.	193960.	161.	1
B30	499996.	194035.	162.	1
B31	500129.	194079.	162.	1
B32	500319.	194110.	166.	1
B33	500636.	194189.	172.	1
B34	500780.	194299.	172.	0
B35	500929.	194437.	168.	0
B36	501065.	194527.	162.	0
B37	501266.	194641.	157.	0
B38	501455.	194749.	160.	0

ROADWAY 11 US 29 Biii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B38	501455.	194749.	160.	1
B39	501617.	194867.	165.	1
B40	501794.	195075.	169.	1
B41	501890.	195166.	171.	1
B42	502092.	195262.	173.	1
B43	502269.	195328.	173.	0
B44	502449.	195421.	171.	0
B45	502660.	195593.	164.	0

B46	502773.	195731.	161.	0
B47	502885.	195955.	151.	0
B48	502993.	196171.	143.	0
B49	503115.	196354.	137.	0
B50	503297.	196625.	135.	0
B51	503379.	196720.	135.	0

OROADWAY 12 PROP RAMP 5 ** EXISTING US 250 ALIGN **

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2800.	90.
HT	140.	90.
MT	100.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
JA	499700.	191319.	151.	0
JB	499404.	191240.	161.	0
JC	499295.	191213.	162.	0
JO	499147.	191181.	163.	0
J1	499105.	191176.	164.	0
J2	499006.	191162.	167.	0
J3	498817.	191135.	177.	0
J4	498692.	191117.	183.	0
J5	498613.	191105.	187.	0

OROADWAY 13 RAMP 6

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K1	499051.	191136.	165.	1
K2	498895.	191052.	173.	1
K3	498756.	190969.	173.	1
K4	498713.	190950.	167.	1

OROADWAY 14 RAMP 3

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
G1	498238.	190898.	179.	1
G2	498363.	190970.	180.	1
G3	498497.	191051.	180.	1

OROADWAY 15 RAMP 41

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K8	498265.	190835.	182.	1
K10	498202.	190808.	181.	1
K11	498115.	190746.	178.	1

ROADWAY 16 RAMP 4

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
F2	498048.	190668.	171.	1
F3	498115.	190746.	178.	1
F4	498239.	190845.	181.	1
F5	498385.	190922.	187.	1
F6	498489.	190977.	191.	1
F7	498502.	190986.	195.	1

ROADWAY 17 LAMBS ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	118.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
L1	500009.	193771.	172.	0
L2	500030.	193946.	168.	0
L3	500033.	193990.	168.	0
L4	500038.	194045.	169.	0

ROADWAY 18 ROSLYN ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	38.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
M1	500708.	193948.	173.	1
M2	500638.	194048.	175.	1
M3	500586.	194157.	180.	1

OROADWAY 19 HYDRAULIC ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1750.	70.
HT	10.	70.
MT	10.	70.

0 -----COORDINATES-----

	X	Y	Z	GRADE
N0	500882.	194280.	175.	1
N1	500878.	194289.	176.	1
N2	500882.	194387.	178.	1

OROADWAY 20 WOODBURN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	38.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
P1	501962.	195048.	183.	0
P2	501999.	195162.	182.	0
P3	502036.	195234.	181.	0

OROADWAY 21 LAMBS ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	118.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
L44	500040.	194074.	169.	0
L5	500043.	194110.	168.	0
L6	500059.	194248.	164.	0

OROADWAY 22 ROSLYN RD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	38.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
M33	500582.	194192.	178.	0

M4	500587.	194234.	177.	0
M5	500601.	194304.	172.	0
M6	500604.	194392.	169.	0
M7	500545.	194537.	159.	0

ROADWAY 23 HYDROLIC ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1750.	70.
HT	10.	70.
MT	10.	70.

0

-----COORDINATES-----

	X	Y	Z	GRADE
N3	500884.	194426.	178.	1
N4	500886.	194634.	173.	1
N5	500877.	194754.	165.	1

ROADWAY 24 WOODBURN ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	38.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
P4	502068.	195284.	180.	0
P44	502191.	195407.	174.	0
P5	502300.	195476.	171.	0
P6	502717.	195738.	165.	0
P7	502763.	195796.	159.	0
P8	502802.	195873.	156.	0
P9	502837.	195987.	155.	0
P10	502842.	196087.	154.	0
P11	502834.	196156.	151.	0

ROADWAY 25 RAMP 311

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
G4	498546.	191113.	182.	1
G5	498579.	191209.	188.	1
G6	498581.	191270.	207.	1
G7	498521.	191418.	187.	1

ROADWAY 26 RAMP 411

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
F8	498606.	191117.	196.	1
F9	498630.	191196.	197.	1
F10	498632.	191265.	197.	1
F11	498590.	191374.	198.	1
F12	498443.	191535.	200.	1

OROADWAY 27 RAMP 611

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K5	498605.	190922.	185.	1
K6	498536.	190904.	184.	1
K60	498412.	190872.	183.	1

OROADWAY 28 ROUTE 250 D111

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D7	498541.	191010.	179.	1
D8	498373.	190952.	180.	1
D9	498251.	190881.	179.	1
D10	498161.	190806.	177.	1
D11	498048.	190668.	171.	1

OROADWAY 29 ROUTE 250 E111

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E7	498538.	191021.	179.	1
E8	498368.	190963.	180.	1
E9	498243.	190892.	179.	1

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192035.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----
X Y Z Z0 DELZ P
MM1 501415. 194702. 164. 100. 0. 0
MM2 501487. 194738. 167. 100.

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----
X Y Z Z0 DELZ P
NN1 501856. 195108. 173. 100. 0. 0
NN2 501937. 195157. 179. 100.
NN3 501966. 195181. 177. 100.

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----
X Y Z Z0 DELZ P
OO1 502037. 195215. 178. 100. 0. 0
OO2 502109. 195243. 179. 100.

1

BARRIER 16 TYPE(R) WALL 16 -NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----
X Y Z Z0 DELZ P
PP1 498644. 191089. 190. 100. 0. 0
PP2 498711. 191108. 182. 100.
PP3 498745. 191110. 180. 100.
PP4 498810. 191123. 166. 100.
PP5 498843. 191126. 173. 100.
PP6 498909. 191136. 166. 100.

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----
X Y Z Z0 DELZ P
QQ0 498761. 191156. 177. 100. 0. 0
QQ2 498938. 191167. 171. 100.
QQ3 499036. 191179. 166. 100.
QQ4 499100. 191210. 166. 100.
QQ5 499127. 191217. 170. 100.
QQ6 499219. 191236. 168. 100.
QQ7 499324. 191249. 162. 100.
QQ8 499420. 191279. 170. 100.
QQ9A 499557. 191305. 151. 151.

1

BARRIER 18 TYPE(R) WALL 17 WOODBURN NAT WALL

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 (EXT OF WALL 17 OFF US 250)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
R1	498986.	190403.	180.
R2	498973.	190433.	181.
R3	498809.	190542.	188.
R4	498774.	190542.	189.
R5	498856.	190479.	187.
R6	498884.	190603.	182.
R7	498904.	190441.	184.
R8	498704.	190763.	189.
R9	498636.	190672.	189.
R10	498506.	190696.	206.
R11	498446.	190743.	206.
R12	498717.	190539.	187.
R13	498446.	191131.	203.
R14	498459.	191216.	197.
R15	498396.	191268.	192.
R16	498749.	190860.	187.
R17	498208.	191096.	200.
R18	499621.	191354.	156.
R19	499534.	191350.	163.
R20	499514.	191350.	166.
R21	499455.	191317.	173.
R22	499471.	191350.	173.
R23	499436.	191309.	173.
R24	499408.	191335.	173.
R25	499350.	191291.	168.
R26	499325.	191286.	165.
R27	499226.	191272.	173.
R28	499208.	191257.	175.
R29	499181.	191264.	176.
R30	499136.	191241.	174.
R31	499109.	191232.	173.

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23 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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24 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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25 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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26 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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27 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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28 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0
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1

RECEIVER	LEQ(H)	L10
R1	59.9	63.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

2	1	2	3
	54.6	48.9	44.1
3	1	2	3
	56.2	49.5	44.3
12	6		
	40.6		

1

RECEIVER	LEQ(H)	L10
R2	58.0	61.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

2 1 2 3
 48.0 50.5 48.8
3 1 2 3
 48.8 51.6 49.4
12 6
 41.1

1

RECEIVER LEQ(H) L10
R3 49.9 52.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 6 7
 43.0 41.7

1

RECEIVER LEQ(H) L10
R4 49.4 52.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 6 7
 42.9 41.8

1

RECEIVER LEQ(H) L10
R5 50.2 53.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1 1
 40.6
2 3
 40.2
3 3
 40.5
12 6 7
 41.9 40.4

1

RECEIVER LEQ(H) L10
R6 52.3 55.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1					
	47.1					
12	1	3	5	6	7	
	40.1	40.9	40.7	44.4	42.7	

1

RECEIVER	LEQ(H)	L10
R7	51.6	55.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1					
	40.0					
2	3					
	43.2					
3	3					
	43.8					
12	6					
	41.3					

1

RECEIVER	LEQ(H)	L10
R8	52.7	55.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	3	5	6	7	8	
	41.1	41.9	47.1	47.2	45.0	

1

RECEIVER	LEQ(H)	L10
R9	39.9	43.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R10	49.5	52.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	6	7	8			
	43.3	43.8	42.7			

1

RECEIVER	LEQ(H)	L10
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R11 49.5 52.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 6 7 8
43.1 43.9 43.3

1

RECEIVER LEQ(H) L10
R12 48.8 51.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 6 7
42.6 41.7

1

RECEIVER LEQ(H) L10
R13 54.8 58.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 6 7 8
46.1 49.2 51.6

1

RECEIVER LEQ(H) L10
R14 42.4 45.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R15 40.3 42.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R16 55.7 58.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 3 5 6 7 8
40.8 42.9 44.4 50.4 50.8 48.0

1

RECEIVER LEQ(H) L10
R17 47.2 50.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 7 8
41.8 43.2

1

RECEIVER LEQ(H) L10
R18 67.9 71.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 5 6
67.8 49.3 44.0 40.7 41.0

1

RECEIVER LEQ(H) L10
R19 66.1 69.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6
65.9 48.4 48.2 40.4 42.5 42.4

1

RECEIVER LEQ(H) L10
R20 65.6 68.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6
65.4 49.2 49.5 40.9 42.9 42.8

1

RECEIVER LEQ(H) L10
R21 67.4 70.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6
66.7 57.0 52.4 42.9 44.6 44.2

1

RECEIVER	LEQ(H)	L10
R22	64.7	67.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6
	64.0	53.2	51.0	42.0	43.9	43.6

1

RECEIVER	LEQ(H)	L10
R23	67.6	70.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6
	66.7	58.4	53.4	43.6	45.2	44.6

1

RECEIVER	LEQ(H)	L10
R24	64.0	67.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6	7
	62.0	57.4	53.9	44.1	45.7	45.0	40.1

1

RECEIVER	LEQ(H)	L10
R25	66.1	69.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6	7
	57.8	64.1	58.7	46.9	48.1	46.7	41.3

1

RECEIVER	LEQ(H)	L10
R26	66.2	69.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6	7
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55.3 64.2 60.3 47.4 48.1 47.4 41.8

1

RECEIVER LEQ(H) L10
R27 66.4 69.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7
54.1 59.0 64.3 53.5 53.5 50.6 44.0

1

RECEIVER LEQ(H) L10
R28 67.6 70.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
53.3 58.0 66.1 55.8 55.0 51.5 44.6 40.2

1

RECEIVER LEQ(H) L10
R29 66.4 69.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
52.2 55.8 64.3 56.8 56.1 52.4 45.2 40.7

1

RECEIVER LEQ(H) L10
R30 67.4 70.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
50.5 53.3 63.8 61.1 60.6 54.9 46.6 41.8

1

RECEIVER LEQ(H) L10
R31 68.3 71.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
49.7 52.0 61.9 63.1 63.7 56.5 47.5 42.5

1

RECEIVER LEQ(H) L10
R32 65.7 69.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
48.3 49.1 54.0 58.4 62.9 57.8 48.2 43.1

1

RECEIVER LEQ(H) L10
R33 68.1 71.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
44.4 44.2 49.6 47.4 55.3 67.1 58.3 49.8

1

RECEIVER LEQ(H) L10
R34 69.3 72.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
43.8 43.3 48.4 45.9 53.3 68.1 61.8 51.7

1

RECEIVER LEQ(H) L10
R35 68.9 72.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
43.2 42.6 47.4 44.6 51.7 66.5 64.6 53.4

1

RECEIVER LEQ(H) L10
R36 69.5 72.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
42.8 42.1 46.6 43.7 50.5 65.0 67.2 55.2

1

RECEIVER LEQ(H) L10
R37 66.9 70.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
44.7 44.9 50.5 48.6 56.8 65.7 56.0 48.5

1

RECEIVER LEQ(H) L10
R38 41.6 44.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R39 41.2 43.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/30/97 15:08:31
 INPUT FILE - 1-39PM_2.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN EXISTING ** RECEIVERS R1-R39 ** ROAD SET #2 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 NORTH GROUNDS CONNECTOR A11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A9	498624.	190870.	186.	1
A10	498622.	190951.	185.	1
A11	498618.	191091.	187.	1

OROADWAY 2 NORTH GROUNDS CONNECTOR B11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B9	498612.	190870.	186.	1
B10	498610.	190951.	185.	1
B11	498606.	191091.	187.	1

OROADWAY 3 ROUTE 250 D11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D3	499109.	191156.	163.	1
D4	498918.	191108.	166.	1
D5	498752.	191065.	172.	1

D6 498701. 191051. 174. 1

OROADWAY 4 ROUTE 250 Eii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E3	499106.	191170.	163.	1
E4	498914.	191120.	166.	1
E5	498749.	191077.	172.	1
E6	498698.	191063.	174.	1

OROADWAY 5 RAMP 5ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	2550.	90.	
	HT	150.	90.	
	MT	100.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
J6	498593.	191102.	187.	0
J7	498519.	191087.	190.	0
J8	498418.	191053.	192.	0
J9	498294.	190989.	191.	0
J10	498191.	190911.	189.	0
J11	498115.	190832.	186.	0
J12	497972.	190544.	165.	0
J13	497933.	190435.	163.	0
J14	497865.	190239.	162.	0

OROADWAY 6 OLD RAMP 5iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
OLDJ11	498115.	190832.	180.	1
OLDJ12	498008.	190664.	170.	1
OLDJ13	497973.	190583.	166.	1

OROADWAY 7 RAMP 6iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K7	498270.	190824.	182.	1
K12	498156.	190747.	180.	1
K13	498075.	190654.	175.	1
K14	497998.	190478.	172.	1

OROADWAY 8 ROUTE 250 Div

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D11	498048.	190668.	171.	1
D12	497980.	190541.	165.	1
D13	497941.	190433.	163.	1

OROADWAY 9 ROUTE 250 Eiv

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E9	498243.	190892.	179.	1
E10	498151.	190816.	177.	1
E11	498034.	190676.	171.	1
E12	497965.	190547.	165.	1

OROADWAY 10 ROUTE 250 Ev

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E12	497965.	190547.	165.	1
E13	497925.	190438.	163.	1

OROADWAY 11 IVY ROAD V

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	600.	72.	
	HT	35.	72.	
	MT	14.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H1	497975.	190297.	170.	1

H3 497919. 190355. 170. 1

ROADWAY 12 IVY ROAD Vii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	600.	72.
HT	35.	72.
MT	14.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H33	497893.	190383.	170.	1
H5	497838.	190442.	170.	1

ROADWAY 13 IVY ROAD W

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	500.	72.
HT	30.	72.
MT	12.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H2	497969.	190288.	170.	1
H4	497915.	190345.	170.	1

ROADWAY 14 IVY ROAD Wii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	500.	72.
HT	30.	72.
MT	12.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H44	497879.	190383.	170.	1
H6	497832.	190432.	170.	1

ROADWAY 15 IVY ROAD Wiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	650.	72.
HT	36.	72.
MT	15.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H6	497832.	190432.	170.	1
H7	497793.	190456.	170.	1
H9	497703.	190532.	170.	1

OROADWAY 16 IVY ROAD V111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	950.	72.
HT	50.	72.
MT	20.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H5	497838.	190442.	170.	1
H8	497803.	190463.	170.	1
H10	497771.	190540.	170.	1

OROADWAY 17 ROUTE 250 Evi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E13	497925.	190438.	163.	1
E14	497858.	190241.	162.	1

OROADWAY 18 ROUTE 250 Dv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
D13	497941.	190433.	163.	1
D14	497873.	190236.	162.	1

OROADWAY 19 OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	370.	60.
HT	5.	60.
MT	10.	60.

0 -----COORDINATES-----

	X	Y	Z	GRADE
OI1	498121.	190435.	179.	0
OI2	497955.	190488.	176.	0
OI3	497935.	190494.	166.	0
OI4	497876.	190513.	167.	0
OI5	497775.	190562.	165.	0

OROADWAY 20 RAMP TO OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	220.	60.
HT	4.	60.
MT	8.	60.

0

-----COORDINATES-----

	X	Y	Z	GRADE
OIR1	498074.	190788.	181.	0
OIR2	497906.	190644.	169.	0

OROADWAY 21 RIO ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	850.	70.
HT	13.	70.
MT	40.	70.

0

-----COORDINATES-----

	X	Y	Z	GRADE
RIO0	500455.	193741.	177.	0
RIO1	500712.	193980.	173.	0
RIO2	501033.	194280.	172.	0
RIO3	501629.	194648.	170.	0

OROADWAY 22 BARRACKS ROAD SOUTH

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	620.	80.
HT	12.	80.
MT	20.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
BARR1	498418.	192490.	170.	0
BARR2	498695.	192305.	183.	0

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0

BB2	498530.	191155.	208.	100.
BB3	498551.	191287.	202.	100.
BB4	498546.	191355.	198.	100.

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0

GG2 498905. 193305. 165. 100.
GG3 498921. 193352. 162. 100.

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16- NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
PP1	498644.	191089.	189.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ0	498761.	191156.	177.	177.	0.	0
QQ2	498938.	191167.	171.	171.		
QQ3	499036.	191179.	166.	166.		
QQ4	499100.	191210.	166.	166.		
QQ5	499127.	191217.	170.	170.		
QQ6	499219.	191236.	168.	168.		
QQ7	499324.	191249.	162.	162.		
QQ8	499420.	191279.	170.	170.		
QQ9A	499557.	191305.	151.	151.		

1

BARRIER 18 TYPE(R) WALL 18 (NAT WALL AT WOODBURN)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 EXT OF NAT WALL 17 NEAR US 250

-----COORDINATES-----
X Y Z ZO DELZ P
QQ9B 499559. 191307. 151. 151. 0. 0
QQ10 499575. 191324. 158. 158.

1

RECEIVERS

-----COORDINATES-----
X Y Z
R1 498986. 190403. 180.
R2 498973. 190433. 181.
R3 498809. 190542. 188.
R4 498774. 190542. 189.
R5 498856. 190479. 187.
R6 498884. 190603. 182.
R7 498904. 190441. 184.
R8 498704. 190763. 189.
R9 498636. 190672. 189.
R10 498506. 190696. 206.
R11 498446. 190743. 206.
R12 498717. 190539. 187.
R13 498446. 191131. 203.
R14 498459. 191216. 197.
R15 498396. 191268. 192.
R16 498749. 190860. 187.
R17 498208. 191096. 200.
R18 499621. 191354. 156.
R19 499534. 191350. 163.
R20 499514. 191350. 166.
R21 499455. 191317. 173.
R22 499471. 191350. 173.
R23 499436. 191309. 173.
R24 499408. 191335. 173.
R25 499350. 191291. 168.
R26 499325. 191286. 165.
R27 499226. 191272. 173.
R28 499208. 191257. 175.
R29 499181. 191264. 176.
R30 499136. 191241. 174.
R31 499109. 191232. 173.
R32 499081. 191242. 168.
R33 498887. 191200. 173.
R34 498852. 191189. 178.
R35 498821. 191187. 179.
R36 498795. 191179. 179.
R37 498913. 191215. 173.
R38 497959. 190614. 171.
R39 497950. 190587. 171.

1

14 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
15 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
16 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
17 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
18 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
19 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
20 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
21 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
22 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
2 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
3 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
4 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0

18 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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19 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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20 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

1

RECEIVER	LEQ(H)	L10
R1	46.0	48.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R2	46.3	48.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R3	49.0	51.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	2	3	6
40.3	40.8	42.4	

1

RECEIVER	LEQ(H)	L10
R4	49.5	51.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	2	3	4	6
40.6	41.1	40.3	43.0	

1

RECEIVER	LEQ(H)	L10
R5	48.0	50.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	6
	41.5

1

RECEIVER	LEQ(H)	L10
R6	48.3	50.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	2	3	6
	40.3	40.5	41.5

1

RECEIVER	LEQ(H)	L10
R7	47.1	49.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	6
	40.7

1

RECEIVER	LEQ(H)	L10
R8	52.9	55.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	5	6
	45.2	45.9	45.8	43.4	41.7	44.5

1

RECEIVER	LEQ(H)	L10
R9	52.0	54.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	2	3	4	5	6	8
---	---	---	---	---	---	---

42.8 45.1 44.2 42.6 45.8 40.2

1

RECEIVER LEQ(H) L10
R10 55.2 57.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4 5 6 7 8
44.0 46.2 47.9 47.4 45.8 48.7 41.4 41.9

1

RECEIVER LEQ(H) L10
R11 57.1 59.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4 5 6 7 8
45.0 47.8 50.2 50.0 48.2 50.3 42.2 42.4

1

RECEIVER LEQ(H) L10
R12 50.0 52.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 3 4 6
41.8 41.1 43.9

1

RECEIVER LEQ(H) L10
R13 66.9 70.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4 5 6
58.3 64.8 59.7 51.3 46.1 46.3

1

RECEIVER LEQ(H) L10
R14 59.4 62.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4 5 6
42.4 56.6 54.0 48.5 44.2 44.9

1

RECEIVER LEQ(H) L10
R15 54.0 57.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 2 3 4 5 6
49.7 49.2 45.1 41.1 41.8

1

RECEIVER LEQ(H) L10
R16 53.3 56.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4 6
47.2 47.1 46.1 43.6 43.5

1

RECEIVER LEQ(H) L10
R17 61.7 64.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4 5 6 7 8
45.8 50.7 56.9 57.4 52.2 50.4 40.2 40.2

1

RECEIVER LEQ(H) L10
R18 40.2 42.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R19 41.0 43.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R20 41.2 43.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R21 41.9 44.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R22 41.6 44.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R23 42.1 44.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R24 42.3 44.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R25 43.0 45.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R26 43.3 45.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R27 44.6 47.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R28 44.9 47.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R29 45.2 47.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R30 45.9 48.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R31 46.4 49.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1
40.0

1

RECEIVER LEQ(H) L10
R32 46.7 49.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2
40.5 40.2

1

RECEIVER LEQ(H) L10
R33 50.5 53.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4
45.8 44.7 43.0 40.1

1

RECEIVER LEQ(H) L10
R34 51.6 54.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4
47.1 45.7 43.8 40.7

1

RECEIVER LEQ(H) L10
R35 52.5 55.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4
	48.3	46.6	44.5	41.3

1

RECEIVER	LEQ(H)	L10
R36	53.3	56.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4
	49.5	47.5	45.2	41.8

1

RECEIVER	LEQ(H)	L10
R37	49.9	52.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3
	44.9	43.9	42.4

1

RECEIVER	LEQ(H)	L10
R38	70.3	73.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	3	4	5	6	7	8
	42.8	45.5	48.4	69.5	60.4	53.5
12	1					
	42.6					
14	1					
	40.7					
15	1	2				
	40.2	43.4				
16	1	2				
	41.8	45.2				
19	1	3	4			
	42.6	41.2	41.5			
20	1					
	49.4					

1

RECEIVER	LEQ(H)	L10
----------	--------	-----

R39 70.9 74.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	3	4	5	6	7	8
	42.3	44.8	47.5	69.6	63.8	54.9
11	1					
	40.9					
12	1					
	44.1					
14	1					
	42.1					
15	1	2				
	41.6	44.4				
16	1	2				
	43.2	46.4				
19	1	3	4			
	44.4	44.0	43.3			
20	1					
	46.5					

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/26/97 17:05:07
 INPUT FILE - 40-78P_1.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN EXIST CONDITIONS ** RECEIVERS R40-R78 ** ROAD SET #1 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 MASSIE ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	380.	56.
HT	4.	56.
MT	4.	56.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
I1	498983.	190641.	178.	1
I2	498935.	190545.	177.	1

OROADWAY 2 North Grounds Connector A

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	310.	50.
HT	5.	50.
MT	4.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A1	499008.	190362.	175.	1
A2	499010.	190422.	176.	1
A3	499000.	190461.	177.	1
A4	498949.	190524.	178.	1

OROADWAY 3 North Grounds Connector B

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	320.	50.
HT	5.	50.

	MT	4.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B1	499004.	190362.	175.	0
B2	499006.	190422.	176.	0
B3	498997.	190460.	177.	0
B4	498945.	190518.	178.	0

ROADWAY 4 ROUTE 250 D

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D0	499702.	191313.	151.	1
D1	499405.	191234.	161.	1
D2	499296.	191205.	162.	1

ROADWAY 5 ROUTE 250 E

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E0	499699.	191325.	151.	1
E1	499402.	191247.	161.	1
E2	499293.	191219.	162.	1

ROADWAY 6 US 29 A1

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498384.	191582.	204.	0
A16	498327.	191713.	203.	1
A17	498302.	191973.	201.	1
A18	498293.	192173.	194.	1
A19	498328.	192371.	186.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

OROADWAY 7 US 29 A11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	GRADE
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	
A25	498959.	193591.	144.	0
A26	499050.	193746.	143.	0
A27	499248.	193915.	150.	0
A28	499391.	193973.	159.	0
A29	499647.	193996.	161.	0
A30	500026.	194064.	161.	0
A31	500144.	194098.	162.	0
A32	500318.	194124.	166.	0
A33	500630.	194201.	172.	0
A34	500770.	194309.	172.	1
A35	500919.	194448.	168.	1
A36	501055.	194544.	161.	1
A37	501271.	194666.	155.	1
A38	501441.	194770.	158.	1

OROADWAY 8 US 29 A111

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	GRADE
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	
A38	501441.	194770.	158.	0
A39	501584.	194914.	162.	0
A40	501749.	195110.	168.	0
A41	501873.	195195.	170.	0
A42	502086.	195281.	173.	0
A43	502262.	195347.	173.	0
A44	502438.	195437.	171.	1
A45	502645.	195605.	164.	1
A46	502758.	195744.	161.	1
A47	502866.	195961.	151.	1
A48	502976.	196182.	143.	1
A49	503099.	196365.	137.	1
A50	503297.	196697.	135.	1

OROADWAY 9 US 29 B1

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	GRADE
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	

B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498395.	191589.	204.	1
B16	498339.	191716.	203.	0
B17	498314.	191973.	201.	0
B18	498306.	192173.	194.	0
B19	498340.	192368.	186.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

OROADWAY 10 US 29 Bii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B25	498982.	193577.	147.	1
B26	499053.	193696.	148.	1
B27	499148.	193798.	153.	1
B28	499311.	193905.	157.	1
B29	499644.	193960.	161.	1
B30	499996.	194035.	162.	1
B31	500129.	194079.	162.	1
B32	500319.	194110.	166.	1
B33	500636.	194189.	172.	1
B34	500780.	194299.	172.	0
B35	500929.	194437.	168.	0
B36	501065.	194527.	162.	0
B37	501266.	194641.	157.	0
B38	501455.	194749.	160.	0

OROADWAY 11 US 29 Biii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B38	501455.	194749.	160.	1
B39	501617.	194867.	165.	1
B40	501794.	195075.	169.	1
B41	501890.	195166.	171.	1
B42	502092.	195262.	173.	1
B43	502269.	195328.	173.	0
B44	502449.	195421.	171.	0
B45	502660.	195593.	164.	0

B46	502773.	195731.	161.	0
B47	502885.	195955.	151.	0
B48	502993.	196171.	143.	0
B49	503115.	196354.	137.	0
B50	503297.	196625.	135.	0
B51	503379.	196720.	135.	0

OROADWAY 12 RAMP 5

		VEHICLE TYPE	VEHICLES/HOUR	SPEED	
		CARS	2800.	90.	
		HT	140.	90.	
		MT	100.	90.	
0 -----COORDINATES-----					
		X	Y	Z	GRADE
JA		499700.	191319.	151.	0
JB		499404.	191240.	161.	0
JC		499295.	191213.	162.	0
J0		499147.	191181.	163.	0
J1		499105.	191176.	164.	0
J2		499006.	191162.	167.	0
J3		498817.	191135.	177.	0
J4		498692.	191117.	183.	0
J5		498613.	191105.	187.	0

OROADWAY 13 RAMP 6

		VEHICLE TYPE	VEHICLES/HOUR	SPEED	
		CARS	1.	80.	
0 -----COORDINATES-----					
		X	Y	Z	GRADE
K1		499051.	191136.	165.	1
K2		498895.	191052.	173.	1
K3		498756.	190969.	173.	1
K4		498713.	190950.	167.	1

OROADWAY 14 RAMP 3

		VEHICLE TYPE	VEHICLES/HOUR	SPEED	
		CARS	1.	80.	
0 -----COORDINATES-----					
		X	Y	Z	GRADE
G1		498238.	190898.	179.	1
G2		498363.	190970.	180.	1
G3		498497.	191051.	180.	1

OROADWAY 15 RAMP 41

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K8	498265.	190835.	182.	1
K10	498202.	190808.	181.	1
K11	498115.	190746.	178.	1

OROADWAY 16 RAMP 4

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
F2	498048.	190668.	171.	1
F3	498115.	190746.	178.	1
F4	498239.	190845.	181.	1
F5	498385.	190922.	187.	1
F6	498489.	190977.	191.	1
F7	498502.	190986.	195.	1

OROADWAY 17 LAMBS ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	118.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
L1	500009.	193771.	172.	0
L2	500030.	193946.	168.	0
L3	500033.	193990.	168.	0
L4	500038.	194045.	169.	0

OROADWAY 18 ROSLYN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	38.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
M1	500708.	193948.	173.	1
M2	500638.	194048.	175.	1
M3	500586.	194157.	180.	1

OROADWAY 19 HYDRAULIC ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1750.	70.	
	HT	10.	70.	
	MT	10.	70.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
N0	500882.	194280.	175.	1
N1	500878.	194289.	176.	1
N2	500882.	194387.	178.	1

OROADWAY 20 WOODBURN ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	38.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
P1	501962.	195048.	183.	0
P2	501999.	195162.	182.	0
P3	502036.	195234.	181.	0

OROADWAY 21 LAMBS ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	118.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
L44	500040.	194074.	169.	0
L5	500043.	194110.	168.	0
L6	500059.	194248.	164.	0

OROADWAY 22 ROSLYN RD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	38.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
M33	500582.	194192.	178.	0

M4	500587.	194234.	177.	0
M5	500601.	194304.	172.	0
M6	500604.	194392.	169.	0
M7	500545.	194537.	159.	0

ROADWAY 23 HYDRAULIC ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1750.	70.
HT	10.	70.
MT	10.	70.

0 -----COORDINATES-----

	X	Y	Z	GRADE
N3	500884.	194426.	178.	1
N4	500886.	194634.	173.	1
N5	500877.	194754.	165.	1

ROADWAY 24 WOODBURN ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	38.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
P4	502068.	195284.	180.	0
P44	502191.	195407.	174.	0
P5	502300.	195476.	171.	0
P6	502717.	195738.	165.	0
P7	502763.	195796.	159.	0
P8	502802.	195873.	156.	0
P9	502837.	195987.	155.	0
P10	502842.	196087.	154.	0
P11	502834.	196156.	151.	0

ROADWAY 25 RAMP 311

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0 -----COORDINATES-----

	X	Y	Z	GRADE
G4	498546.	191113.	182.	1
G5	498579.	191209.	188.	1
G6	498581.	191270.	207.	1
G7	498521.	191418.	187.	1

ROADWAY 26 RAMP 411

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
F8	498606.	191117.	196.	1
F9	498630.	191196.	197.	1
F10	498632.	191265.	197.	1
F11	498590.	191374.	198.	1
F12	498443.	191535.	200.	1

OROADWAY 27 RAMP 6ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K5	498605.	190922.	185.	1
K6	498536.	190904.	184.	1
K60	498412.	190872.	183.	1

OROADWAY 28 ROUTE 250 Diii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D7	498541.	191010.	179.	1
D8	498373.	190952.	180.	1
D9	498251.	190881.	179.	1
D10	498161.	190806.	177.	1
D11	498048.	190668.	171.	1

OROADWAY 29 ROUTE 250 Eiii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E7	498538.	191021.	179.	1
E8	498368.	190963.	180.	1
E9	498243.	190892.	179.	1

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	191036.	214.	100.		
DD8	498250.	192132.	200.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----
X Y Z ZO DELZ P
MM1 501415. 194702. 164. 100. 0. 0
MM2 501487. 194738. 167. 100.

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----
X Y Z ZO DELZ P
NN1 501856. 195108. 173. 100. 0. 0
NN2 501937. 195157. 179. 100.
NN3 501966. 195181. 177. 100.

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----
X Y Z ZO DELZ P
OO1 502037. 195215. 178. 100. 0. 0
OO2 502109. 195243. 179. 100.

1

BARRIER 16 TYPE(R) WALL 16-NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----
X Y Z ZO DELZ P
PP1 498644. 191089. 189. 100. 0. 0
PP2 498711. 191108. 182. 100.
PP3 498745. 191110. 180. 100.
PP4 498810. 191123. 166. 100.
PP5 498843. 191126. 173. 100.
PP6 498909. 191136. 166. 100.

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----
X Y Z ZO DELZ P
QQ0 498761. 191156. 181. 181. 0. 0
QQ2 498938. 191167. 171. 171.
QQ3 499036. 191179. 166. 166.
QQ4 499100. 191210. 166. 166.
QQ5 499127. 191217. 170. 170.
QQ6 499219. 191236. 168. 168.
QQ7 499324. 191249. 162. 162.
QQ8 499420. 191279. 170. 170.
QQ9A 499557. 191305. 151. 151.

1

BARRIER 18 TYPE(R) WALL 18 (NAT WALL AT WOODBURN)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 - EXTENSION OF NAT WALL 17 AT US 250

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVER

-----COORDINATES-----

	X	Y	Z
R40	497926.	190528.	171.
R41	497985.	190438.	173.
R42	498775.	191232.	183.
R43	498771.	191257.	183.
R44	498760.	191320.	183.
R45	498742.	191352.	182.
R46	498160.	191923.	202.
R47	498447.	191978.	245.
R48	498089.	192007.	198.
R49	498092.	192047.	194.
R50	498319.	192107.	211.
R51	498224.	192243.	178.
R52	498187.	192162.	185.
R53	498168.	192117.	190.
R54	498535.	192249.	190.
R55	498598.	192516.	187.
R56	498671.	192575.	178.
R57	498585.	192726.	171.
R58	498615.	192779.	170.
R59	498668.	192757.	176.
R60	498708.	192885.	166.
R61	498753.	192958.	170.
R62	498728.	192929.	169.
R63	498790.	193033.	168.
R64	498911.	193315.	167.
R65	499446.	193904.	167.
R66	500003.	194010.	169.
R67	500016.	194127.	167.
R68	499997.	193909.	174.
R69	500020.	194158.	169.
R70	500547.	194112.	178.

	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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23 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	2.0	.0	.0	.0
24 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
25 *	.0	.0	4.0	4.0	4.0	4.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26 *	.0	.0	2.0	2.0	2.0	2.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
27 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
28 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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29 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

1

RECEIVER	LEQ(H)	L10
R40	40.6	43.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R41	40.7	43.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R42	60.8	64.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	3	5	6	7	8
	43.0	46.2	56.3	57.5	51.1

1

RECEIVER	LEQ(H)	L10
R43	59.2	62.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	3	5	6	7	8
42.8	45.8	54.8	55.4	50.0	

1

RECEIVER	LEQ(H)	L10
R44	56.0	59.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	3	5	6	7	8
41.9	44.5	51.5	51.3	47.4	

1

RECEIVER	LEQ(H)	L10
R45	54.5	58.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	3	5	6	7	8
41.1	43.5	49.9	49.6	46.4	

1

RECEIVER	LEQ(H)	L10
R46	34.4	37.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R47	44.0	46.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R48	32.7	35.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
----------	--------	-----

R49 31.6 34.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R50	39.8	40.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1*** NO SOLUTION FOR RECEIVER 12 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 12, BARRIER 20 AND ROADWAY 27

1

RECEIVER	LEQ(H)	L10
R51	.0	.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R52	31.5	34.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R53	31.3	34.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R54	41.7	43.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R55	39.6	42.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R56	39.2	41.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R57	39.9	41.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R58	40.1	41.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
R59	38.2	41.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
R60	38.0	40.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
R61	37.5	40.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
R62	38.3	40.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
R63	37.3	39.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
R64	36.6	38.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
R65	34.1	36.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
R66	48.9	51.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

17 2 3
 42.1 46.4

1

RECEIVER LEQ(H) L10
R67 49.4 51.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2
 42.8 47.8

1

RECEIVER LEQ(H) L10
R68 49.6 51.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

17 1
 48.9

1

RECEIVER LEQ(H) L10
R69 49.6 51.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2
 49.0

1

RECEIVER LEQ(H) L10
R70 45.2 47.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

18 2
 42.2

1

RECEIVER LEQ(H) L10
R71 51.5 55.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	1	2
	44.0	49.4
23	1	
	43.6	

1

RECEIVER	LEQ(H)	L10
R72	48.1	50.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22	3	
	43.4	
23	1	
	41.3	

1

RECEIVER	LEQ(H)	L10
R73	62.5	66.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	46.7	
23	1	2
	62.2	47.9

1

RECEIVER	LEQ(H)	L10
R74	53.5	56.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	47.0	
23	1	2
	51.6	43.4

1

RECEIVER	LEQ(H)	L10
R75	52.5	55.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	44.0	
23	1	2
	50.4	44.4

1

RECEIVER	LEQ(H)	L10
R76	54.8	58.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	43.0	
23	1	2
	53.4	47.5

1

RECEIVER	LEQ(H)	L10
R77	49.9	53.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	1	2
	42.6	47.6
23	1	
	42.2	

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/26/97 17:26:22
 INPUT FILE - 40-78P_2.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN EXISTING ** RECEIVERS R40-R78 ** ROAD SET #2 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 NORTH GROUNDS CONNECTOR Aii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A9	498624.	190870.	186.	1
A10	498622.	190951.	185.	1
A11	498618.	191091.	187.	1

OROADWAY 2 NORTH GROUNDS CONNECTOR Bii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B9	498612.	190870.	186.	1
B10	498610.	190951.	185.	1
B11	498606.	191091.	187.	1

OROADWAY 3 ROUTE 250 Dii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D3	499109.	191156.	163.	1
D4	498918.	191108.	166.	1
D5	498752.	191065.	172.	1

D6 498701. 191051. 174. 1

OROADWAY 4 ROUTE 250 Eii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E3	499106.	191170.	163.	1
E4	498914.	191120.	166.	1
E5	498749.	191077.	172.	1
E6	498698.	191063.	174.	1

OROADWAY 5 RAMP 5ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	2550.	90.	
	HT	150.	90.	
	MT	100.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
J6	498593.	191102.	187.	0
J7	498519.	191087.	190.	0
J8	498418.	191053.	192.	0
J9	498294.	190989.	191.	0
J10	498191.	190911.	189.	0
J11	498115.	190832.	186.	0
J12	497972.	190544.	165.	0
J13	497933.	190435.	163.	0
J14	497865.	190239.	162.	0

OROADWAY 6 OLD RAMP 5iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
OLD J11	498115.	190832.	180.	1
OLD J12	498008.	190664.	170.	1
OLD J13	497973.	190583.	166.	1

OROADWAY 7 RAMP 6iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K7	498270.	190824.	182.	1
K12	498156.	190747.	180.	1
K13	498075.	190654.	175.	1
K14	497998.	190478.	172.	1

OROADWAY 8 ROUTE 250 Div

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D11	498048.	190668.	171.	1
D12	497980.	190541.	165.	1
D13	497941.	190433.	163.	1

OROADWAY 9 ROUTE 250 Eiv

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E9	498243.	190892.	179.	1
E10	498151.	190816.	177.	1
E11	498034.	190676.	171.	1
E12	497965.	190547.	165.	1

OROADWAY 10 ROUTE 250 Ev

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E12	497965.	190547.	165.	1
E13	497925.	190438.	163.	1

OROADWAY 11 IVY ROAD V

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	600.	72.	
	HT	35.	72.	
	MT	14.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H1	497975.	190297.	170.	1

H3 497919. 190355. 170. 1

ROADWAY 12 IVY ROAD Vii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	600.	72.
HT	35.	72.
MT	14.	72.

0 -----COORDINATES-----
X Y Z GRADE
H33 497893. 190383. 170. 1
H5 497838. 190442. 170. 1

ROADWAY 13 IVY ROAD W

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	500.	72.
HT	30.	72.
MT	12.	72.

0 -----COORDINATES-----
X Y Z GRADE
H2 497969. 190288. 170. 1
H4 497915. 190345. 170. 1

ROADWAY 14 IVY ROAD Wii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	500.	72.
HT	30.	72.
MT	12.	72.

0 -----COORDINATES-----
X Y Z GRADE
H44 497879. 190383. 170. 1
H6 497832. 190432. 170. 1

ROADWAY 15 IVY ROAD Wiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	650.	72.
HT	36.	72.
MT	15.	72.

0 -----COORDINATES-----
X Y Z GRADE
H6 497832. 190432. 170. 1
H7 497793. 190456. 170. 1
H9 497703. 190532. 170. 1

OROADWAY 16 IVY ROAD Villi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	9501.	72.
HT	50.	72.
MT	20.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H5	497838.	190442.	170.	1
H8	497803.	190463.	170.	1
H10	497711.	190540.	170.	1

OROADWAY 17 ROUTE 250 Ev1

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
E13	497925.	190438.	163.	1
E14	497858.	190241.	162.	1

OROADWAY 18 ROUTE 250 Dv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
D13	497941.	190433.	163.	1
D14	497873.	190236.	162.	1

OROADWAY 19 OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	370.	60.
HT	5.	60.
MT	10.	60.

0

-----COORDINATES-----

	X	Y	Z	GRADE
OI1	498121.	190435.	179.	0
OI2	497955.	190488.	176.	0
OI3	497935.	190494.	166.	0
OI4	497876.	190513.	167.	0
OI5	497775.	190562.	165.	0

OROADWAY 20 RAMP TO OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	220.	60.
HT	4.	60.
MT	8.	60.

0

-----COORDINATES-----

	X	Y	Z	GRADE
OIR1	498074.	190788.	181.	0
OIR2	497906.	190644.	169.	0

OROADWAY 21 RIO ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	850.	70.
HT	13.	70.
MT	40.	70.

0

-----COORDINATES-----

	X	Y	Z	GRADE
RIO0	500455.	193741.	177.	0
RIO1	500712.	193980.	173.	0
RIO2	501033.	194280.	172.	0
RIO3	501629.	194648.	170.	0

OROADWAY 22 BARRACKS ROAD SOUTH

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	600.	80.
HT	12.	80.
MT	20.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
BARR1	498418.	192490.	170.	0
BARR2	498695.	192305.	183.	0

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0

BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0

GG2 498905. 193305. 165. 100.
GG3 498921. 193352. 162. 100.

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----
X Y Z ZO DELZ P
NN1 501856. 195108. 173. 100. 0. 0
NN2 501937. 195157. 179. 100.
NN3 501966. 195181. 177. 100.

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----
X Y Z ZO DELZ P
OO1 502037. 195215. 178. 100. 0. 0
OO2 502109. 195243. 179. 100.

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----
X Y Z ZO DELZ P
PP1 498644. 191089. 189. 100. 0. 0
PP2 498711. 191108. 182. 100.
PP3 498745. 191110. 180. 100.
PP4 498810. 191123. 166. 100.
PP5 498843. 191126. 173. 100.
PP6 498909. 191136. 166. 100.

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----
X Y Z ZO DELZ P
QQ0 498761. 191156. 177. 177. 0. 0
QQ2 498938. 191167. 171. 171.
QQ3 499036. 191179. 166. 166.
QQ4 499100. 191210. 166. 166.
QQ5 499127. 191217. 170. 170.
QQ6 499219. 191236. 168. 168.
QQ7 499324. 191249. 162. 162.
QQ8 499420. 191279. 170. 170.
QQ9A 499557. 191305. 151. 151.

1

BARRIER 18 TYPE(R) WALL 18 (NAT BARRIER NEAR WOODBURN ROAD)

-----COORDINATES-----
X Y Z ZO DELZ P
RR1 502052. 195277. 182. 100. 0. 0
RR2 502084. 195322. 180. 100.
RR3 502159. 195391. 178. 100.
RR4 502241. 195450. 173. 100.

1

BARRIER 19 TYPE(R) WALL 19 EXTENSION OF NAT WALL 17 NEAR US 250

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
R40	497926.	190528.	171.
R41	497985.	190438.	173.
R42	498775.	191232.	183.
R43	498771.	191257.	183.
R44	498760.	191320.	183.
R45	498742.	191352.	182.
R46	498160.	191923.	202.
R47	498447.	191978.	245.
R48	498089.	192007.	198.
R49	498092.	192047.	194.
R50	498319.	192107.	211.
R51	498224.	192243.	178.
R52	498187.	192162.	185.
R53	498168.	192117.	190.
R54	498535.	192249.	190.
R55	498598.	192516.	187.
R56	498671.	192575.	178.
R57	498585.	192726.	171.
R58	498615.	192779.	170.
R59	498668.	192757.	176.
R60	498708.	192885.	166.
R61	498753.	192958.	170.
R62	498728.	192929.	169.
R63	498790.	193033.	168.
R64	498911.	193315.	167.
R65	499446.	193904.	167.
R66	500003.	194010.	169.
R67	500016.	194127.	167.
R68	499997.	193909.	174.
R69	500020.	194158.	169.
R70	500547.	194112.	178.
R71	500803.	194225.	180.
R72	500566.	194367.	181.
R73	500922.	194507.	180.
R74	501004.	194447.	168.
R75	501031.	194491.	163.
R76	500972.	194556.	175.
R77	500855.	194177.	179.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
19 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
20 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
21 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
22 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	1.0	.0	4.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		

1

RECEIVER	LEQ(H)	L10
R40	71.3	74.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	3	4	5	6	7	8
	41.1	43.3	45.5	64.2	69.4	58.9
11	1					
	43.8					
12	1					
	48.4					
13	1					
	42.4					
14	1					
	46.2					
15	1	2				
	45.4	46.9				
16	1	2				
	53.1	54.9				
19	1	2	3	4		
	48.5	49.0	55.2	47.9		
20	1					
	41.3					

1

RECEIVER	LEQ(H)	L10
R41	69.7	73.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	3	4	5	6	7	8
	40.4	42.3	44.1	58.4	67.0	64.3
11	1					
	49.6					
12	1					
	49.3					
13	1					
	47.8					
14	1					
	46.9					
15	1	2				
	43.3	43.7				
16	1	2				
	50.5	51.4				
19	1	2	3			
	54.8	43.9	43.8			

1

RECEIVER	LEQ(H)	L10
R42	53.3	56.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	6
	49.2	47.4	45.1	41.8	40.9

1

RECEIVER	LEQ(H)	L10
R43	53.0	56.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	6
	48.7	47.1	44.9	41.6	40.7

1

RECEIVER	LEQ(H)	L10
R44	50.4	53.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2
	47.3	45.5

1

RECEIVER	LEQ(H)	L10
R45	49.4	52.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2
 46.8 44.3

1

RECEIVER LEQ(H) L10
R46 43.9 46.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R47 44.9 47.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R48 43.4 45.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R49 43.3 45.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1*** NO SOLUTION FOR RECEIVER 11 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 11, BARRIER 20 AND ROADWAY 5

1

RECEIVER LEQ(H) L10
R50 .0 2.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R51 44.1 47.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
 42.1

1

RECEIVER LEQ(H) L10

R52 43.4 46.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R53 43.3 46.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R54 50.7 54.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
50.2

1

RECEIVER LEQ(H) L10
R55 52.5 56.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
52.4

1

RECEIVER LEQ(H) L10
R56 44.4 47.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
43.4

1

RECEIVER LEQ(H) L10
R57 43.8 47.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
43.3

1

RECEIVER LEQ(H) L10
R58 42.2 45.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
41.4

1

RECEIVER LEQ(H) L10
R59 42.5 46.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
41.5

1

RECEIVER LEQ(H) L10
R60 39.7 43.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R61 38.6 41.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R62 39.0 42.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R63 37.6 40.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R64 34.9 37.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10

R65 33.8 36.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R66 39.1 42.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R67 38.6 41.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R68 39.4 42.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R69 38.5 41.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R70 49.7 52.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2
 46.8 46.0

1

RECEIVER LEQ(H) L10
R71 54.1 57.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2 3
 42.0 53.4 43.4

1

RECEIVER LEQ(H) L10
R72 43.5 46.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R73	48.3	51.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	44.0	45.9

1

RECEIVER	LEQ(H)	L10
R74	51.9	55.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	46.5	50.2

1

RECEIVER	LEQ(H)	L10
R75	50.9	54.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	44.5	49.6

1

RECEIVER	LEQ(H)	L10
R76	47.9	51.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	42.5	46.2

1

RECEIVER	LEQ(H)	L10
R77	60.3	63.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21

1 2 3

42.5 60.1 44.4

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/26/97 17:28:10
 INPUT FILE - 79-116P1.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN EXIST ** RECEIVERS R79-R116 ** ROAD SET #1 CENTRAL
 PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 MASSIE ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	380.	56.
HT	4.	56.
MT	4.	56.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
I1	498983.	190641.	178.	1
I2	498935.	190545.	177.	1

ROADWAY 2 North Grounds Connector A

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	310.	50.
HT	5.	50.
MT	4.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A1	499008.	190362.	175.	1
A2	499010.	190422.	176.	1
A3	499000.	190461.	177.	1
A4	498949.	190524.	178.	1

ROADWAY 3 North Grounds Connector B

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	320.	50.
HT	5.	50.

	MT	4.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B1	499004.	190362.	175.	0
B2	499006.	190422.	176.	0
B3	498997.	190460.	177.	0
B4	498945.	190518.	178.	0

ROADWAY 4 ROUTE 250 D

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D0	499702.	191313.	151.	1
D1	499405.	191234.	161.	1
D2	499296.	191205.	162.	1

ROADWAY 5 ROUTE 250 E

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E0	499699.	191325.	151.	1
E1	499402.	191247.	161.	1
E2	499293.	191219.	162.	1

ROADWAY 6 US 29 A1

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498384.	191582.	204.	0
A16	498327.	191713.	203.	1
A17	498302.	191973.	201.	1
A18	498293.	192173.	194.	1
A19	498328.	192371.	186.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

ROADWAY 7 US 29 Aii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A25	498959.	193591.	144.	0
A26	499050.	193746.	143.	0
A27	499248.	193915.	150.	0
A28	499391.	193973.	159.	0
A29	499647.	193996.	161.	0
A30	500026.	194064.	161.	0
A31	500144.	194098.	162.	0
A32	500318.	194124.	166.	0
A33	500630.	194201.	172.	0
A34	500770.	194309.	172.	1
A35	500919.	194448.	168.	1
A36	501055.	194544.	161.	1
A37	501271.	194666.	155.	1
A38	501441.	194770.	158.	1

ROADWAY 8 US 29 Aiii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A38	501441.	194770.	158.	0
A39	501584.	194914.	162.	0
A40	501749.	195110.	168.	0
A41	501873.	195195.	170.	0
A42	502086.	195281.	173.	0
A43	502262.	195347.	173.	0
A44	502438.	195437.	171.	1
A45	502645.	195605.	164.	1
A46	502758.	195744.	161.	1
A47	502866.	195961.	151.	1
A48	502976.	196182.	143.	1
A49	503099.	196365.	137.	1
A50	503297.	196697.	135.	1

ROADWAY 9 US 29 B1

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE

B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498395.	191589.	204.	1
B16	498339.	191716.	203.	0
B17	498314.	191973.	201.	0
B18	498306.	192173.	194.	0
B19	498340.	192368.	186.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

OROADWAY 10 US 29 Bii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	GRADE
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B25	498982.	193577.	147.	1
B26	499053.	193696.	148.	1
B27	499148.	193798.	153.	1
B28	499311.	193905.	157.	1
B29	499644.	193960.	161.	1
B30	499996.	194035.	162.	1
B31	500129.	194079.	162.	1
B32	500319.	194110.	166.	1
B33	500636.	194189.	172.	1
B34	500780.	194299.	172.	0
B35	500929.	194437.	168.	0
B36	501065.	194527.	162.	0
B37	501266.	194641.	157.	0
B38	501455.	194749.	160.	0

OROADWAY 11 US 29 Biii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	GRADE
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B38	501455.	194749.	160.	1
B39	501617.	194867.	165.	1
B40	501794.	195075.	169.	1
B41	501890.	195166.	171.	1
B42	502092.	195262.	173.	1
B43	502269.	195328.	173.	0
B44	502449.	195421.	171.	0
B45	502660.	195593.	164.	0

B46	502773.	195731.	161.	0
B47	502885.	195955.	151.	0
B48	502993.	196171.	143.	0
B49	503115.	196354.	137.	0
B50	503297.	196625.	135.	0
B51	503379.	196720.	135.	0

OROADWAY 12 RAMP 5

		VEHICLE TYPE	VEHICLES/HOUR	SPEED	
		CARS	2800.	80.	
		HT	140.	80.	
		MT	100.	80.	
0 -----COORDINATES-----					
		X	Y	Z	GRADE
JA		499700.	191319.	151.	0
JB		499404.	191240.	161.	0
JC		499295.	191213.	162.	0
J0		499147.	191181.	163.	0
J1		499105.	191176.	164.	0
J2		499006.	191162.	167.	0
J3		498817.	191135.	177.	0
J4		498692.	191117.	183.	0
J5		498613.	191105.	187.	0

OROADWAY 13 RAMP 6

		VEHICLE TYPE	VEHICLES/HOUR	SPEED	
		CARS	1.	80.	
0 -----COORDINATES-----					
		X	Y	Z	GRADE
K1		499051.	191136.	165.	1
K2		498895.	191052.	173.	1
K3		498756.	190969.	173.	1
K4		498713.	190950.	167.	1

OROADWAY 14 RAMP 3

		VEHICLE TYPE	VEHICLES/HOUR	SPEED	
		CARS	1.	80.	
0 -----COORDINATES-----					
		X	Y	Z	GRADE
G1		498238.	190898.	179.	1
G2		498363.	190970.	180.	1
G3		498497.	191051.	180.	1

OROADWAY 15 RAMP 41

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K8	498265.	190835.	182.	1
K10	498202.	190808.	181.	1
K11	498115.	190746.	178.	1

ROADWAY 16 RAMP 4

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
F2	498048.	190668.	171.	1
F3	498115.	190746.	178.	1
F4	498239.	190845.	181.	1
F5	498385.	190922.	187.	1
F6	498489.	190977.	191.	1
F7	498502.	190986.	195.	1

ROADWAY 17 LAMBS ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	118.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
L1	500009.	193771.	172.	0
L2	500030.	193946.	168.	0
L3	500033.	193990.	168.	0
L4	500038.	194045.	169.	0

ROADWAY 18 ROSLYN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	38.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
M1	500708.	193948.	173.	1
M2	500638.	194048.	175.	1
M3	500586.	194157.	180.	1

OROADWAY 19 HYDRAULIC ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1750.	70.
HT	10.	70.
MT	10.	70.

0

-----COORDINATES-----

	X	Y	Z	GRADE
N0	500882.	194280.	175.	1
N1	500878.	194289.	176.	1
N2	500882.	194387.	178.	1

OROADWAY 20 WOODBURN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	38.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
P1	501962.	195048.	183.	0
P2	501999.	195162.	182.	0
P3	502036.	195234.	181.	0

OROADWAY 21 LAMBS ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	118.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
L44	500040.	194074.	169.	0
L5	500043.	194110.	168.	0
L6	500059.	194248.	164.	0

OROADWAY 22 ROSLYN RD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	38.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
M33	500582.	194192.	178.	0

M4	500587.	194234.	177.	0
M5	500601.	194304.	172.	0
M6	500604.	194392.	169.	0
M7	500545.	194537.	159.	0

OROADWAY 23 HYDRAULIC ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1750.	70.	
	HT	10.	70.	
	MT	10.	70.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
N3	500884.	194426.	178.	1
N4	500886.	194634.	173.	1
N5	500877.	194754.	165.	1

OROADWAY 24 WOODBURN ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	38.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
P4	502068.	195284.	180.	0
P44	502191.	195407.	174.	0
P5	502300.	195476.	171.	0
P6	502717.	195738.	165.	0
P7	502763.	195796.	159.	0
P8	502802.	195873.	156.	0
P9	502837.	195987.	155.	0
P10	502842.	196087.	154.	0
P11	502834.	196156.	151.	0

OROADWAY 25 RAMP 3ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
G4	498546.	191113.	182.	1
G5	498579.	191209.	188.	1
G6	498581.	191270.	207.	1
G7	498521.	191418.	187.	1

OROADWAY 26 RAMP 4ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
F8	498606.	191117.	196.	1
F9	498630.	191196.	197.	1
F10	498632.	191265.	197.	1
F11	498590.	191374.	198.	1
F12	498443.	191535.	200.	1

ROADWAY 27 RAMP 6ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K5	498605.	190922.	185.	1
K6	498536.	190904.	184.	1
K60	498412.	190872.	183.	1

ROADWAY 28 ROUTE 250 Diii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D7	498541.	191010.	179.	1
D8	498373.	190952.	180.	1
D9	498251.	190881.	179.	1
D10	498161.	190806.	177.	1
D11	498048.	190668.	171.	1

ROADWAY 29 ROUTE 250 Eiii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E7	498538.	191021.	179.	1
E8	498368.	190963.	180.	1
E9	498243.	190892.	179.	1

1

BARRIER 1 TYPE (R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	211.	100.		
DD4	498231.	191905.	214.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----
X Y Z ZO DELZ P
MM1 501415. 194702. 164. 100. 0. 0
MM2 501487. 194738. 167. 100.

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----
X Y Z ZO DELZ P
NN1 501856. 195108. 173. 100. 0. 0
NN2 501937. 195157. 179. 100.
NN3 501966. 195181. 177. 100.

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----
X Y Z ZO DELZ P
OO1 502037. 195215. 178. 100. 0. 0
OO2 502109. 195243. 179. 100.

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----
X Y Z ZO DELZ P
PP1 498644. 191089. 189. 100. 0. 0
PP2 498711. 191108. 182. 100.
PP3 498745. 191110. 180. 100.
PP4 498810. 191123. 166. 100.
PP5 498843. 191126. 173. 100.
PP6 498909. 191136. 166. 100.

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----
X Y Z ZO DELZ P
QQ0 498761. 191156. 181. 181. 0. 0
QQ2 498938. 191167. 191. 191.
QQ3 499036. 191179. 166. 166.
QQ4 499100. 191210. 166. 166.
QQ5 499127. 191217. 170. 170.
QQ6 499219. 191236. 168. 168.
QQ7 499324. 191249. 162. 162.
QQ8 499420. 191279. 170. 170.
QQ9A 499557. 191305. 151. 151.

1

BARRIER 18 TYPE(R) WALL 18 NAT WALL AT WOODBURN

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 EXT OF NAT WALL 17

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
R79	500857.	194547.	182.
R80	500837.	194628.	174.
R81	500927.	194617.	178.
R82	500980.	194607.	175.
R83	500991.	194651.	175.
R84	500971.	194678.	176.
R85	500916.	194709.	170.
R86	500955.	194718.	170.
R87	501094.	194612.	158.
R88	501150.	194518.	161.
R89	501260.	194568.	166.
R90	501519.	194630.	172.
R91	501513.	194708.	172.
R92	501813.	194972.	180.
R93	502067.	195190.	182.
R94	502010.	195307.	173.
R95	501962.	195326.	169.
R96	501993.	195339.	175.
R97	502002.	195357.	175.
R98	502021.	195370.	175.
R99	502060.	195383.	173.
R100	502082.	195385.	176.
R101	502093.	195397.	175.
R102	502013.	195112.	184.
R103	502295.	195386.	175.
R104	502194.	195435.	178.
R105	502261.	195467.	172.
R106	502220.	195404.	178.
R107	502338.	195414.	175.
R108	502293.	195427.	175.
R109	502564.	195561.	169.

	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.0	.5		
26 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.0	.5		
27 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.0	.5		
28 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.0	.5		
29 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.0	.5		

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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4 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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5 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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6 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7 *	3.0	2.0	3.0	3.0	3.0	3.0	4.0	4.0	.0	4.0
	.0	.0	1.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	1.0	.0	.0	.0	2.0	2.0	2.0	2.0
	2.0	2.0	2.0	.0	2.0	1.0	2.0	.0	.0	.0

	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
23 *	.0	2.0	1.0	2.0	2.0	2.0	1.0	2.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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24 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
25 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
26 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
27 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
28 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
29 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		

1

RECEIVER	LEQ(H)	L10
R79	64.3	67.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	44.5	
23	1	2
	64.0	51.1

1

RECEIVER	LEQ(H)	L10
R80	59.3	62.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
----	---	--

40.5
23 1 2
56.1 56.3

1

RECEIVER LEQ(H) L10
R81 61.1 64.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19 2
41.0
23 1 2
59.1 56.8

1

RECEIVER LEQ(H) L10
R82 54.2 57.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19 2
40.8
23 1 2
51.8 49.9

1

RECEIVER LEQ(H) L10
R83 53.2 56.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23 1 2
49.3 50.5

1

RECEIVER LEQ(H) L10
R84 54.6 57.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23 1 2
49.3 52.9

1

RECEIVER LEQ(H) L10

R85 62.4 65.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23 1 2
 50.5 62.1

1

RECEIVER LEQ(H) L10

R86 55.4 58.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23 1 2
 47.6 54.5

1

RECEIVER LEQ(H) L10

R87 49.4 53.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23 1 2
 46.4 45.2

1

RECEIVER LEQ(H) L10

R88 47.2 50.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23 1 2
 44.4 41.5

1

RECEIVER LEQ(H) L10

R89 43.9 47.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23 1
 40.6

1

RECEIVER LEQ(H) L10
R90 38.2 41.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R91 38.4 41.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R92 35.5 38.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R93 43.3 44.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

20 2
41.3

1

RECEIVER LEQ(H) L10
R94 38.9 41.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R95 36.5 39.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R96 37.3 39.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R97 37.1 39.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10

R98 37.5 39.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R99 38.2 40.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R100 39.7 41.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R101 39.4 41.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R102 47.2 48.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

20 1
46.5

1

RECEIVER LEQ(H) L10
R103 42.3 43.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R104 48.1 48.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24 1 2
41.2 46.9

1

RECEIVER LEQ(H) L10
R105 52.4 53.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24 2
52.1

1

RECEIVER LEQ(H) L10
R106 50.3 51.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24 1 2
42.2 49.4

1

RECEIVER LEQ(H) L10
R107 42.5 44.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R108 45.7 47.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24 2
44.1

1

RECEIVER LEQ(H) L10
R109 43.4 44.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24 3
41.3

1

RECEIVER LEQ(H) L10
R110 43.9 45.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24

3

42.6

1

RECEIVER	LEQ(H)	L10
R111	37.0	39.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R112	36.6	39.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R113	39.0	41.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R114	30.9	33.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

*** ANGLE SUBTENDED AT RECEIVER BY ROAD SEGMENT IS APPROACHING ZERO

INITIAL PT. OF ROAD SEGMENT *****	*****	567.5848
END PT. OF ROAD SEGMENT*****	*****	567.5853
RECEIVER POINT	.0000	.0000 .0000

1

RECEIVER	LEQ(H)	L10
IGNO	-947.7	-945.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R116	28.4	31.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/26/97 17:32:36
 INPUT FILE - 79-116P2.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN EXISTING ** RECEIVERS R79-R116 ** ROAD SET #2 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 NORTH GROUNDS CONNECTOR A11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A9	498624.	190870.	186.	1
A10	498622.	190951.	185.	1
A11	498618.	191091.	187.	1

ROADWAY 2 NORTH GROUNDS CONNECTOR B11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B9	498612.	190870.	186.	1
B10	498610.	190951.	185.	1
B11	498606.	191091.	187.	1

ROADWAY 3 ROUTE 250 D11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D3	499109.	191156.	163.	1
D4	498918.	191108.	166.	1
D5	498752.	191065.	172.	1

D6 498701. 191051. 174. 1

ROADWAY 4 ROUTE 250 Eii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E3	499106.	191170.	163.	1
E4	498914.	191120.	166.	1
E5	498749.	191077.	172.	1
E6	498698.	191063.	174.	1

ROADWAY 5 RAMP 5ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	2550.	90.	
	HT	150.	90.	
	MT	100.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
J6	498593.	191102.	187.	0
J7	498519.	191087.	190.	0
J8	498418.	191053.	192.	0
J9	498294.	190989.	191.	0
J10	498191.	190911.	190.	0
J11	498115.	190832.	186.	0
J12	497972.	190544.	165.	0
J13	497933.	190435.	163.	0
J14	497865.	190239.	162.	0

ROADWAY 6 OLD RAMP 5iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
OLD J11	498115.	190832.	180.	1
OLD J12	498008.	190664.	170.	1
OLD J13	497973.	190583.	166.	1

ROADWAY 7 RAMP 6iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K7	498270.	190824.	182.	1
K12	498156.	190747.	180.	1
K13	498075.	190654.	175.	1
K14	497998.	190478.	172.	1

OROADWAY 8 ROUTE 250 Div

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D11	498048.	190668.	171.	1
D12	497980.	190541.	165.	1
D13	497941.	190433.	163.	1

OROADWAY 9 ROUTE 250 Eiv

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E9	498243.	190892.	179.	1
E10	498151.	190816.	177.	1
E11	498034.	190676.	171.	1
E12	497965.	190547.	165.	1

OROADWAY 10 ROUTE 250 Ev

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E12	497965.	190547.	165.	1
E13	497925.	190438.	163.	1

OROADWAY 11 IVY ROAD V

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	600.	72.	
	HT	35.	72.	
	MT	14.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H1	497975.	190297.	170.	1

H3 497919. 190355. 170. 1

ROADWAY 12 IVY ROAD V11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	600.	72.
HT	35.	72.
MT	14.	72.

0 -----COORDINATES-----
X Y Z GRADE
H33 497893. 190383. 170. 1
H5 497838. 190442. 170. 1

ROADWAY 13 IVY ROAD W

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	500.	72.
HT	30.	72.
MT	12.	72.

0 -----COORDINATES-----
X Y Z GRADE
H2 497969. 190288. 170. 1
H4 497915. 190345. 170. 1

ROADWAY 14 IVY ROAD W11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	500.	72.
HT	30.	72.
MT	12.	72.

0 -----COORDINATES-----
X Y Z GRADE
H44 497879. 190383. 170. 1
H6 497832. 190432. 170. 1

ROADWAY 15 IVY ROAD W111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	650.	72.
HT	36.	72.
MT	15.	72.

0 -----COORDINATES-----
X Y Z GRADE
H6 497832. 190432. 170. 1
H7 497793. 190456. 170. 1
H9 497703. 190532. 170. 1

OROADWAY 16 IVY ROAD Viii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	950.	72.	
	HT	50.	72.	
	MT	20.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H5	497838.	190442.	170.	1
H8	497803.	190463.	170.	1
H10	497711.	190540.	170.	1

OROADWAY 17 ROUTE 250 Ev1

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E13	497925.	190438.	170.	1
E14	497858.	190241.	170.	1

OROADWAY 18 ROUTE 250 Dv

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D13	497941.	190433.	170.	1
D14	497873.	190236.	170.	1

OROADWAY 19 OLD IVY ROAD

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	370.	60.	
	HT	5.	60.	
	MT	10.	60.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
OI1	498121.	190435.	179.	0
OI2	497955.	190488.	176.	0
OI3	497935.	190494.	166.	0
OI4	497876.	190513.	167.	0
OI5	497906.	190644.	169.	0

OROADWAY 20 RAMP TO OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	220.	60.
HT	4.	60.
MT	8.	60.

0

-----COORDINATES-----

	X	Y	Z	GRADE
OIR1	498074.	190788.	181.	0
OIR2	497906.	190644.	169.	0

OROADWAY 21 RIO ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	850.	70.
HT	13.	70.
MT	40.	70.

0

-----COORDINATES-----

	X	Y	Z	GRADE
RIO0	500455.	193741.	177.	0
RIO1	500712.	193980.	173.	0
RIO2	501033.	194280.	172.	0
RIO3	501629.	194648.	170.	0

OROADWAY 22 BARRACKS ROAD SOUTH

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	620.	80.
HT	12.	80.
MT	20.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
BARR1	498418.	192490.	170.	0
BARR2	498695.	192305.	183.	0

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0

BB2 498530. 191155. 208. 100.
BB3 498551. 191287. 202. 100.
BB4 498546. 191355. 198. 100.

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0

GG2 498905. 193305. 165. 100.
GG3 498921. 193352. 162. 100.

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
PP1	498644.	191089.	189.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ0	498761.	191156.	181.	181.	0.	0
QQ2	498938.	191167.	171.	171.		
QQ3	499036.	191179.	166.	166.		
QQ4	499100.	191210.	166.	166.		
QQ5	499127.	191217.	170.	170.		
QQ6	499219.	191236.	168.	168.		
QQ7	499324.	191249.	162.	162.		
QQ8	499420.	191279.	170.	170.		
QQ9A	499557.	191305.	151.	151.		

1

BARRIER 18 TYPE(R) WALL 18 NAT BARRIER NEAR WOODBURN

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 - EXTENSION OF NAT WALL 17 NEAR US 250

-----COORDINATES-----
X Y Z ZO DELZ P
QQ9B 499559. 191307. 151. 151. 0. 0
QQ10 499575. 191324. 158. 158.

1

RECEIVERS

-----COORDINATES-----
X Y Z
R79 500857. 194547. 182.
R80 500837. 194628. 174.
R81 500927. 194617. 178.
R82 500980. 194607. 175.
R83 500991. 194651. 175.
R84 500971. 194678. 176.
R85 500916. 194709. 170.
R86 500955. 194718. 170.
R87 501094. 194612. 158.
R88 501150. 194518. 161.
R89 501260. 194568. 166.
R90 501519. 194630. 172.
R91 501513. 194708. 172.
R92 501813. 194972. 180.
R93 502067. 195190. 182.
R94 502010. 195307. 173.
R95 501962. 195326. 169.
R96 501993. 195339. 175.
R97 502002. 195357. 175.
R98 502021. 195370. 175.
R99 502060. 195383. 173.
R100 502082. 195385. 176.
R101 502093. 195397. 175.
R102 502013. 195112. 184.
R103 502295. 195386. 175.
R104 502194. 195435. 178.
R105 502261. 195467. 172.
R106 502220. 195404. 178.
R107 502338. 195414. 175.
R108 502293. 195427. 175.
R109 502564. 195561. 169.
R110 502600. 195598. 165.
R111 502696. 195541. 153.
R112 502952. 195884. 135.
R113 502947. 195993. 144.
R114 502957. 196315. 148.
IGNORE 0. 0. 0.
R116 503220. 196194. 130.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
19 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
20 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
21 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
22 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0

1

RECEIVER	LEQ(H)	L10
R79	46.3	49.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	42.3	43.5

1

RECEIVER	LEQ(H)	L10
R80	44.2	47.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	3
	41.9

1

RECEIVER	LEQ(H)	L10
R81	45.9	48.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	40.7	43.9

1

RECEIVER LEQ(H) L10
R82 46.8 49.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
41.1 45.2

1

RECEIVER LEQ(H) L10
R83 46.0 49.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
44.5

1

RECEIVER LEQ(H) L10
R84 45.2 48.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
43.6

1

RECEIVER LEQ(H) L10
R85 43.8 46.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
42.1

1

RECEIVER LEQ(H) L10
R86 44.1 47.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
42.6

1

RECEIVER LEQ(H) L10
R87 48.4 51.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
40.3 47.5

1

RECEIVER LEQ(H) L10
R88 52.7 56.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
42.1 52.3

1

RECEIVER LEQ(H) L10
R89 53.5 56.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
53.3

1

RECEIVER LEQ(H) L10
R90 60.7 64.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
60.7

1

RECEIVER LEQ(H) L10
R91 53.1 56.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
53.0

1

RECEIVER LEQ(H) L10
R92 40.4 43.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R93 35.1 38.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R94 34.2 37.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R95 34.6 37.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R96 34.2 37.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R97 34.0 37.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R98 33.7 36.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R99 33.2 36.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R100 33.0 36.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R101	32.8	35.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R102	36.4	39.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R103	31.8	34.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R104	31.9	35.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R105	31.3	34.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R106	32.1	35.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R107	31.3	34.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R108	31.4	34.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R109	29.1	32.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R110	28.7	31.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
R111	28.4	31.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
R112	25.5	28.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
R113	25.0	27.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
R114	22.9	25.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
IGNO	-943.0	-940.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER	LEQ(H)	L10
R116	23.0	25.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/26/97 17:34:39
 INPUT FILE - 300-PM_1.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN EXISTING ** RECEIVERS R300- ** ROAD SET #1 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 Massie Rd.

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	380.	56.
HT	4.	56.
MT	4.	56.

0 -----COORDINATES-----

	X	Y	Z	GRADE
I1	498983.	190641.	178.	1
I2	498935.	190545.	177.	1

OROADWAY 2 North Grounds Connector A

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	310.	50.
HT	5.	50.
MT	4.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
A1	499008.	190362.	175.	1
A2	499010.	190422.	176.	1
A3	499000.	190461.	177.	1
A4	498949.	190524.	178.	1

OROADWAY 3 North Grounds Connector B

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	320.	50.
HT	5.	50.

	MT	4.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B1	499004.	190362.	175.	0
B2	499006.	190422.	176.	0
B3	498997.	190460.	177.	0
B4	498945.	190518.	178.	0

ROADWAY 4 ROUTE 250 D

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
0	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
D0	499702.	191313.	151.	1
D1	499405.	191234.	161.	1
D2	499296.	191205.	162.	1

ROADWAY 5 ROUTE 250 E

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
0	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
E0	499699.	191325.	151.	1
E1	499402.	191247.	161.	1
E2	499293.	191219.	162.	1

ROADWAY 6 US 29 A1

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
0	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498384.	191582.	204.	0
A16	498327.	191713.	203.	1
A17	498302.	191973.	201.	1
A18	498293.	192173.	194.	1
A19	498328.	192371.	186.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

OROADWAY 7 US 29 A11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A25	498959.	193591.	144.	0
A26	499050.	193746.	143.	0
A27	499248.	193915.	150.	0
A28	499391.	193973.	159.	0
A29	499647.	193996.	161.	0
A30	500026.	194064.	161.	0
A31	500144.	194098.	162.	0
A32	500318.	194124.	166.	0
A33	500630.	194201.	172.	0
A34	500770.	194309.	172.	1
A35	500919.	194448.	168.	1
A36	501055.	194544.	161.	1
A37	501271.	194666.	155.	1
A38	501441.	194770.	158.	1

OROADWAY 8 US 29 A111

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A38	501441.	194770.	158.	0
A39	501584.	194914.	162.	0
A40	501749.	195110.	168.	0
A41	501873.	195195.	170.	0
A42	502086.	195281.	173.	0
A43	502262.	195347.	173.	0
A44	502438.	195437.	171.	1
A45	502645.	195605.	164.	1
A46	502758.	195744.	161.	1
A47	502866.	195961.	151.	1
A48	502976.	196182.	143.	1
A49	503099.	196365.	137.	1
A50	503297.	196697.	135.	1

OROADWAY 9 US 29 B1

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE

B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498395.	191589.	204.	1
B16	498339.	191716.	203.	0
B17	498314.	191973.	201.	0
B18	498306.	192173.	194.	0
B19	498340.	192368.	186.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

OROADWAY 10 US 29 Bii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	GRADE
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B25	498982.	193577.	147.	1
B26	499053.	193696.	148.	1
B27	499148.	193798.	153.	1
B28	499311.	193905.	157.	1
B29	499644.	193960.	161.	1
B30	499996.	194035.	162.	1
B31	500129.	194079.	162.	1
B32	500319.	194110.	166.	1
B33	500636.	194189.	172.	1
B34	500780.	194299.	172.	0
B35	500929.	194437.	168.	0
B36	501065.	194527.	162.	0
B37	501266.	194641.	157.	0
B38	501455.	194749.	160.	0

OROADWAY 11 US 29 Biii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	GRADE
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B38	501455.	194749.	160.	1
B39	501617.	194867.	165.	1
B40	501794.	195075.	169.	1
B41	501890.	195166.	171.	1
B42	502092.	195262.	173.	1
B43	502269.	195328.	173.	0
B44	502449.	195421.	171.	0
B45	502660.	195593.	164.	0

B46	502773.	195731.	161.	0
B47	502885.	195955.	151.	0
B48	502993.	196171.	143.	0
B49	503115.	196354.	137.	0
B50	503297.	196625.	135.	0
B51	503379.	196720.	135.	0

ROADWAY 12 RAMP 5

		VEHICLE TYPE	VEHICLES/HOUR	SPEED	
		CARS	2550.	90.	
		HT	140.	90.	
		MT	100.	90.	
0 -----COORDINATES-----					
		X	Y	Z	GRADE
JA		499700.	191319.	162.	0
JB		499404.	191240.	161.	0
JC		499295.	191213.	162.	0
JO		499147.	191181.	163.	0
J1		499105.	191176.	164.	0
J2		499006.	191162.	167.	0
J3		498817.	191135.	177.	0
J4		498692.	191117.	183.	0
J5		498613.	191105.	187.	0

ROADWAY 13 RAMP 6

		VEHICLE TYPE	VEHICLES/HOUR	SPEED	
		CARS	1.	80.	
0 -----COORDINATES-----					
		X	Y	Z	GRADE
K1		499051.	191136.	165.	1
K2		498895.	191052.	173.	1
K3		498756.	190969.	173.	1
K4		498713.	190950.	167.	1

ROADWAY 14 RAMP 3

		VEHICLE TYPE	VEHICLES/HOUR	SPEED	
		CARS	1.	80.	
0 -----COORDINATES-----					
		X	Y	Z	GRADE
G1		498238.	190898.	179.	1
G2		498363.	190970.	180.	1
G3		498497.	191051.	180.	1

ROADWAY 15 RAMP 41

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K8	498265.	190835.	182.	1
K10	498202.	190808.	181.	1
K11	498115.	190746.	178.	1

OROADWAY 16 RAMP 4

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
F2	498048.	190668.	171.	1
F3	498115.	190746.	178.	1
F4	498239.	190845.	181.	1
F5	498385.	190922.	187.	1
F6	498489.	190977.	191.	1
F7	498502.	190986.	195.	1

OROADWAY 17 LAMBS ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	118.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
L1	500009.	193771.	172.	0
L2	500030.	193946.	168.	0
L3	500033.	193990.	168.	0
L4	500038.	194045.	169.	0

OROADWAY 18 ROSLYN ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	38.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
M1	500708.	193948.	173.	1
M2	500638.	194048.	175.	1
M3	500586.	194157.	180.	1

OROADWAY 19 HYDRAULIC ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1750.	70.
HT	10.	70.
MT	10.	70.

0 -----COORDINATES-----

	X	Y	Z	GRADE
N0	500882.	194280.	175.	1
N1	500878.	194289.	176.	1
N2	500882.	194387.	178.	1

OROADWAY 20 WOODBURN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	38.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
P1	501962.	195048.	183.	0
P2	501999.	195162.	182.	0
P3	502036.	195234.	181.	0

OROADWAY 21 LAMBS ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	118.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
L44	500040.	194074.	169.	0
L5	500043.	194110.	168.	0
L6	500059.	194248.	164.	0

OROADWAY 22 ROSLYN RD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	38.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
M33	500582.	194192.	178.	0

M4	500587.	194234.	177.	0
M5	500601.	194304.	172.	0
M6	500604.	194392.	169.	0
M7	500545.	194537.	159.	0

OROADWAY 23 HYDROLIC ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1750.	70.
HT	10.	70.
MT	10.	70.

O-----COORDINATES-----O				
	X	Y	Z	GRADE
N3	500884.	194426.	178.	1
N4	500886.	194634.	173.	1
N5	500877.	194754.	165.	1

OROADWAY 24 WOODBURN ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	38.	50.
HT	1.	50.
MT	1.	50.

O-----COORDINATES-----O				
	X	Y	Z	GRADE
P4	502068.	195284.	180.	0
P44	502191.	195407.	174.	0
P5	502300.	195476.	171.	0
P6	502717.	195738.	165.	0
P7	502763.	195796.	159.	0
P8	502802.	195873.	156.	0
P9	502837.	195987.	155.	0
P10	502842.	196087.	154.	0
P11	502834.	196156.	151.	0

OROADWAY 25 RAMP 311

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

O-----COORDINATES-----O				
	X	Y	Z	GRADE
G4	498546.	191113.	182.	1
G5	498579.	191209.	188.	1
G6	498581.	191270.	207.	1
G7	498521.	191418.	187.	1

OROADWAY 26 RAMP 411

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
F8	498606.	191117.	196.	1
F9	498630.	191196.	197.	1
F10	498632.	191265.	197.	1
F11	498590.	191374.	198.	1
F12	498443.	191535.	200.	1

ROADWAY 27 RAMP 611

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K5	498605.	190922.	185.	1
K6	498536.	190904.	184.	1
K60	498412.	190872.	183.	1

ROADWAY 28 ROUTE 250 D111

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D7	498541.	191010.	179.	1
D8	498373.	190952.	180.	1
D9	498251.	190881.	179.	1
D10	498161.	190806.	177.	1
D11	498048.	190668.	171.	1

ROADWAY 29 ROUTE 250 E111

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E7	498538.	191021.	179.	1
E8	498368.	190963.	180.	1
E9	498243.	190892.	179.	1

1

BARRIER 1 TYPE (R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----
X Y Z ZO DELZ P
MM1 501415. 194702. 164. 100. 0. 0
MM2 501487. 194738. 167. 100.

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----
X Y Z ZO DELZ P
NN1 501856. 195108. 173. 100. 0. 0
NN2 501937. 195157. 179. 100.
NN3 501966. 195181. 177. 100.

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----
X Y Z ZO DELZ P
OO1 502037. 195215. 178. 100. 0. 0
OO2 502109. 195243. 179. 100.

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----
X Y Z ZO DELZ P
PP1 498644. 191089. 189. 100. 0. 0
PP2 498711. 191108. 182. 100.
PP3 498745. 191110. 180. 100.
PP4 498810. 191123. 166. 100.
PP5 498843. 191126. 173. 100.
PP6 498909. 191136. 166. 100.

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----
X Y Z ZO DELZ P
QQ0 498761. 191156. 181. 181. 0. 0
QQ2 498938. 191167. 171. 171.
QQ3 499036. 191179. 166. 166.
QQ4 499100. 191210. 166. 166.
QQ5 499127. 191217. 170. 170.
QQ6 499219. 191236. 168. 168.
QQ7 499324. 191249. 162. 162.
QQ8 499420. 191279. 170. 170.
QQ9A 499557. 191305. 151. 151.

1

BARRIER 18 TYPE(R) WALL 18 NAT BARRIER AT WOODBURN ROAD

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 EXTENSION OF NATURAL WALL 17 AT US 250

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
R300	498768.	192878.	171.
R301	499851.	194148.	157.
R302	500216.	193939.	157.
R304	500723.	194486.	177.
R305	500866.	194455.	178.
R306	500907.	194289.	172.
R307	501074.	194387.	166.
R308	501463.	194599.	168.
R309	501070.	194662.	161.
R310	501114.	194754.	157.
R311	502641.	195688.	164.
R312	503302.	196494.	108.
R313	498250.	191999.	214.
R314	498324.	192036.	219.
R315	498280.	192041.	214.
R316	498345.	192111.	210.
R317	498313.	192207.	188.
R318	498447.	191978.	243.
R47MOD	498160.	191923.	199.
R50MOD	498319.	192106.	208.
R51MOD	498223.	192242.	176.
R55MOD	498580.	192482.	0.
R303	500229.	194005.	155.
R319	500307.	194256.	156.
R320	502126.	195453.	172.
R321	502383.	195539.	172.
R322	502515.	195625.	170.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

	.0	.0	.0	.0	.0	.0	.0	.0	.0
25 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
26 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
27 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
28 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
29 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0

1

RECEIVER	LEQ(H)	L10
R300	37.2	40.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R301	37.1	40.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R302	38.5	42.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R304	51.5	54.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	43.6	
23	1	2
	49.4	43.9

1

RECEIVER	LEQ(H)	L10
R305	67.0	70.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19 2
 51.7
23 1 2
 66.8 45.2

1

RECEIVER LEQ(H) L10
R306 62.9 66.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19 1 2
 57.8 61.1
23 1
 47.2

1

RECEIVER LEQ(H) L10
R307 49.3 52.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19 2
 44.5
23 1 2
 46.2 40.2

1

RECEIVER LEQ(H) L10
R308 39.3 42.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R309 46.6 49.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23 1 2
 42.7 43.1

1

RECEIVER LEQ(H) L10
R310 43.6 46.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23 2
 40.6

1

RECEIVER LEQ(H) L10
R311 60.4 59.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24 3
 60.3

1

RECEIVER LEQ(H) L10
R312 27.5 28.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R313 36.9 40.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R314 38.8 39.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R315 38.8 39.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R316 38.1 40.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R317 46.0 45.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

9 7
43.7

1

RECEIVER LEQ(H) L10
R318 43.9 46.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R47M 32.1 35.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R50M 40.0 39.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1*** NO SOLUTION FOR RECEIVER 21 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 21, BARRIER 20 AND ROADWAY 27

1

RECEIVER LEQ(H) L10
R51M .0 -.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R55M 36.6 39.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R303 38.7 42.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R319 39.4 42.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R320 38.4 40.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R321	54.7	54.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24	3
	54.6

1

RECEIVER	LEQ(H)	L10
R322	53.1	53.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24	3
	53.0

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/26/97 17:37:40
 INPUT FILE - 300-PM_2.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN EXISTING ** RECEIVERS R1-R39 ** ROAD SET #2 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 NORTH GROUNDS CONNECTOR Aii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A9	498624.	190870.	186.	1
A10	498622.	190951.	185.	1
A11	498618.	191091.	187.	1

ROADWAY 2 NORTH GROUNDS CONNECTOR Bii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B9	498612.	190870.	186.	1
B10	498610.	190951.	185.	1
B11	498606.	191091.	187.	1

ROADWAY 3 ROUTE 250 Dii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D3	499109.	191156.	163.	1
D4	498918.	191108.	166.	1
D5	498752.	191065.	172.	1

D6 498701. 191051. 174. 1

ROADWAY 4 ROUTE 250 Eii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E3	499106.	191170.	163.	1
E4	498914.	191120.	166.	1
E5	498749.	191077.	172.	1
E6	498698.	191063.	174.	1

ROADWAY 5 RAMP 5ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	2550.	90.	
	HT	150.	90.	
	MT	100.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
J6	498593.	191102.	187.	0
J7	498519.	191087.	190.	0
J8	498418.	191053.	192.	0
J9	498294.	190989.	191.	0
J10	498191.	190911.	189.	0
J11	498115.	190832.	186.	0
J12	497972.	190544.	165.	0
J13	497933.	190435.	163.	0
J14	497865.	190239.	162.	0

ROADWAY 6 RAMP 5iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
J11	498115.	190832.	180.	1
J12	498008.	190664.	170.	1
J13	497973.	190583.	166.	1

ROADWAY 7 RAMP 6iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K7	498270.	190824.	182.	1
K12	498156.	190747.	180.	1
K13	498075.	190654.	175.	1
K14	497998.	190478.	172.	1

OROADWAY 8 ROUTE 250 Div

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D11	498048.	190668.	171.	1
D12	497980.	190541.	165.	1
D13	497941.	190433.	163.	1

OROADWAY 9 ROUTE 250 Eiv

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E9	498243.	190892.	179.	1
E10	498151.	190816.	177.	1
E11	498034.	190676.	171.	1
E12	497965.	190547.	165.	1

OROADWAY 10 ROUTE 250 Ev

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E12	497965.	190547.	165.	1
E13	497925.	190438.	163.	1

OROADWAY 11 IVY ROAD V

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	600.	72.	
	HT	35.	72.	
	MT	14.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H1	497975.	190297.	170.	1

H3 497919. 190355. 170. 1

ROADWAY 12 IVY ROAD Vii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	600.	72.
HT	35.	72.
MT	14.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H33	497893.	190383.	170.	1
H5	497838.	190442.	170.	1

ROADWAY 13 IVY ROAD W

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	500.	72.
HT	30.	72.
MT	12.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H2	497969.	190288.	170.	1
H4	497915.	190345.	170.	1

ROADWAY 14 IVY ROAD Wiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	500.	72.
HT	30.	72.
MT	12.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H44	497879.	190383.	170.	1
H6	497832.	190432.	170.	1

ROADWAY 15 IVY ROAD Wiiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	650.	72.
HT	36.	72.
MT	15.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H6	497832.	190432.	170.	1
H7	497793.	190456.	170.	1
H9	497703.	190532.	170.	1

OROADWAY 16 IVY ROAD Vi11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	950.	72.
HT	50.	72.
MT	20.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H5	497838.	190442.	170.	1
H8	497803.	190463.	170.	1
H10	497771.	190540.	170.	1

OROADWAY 17 ROUTE 250 Evi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E13	497925.	190438.	163.	1
E14	497858.	190241.	162.	1

OROADWAY 18 ROUTE 250 Dv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
D13	497941.	190433.	163.	1
D14	497873.	190236.	162.	1

OROADWAY 19 OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	370.	60.
HT	5.	60.
MT	10.	60.

0 -----COORDINATES-----

	X	Y	Z	GRADE
OI1	498121.	190435.	179.	0
OI2	497955.	190488.	176.	0
OI3	497935.	190494.	166.	0
OI4	497876.	190513.	167.	0
OI5	497775.	190562.	165.	0

ROADWAY 20 RAMP TO OLD IVY ROAD

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	220.	60.	
	HT	4.	60.	
	MT	8.	60.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
OIR1	498074.	190788.	181.	0
OIR2	497906.	190644.	169.	0

ROADWAY 21 RIO ROAD

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	850.	70.	
	HT	13.	70.	
	MT	40.	70.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
RIO0	500455.	193741.	177.	0
RIO1	500712.	193980.	173.	0
RIO2	501033.	194280.	172.	0
RIO3	501629.	194648.	170.	0

ROADWAY 22 BARRACKS ROAD SOUTH

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	620.	80.	
	HT	12.	80.	
	MT	20.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
BARR1	498418.	192490.	170.	0
BARR2	498695.	192305.	183.	0

1

BARRIER 1 TYPE(R) WALL 1

	-----COORDINATES-----					
	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

	-----COORDINATES-----					
	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0

BB2	498530.	191155.	208.	100.
BB3	498551.	191287.	202.	100.
BB4	498546.	191355.	198.	100.

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		

GG3 498921. 193352. 162. 100.
1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
PP1	498644.	191089.	189.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ0	498761.	191156.	181.	181.	0.	0
QQ2	498938.	191167.	171.	171.		
QQ3	499036.	191179.	166.	166.		
QQ4	499100.	191210.	166.	166.		
QQ5	499127.	191217.	170.	170.		
QQ6	499219.	191236.	168.	168.		
QQ7	499324.	191249.	162.	162.		
QQ8	499420.	191279.	170.	170.		
QQ9A	499557.	191305.	151.	151.		

1

BARRIER 18 TYPE(R) WALL 18 NAT BARRIER NEAR WOODBURN ROAD

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 - EXT OF WALL 17 NEAR US 250

	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

1

RECEIVER	LEQ(H)	L10
R300	39.7	43.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R301	35.9	38.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R302	43.8	47.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	1
	42.4

1

RECEIVER	LEQ(H)	L10
R303	50.1	53.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	1	2
	49.0	42.8

1

RECEIVER	LEQ(H)	L10
----------	--------	-----

R304 44.3 47.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
40.5 41.1

1

RECEIVER LEQ(H) L10
R305 48.5 51.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
45.3 45.1

1

RECEIVER LEQ(H) L10
R306 55.7 59.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
54.7 48.3

1

RECEIVER LEQ(H) L10
R307 57.6 61.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
48.6 57.0

1

RECEIVER LEQ(H) L10
R308 60.4 63.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
60.4

1

RECEIVER LEQ(H) L10
R309 46.8 49.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
45.8

1

RECEIVER LEQ(H) L10
R310 45.3 48.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
44.4

1

RECEIVER LEQ(H) L10
R311 28.0 30.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R312 19.4 22.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R313 44.1 46.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R314 44.4 47.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R315 44.0 46.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1*** NO SOLUTION FOR RECEIVER 17 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 17, BARRIER 20 AND ROADWAY 5

1

RECEIVER LEQ(H) L10
R316 .0 2.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R317 44.4 47.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
43.8

1

RECEIVER LEQ(H) L10
R318 44.8 47.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R47M 43.7 46.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1*** NO SOLUTION FOR RECEIVER 21 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 21, BARRIER 20 AND ROADWAY 5
1

RECEIVER LEQ(H) L10
R50M .0 2.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R51M 44.0 47.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
42.2

1

RECEIVER LEQ(H) L10
R55M 48.5 52.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
48.2

1

RECEIVER	LEQ(H)	L10
R319	41.1	44.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R320	32.1	35.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R321	30.0	33.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R322	28.9	31.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

APPENDIX C
STAMINA PRINTOUT FOR 2022 No-BUILD ALTERNATIVE
NOISE LEVELS

NOTE:

THE RESULTS FOR EACH RECEPTOR ARE CONTAINED IN TWO STAMINA PRINTOUTS (ONE FOR EACH SET OF ROADS) AND MUST BE COMBINED (REFER SECTION 5.4 IN REPORT).

THE FOLLOWING RECEPTORS DO NOT CURRENTLY EXPERIENCE TRAFFIC NOISE. MEASURED NOISE LEVELS APPLY AT THESE SITES:

46, 47/318, 48, 49, 50/316, 51, 52, 53, 313, 314, 315, 317, 318, 56, 57, 58, 59, 60, 61, 62, 63, 300, 64, 65, 301, 302, 319, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 107, 108, 320, 109, 110, 111, 112, 113, 114, 116

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/30/97 15:02:42
 INPUT FILE - 1-39PM_1.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN ** RECEIVERS R1-R39 ** ROAD SET #1 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 Massie Rd.

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	588.	56.
HT	6.	56.
MT	6.	56.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
I1	498983.	190641.	178.	1
I2	498935.	190545.	177.	1

OROADWAY 2 North Grounds Connector A

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	485.	50.
HT	8.	50.
MT	7.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A1	499008.	190362.	175.	1
A2	499010.	190422.	176.	1
A3	499000.	190461.	177.	1
A4	498949.	190524.	178.	1

OROADWAY 3 North Grounds Connector B

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	500.	50.
HT	8.	50.

	MT	8.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B1	499004.	190362.	175.	0
B2	499006.	190422.	176.	0
B3	498997.	190460.	177.	0
B4	498945.	190518.	178.	0

OROADWAY 4 ROUTE 250 D

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D0	499702.	191313.	151.	1
D1	499405.	191234.	161.	1
D2	499296.	191205.	162.	1

OROADWAY 5 ROUTE 250 E

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E0	499699.	191325.	151.	1
E1	499402.	191247.	161.	1
E2	499293.	191219.	162.	1

OROADWAY 6 US 29 A1

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498384.	191582.	204.	0
A16	498327.	191713.	203.	1
A17	498302.	191973.	201.	1
A18	498293.	192173.	194.	1
A19	498328.	192371.	186.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

ROADWAY 7 US 29 Aii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A25	498959.	193591.	144.	0
A26	499050.	193746.	143.	0
A27	499248.	193915.	150.	0
A28	499391.	193973.	159.	0
A29	499647.	193996.	161.	0
A30	500026.	194064.	161.	0
A31	500144.	194098.	162.	0
A32	500318.	194124.	166.	0
A33	500630.	194201.	172.	0
A34	500770.	194309.	172.	1
A35	500919.	194448.	168.	1
A36	501055.	194544.	161.	1
A37	501271.	194666.	155.	1
A38	501441.	194770.	158.	1

ROADWAY 8 US 29 Aiii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A38	501441.	194770.	158.	0
A39	501584.	194914.	162.	0
A40	501749.	195110.	168.	0
A41	501873.	195195.	170.	0
A42	502086.	195281.	173.	0
A43	502262.	195347.	173.	0
A44	502438.	195437.	171.	1
A45	502645.	195605.	164.	1
A46	502758.	195744.	161.	1
A47	502866.	195961.	151.	1
A48	502976.	196182.	143.	1
A49	503099.	196365.	137.	1
A50	503297.	196697.	135.	1

ROADWAY 9 US 29 Bi

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE

B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498395.	191589.	204.	1
B16	498339.	191716.	203.	0
B17	498314.	191973.	201.	0
B18	498306.	192173.	194.	0
B19	498340.	192368.	186.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

OROADWAY 10 US 29 Bii

0	VEHICLE TYPE	VEHICLES/HOUR	SPEED	GRADE
	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
B25	498982.	193577.	147.	1
B26	499053.	193696.	148.	1
B27	499148.	193798.	153.	1
B28	499311.	193905.	157.	1
B29	499644.	193960.	161.	1
B30	499996.	194035.	162.	1
B31	500129.	194079.	162.	1
B32	500319.	194110.	166.	1
B33	500636.	194189.	172.	1
B34	500780.	194299.	172.	0
B35	500929.	194437.	168.	0
B36	501065.	194527.	162.	0
B37	501266.	194641.	157.	0
B38	501455.	194749.	160.	0

OROADWAY 11 US 29 Biii

0	VEHICLE TYPE	VEHICLES/HOUR	SPEED	GRADE
	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
B38	501455.	194749.	160.	1
B39	501617.	194867.	165.	1
B40	501794.	195075.	169.	1
B41	501890.	195166.	171.	1
B42	502092.	195262.	173.	1
B43	502269.	195328.	173.	0
B44	502449.	195421.	171.	0
B45	502660.	195593.	164.	0

B46	502773.	195731.	161.	0
B47	502885.	195955.	151.	0
B48	502993.	196171.	143.	0
B49	503115.	196354.	137.	0
B50	503297.	196625.	135.	0
B51	503379.	196720.	135.	0

OROADWAY 12 PROP RAMP 5 ** EXISTING US 250 ALIGN **

VEHICLE TYPE VEHICLES/HOUR SPEED				
CARS 4000. 90.				
HT 210. 90.				
MT 150. 90.				
0 -----COORDINATES-----				
	X	Y	Z	GRADE
JA	499700.	191319.	151.	0
JB	499404.	191240.	161.	0
JC	499295.	191213.	162.	0
J0	499147.	191181.	163.	0
J1	499105.	191176.	164.	0
J2	499006.	191162.	167.	0
J3	498817.	191135.	177.	0
J4	498692.	191117.	183.	0
J5	498613.	191105.	187.	0

OROADWAY 13 RAMP 6

VEHICLE TYPE VEHICLES/HOUR SPEED				
CARS 1. 80.				
0 -----COORDINATES-----				
	X	Y	Z	GRADE
K1	499051.	191136.	165.	1
K2	498895.	191052.	173.	1
K3	498756.	190969.	173.	1
K4	498713.	190950.	167.	1

OROADWAY 14 RAMP 3

VEHICLE TYPE VEHICLES/HOUR SPEED				
CARS 1. 80.				
0 -----COORDINATES-----				
	X	Y	Z	GRADE
G1	498238.	190898.	179.	1
G2	498363.	190970.	180.	1
G3	498497.	191051.	180.	1

OROADWAY 15 RAMP 41

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K8	498265.	190835.	182.	1
K10	498202.	190808.	181.	1
K11	498115.	190746.	178.	1

OROADWAY 16 RAMP 4

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
F2	498048.	190668.	171.	1
F3	498115.	190746.	178.	1
F4	498239.	190845.	181.	1
F5	498385.	190922.	187.	1
F6	498489.	190977.	191.	1
F7	498502.	190986.	195.	1

OROADWAY 17 LAMBS ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	178.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
L1	500009.	193771.	172.	0
L2	500030.	193946.	168.	0
L3	500033.	193990.	168.	0
L4	500038.	194045.	169.	0

OROADWAY 18 ROSLYN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	59.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
M1	500708.	193948.	173.	1
M2	500638.	194048.	175.	1
M3	500586.	194157.	180.	1

OROADWAY 19 HYDRAULIC ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2673.	70.
HT	14.	70.
MT	13.	70.

0 -----COORDINATES-----

	X	Y	Z	GRADE
N0	500882.	194280.	175.	1
N1	500878.	194289.	176.	1
N2	500882.	194387.	178.	1

OROADWAY 20 WOODBURN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	58.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
P1	501962.	195048.	183.	0
P2	501999.	195162.	182.	0
P3	502036.	195234.	181.	0

OROADWAY 21 LAMBS ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	178.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
L44	500040.	194074.	169.	0
L5	500043.	194110.	168.	0
L6	500059.	194248.	164.	0

OROADWAY 22 ROSLYN RD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	59.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
M33	500582.	194192.	178.	0

M4	500587.	194234.	177.	0
M5	500601.	194304.	172.	0
M6	500604.	194392.	169.	0
M7	500545.	194537.	159.	0

OROADWAY 23 HYDROLIC ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	2673.	70.	
	HT	14.	70.	
	MT	13.	70.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
N3	500884.	194426.	178.	1
N4	500886.	194634.	173.	1
N5	500877.	194754.	165.	1

OROADWAY 24 WOODBURN ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	58.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
P4	502068.	195284.	180.	0
P44	502191.	195407.	174.	0
P5	502300.	195476.	171.	0
P6	502717.	195738.	165.	0
P7	502763.	195796.	159.	0
P8	502802.	195873.	156.	0
P9	502837.	195987.	155.	0
P10	502842.	196087.	154.	0
P11	502834.	196156.	151.	0

OROADWAY 25 RAMP 311

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
G4	498546.	191113.	182.	1
G5	498579.	191209.	188.	1
G6	498581.	191270.	207.	1
G7	498521.	191418.	187.	1

OROADWAY 26 RAMP 411

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
F8	498606.	191117.	196.	1
F9	498630.	191196.	197.	1
F10	498632.	191265.	197.	1
F11	498590.	191374.	198.	1
F12	498443.	191535.	200.	1

OROADWAY 27 RAMP 611

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K5	498605.	190922.	185.	1
K6	498536.	190904.	184.	1
K60	498412.	190872.	183.	1

OROADWAY 28 ROUTE 250 Diii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D7	498541.	191010.	179.	1
D8	498373.	190952.	180.	1
D9	498251.	190881.	179.	1
D10	498161.	190806.	177.	1
D11	498048.	190668.	171.	1

OROADWAY 29 ROUTE 250 Eiii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E7	498538.	191021.	179.	1
E8	498368.	190963.	180.	1
E9	498243.	190892.	179.	1

1 BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192035.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----
X Y Z ZO DELZ P
MM1 501415. 194702. 164. 100. 0. 0
MM2 501487. 194738. 167. 100.

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----
X Y Z ZO DELZ P
NN1 501856. 195108. 173. 100. 0. 0
NN2 501937. 195157. 179. 100.
NN3 501966. 195181. 177. 100.

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----
X Y Z ZO DELZ P
OO1 502037. 195215. 178. 100. 0. 0
OO2 502109. 195243. 179. 100.

1

BARRIER 16 TYPE(R) WALL 16 -NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----
X Y Z ZO DELZ P
PP1 498644. 191089. 190. 100. 0. 0
PP2 498711. 191108. 182. 100.
PP3 498745. 191110. 180. 100.
PP4 498810. 191123. 166. 100.
PP5 498843. 191126. 173. 100.
PP6 498909. 191136. 166. 100.

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----
X Y Z ZO DELZ P
QQ0 498761. 191156. 177. 100. 0. 0
QQ2 498938. 191167. 171. 100.
QQ3 499036. 191179. 166. 100.
QQ4 499100. 191210. 166. 100.
QQ5 499127. 191217. 170. 100.
QQ6 499219. 191236. 168. 100.
QQ7 499324. 191249. 162. 100.
QQ8 499420. 191279. 170. 100.
QQ9A 499557. 191305. 151. 151.

1

BARRIER 18 TYPE(R) WALL 17 WOODBURN NAT WALL

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 (EXT OF WALL 17 OFF US 250)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
R1	498986.	190403.	180.
R2	498973.	190433.	181.
R3	498809.	190542.	188.
R4	498774.	190542.	189.
R5	498856.	190479.	187.
R6	498884.	190603.	182.
R7	498904.	190441.	184.
R8	498704.	190763.	189.
R9	498636.	190672.	189.
R10	498506.	190696.	206.
R11	498446.	190743.	206.
R12	498717.	190539.	187.
R13	498446.	191131.	203.
R14	498459.	191216.	197.
R15	498396.	191268.	192.
R16	498749.	190860.	187.
R17	498208.	191096.	200.
R18	499621.	191354.	156.
R19	499534.	191350.	163.
R20	499514.	191350.	166.
R21	499455.	191317.	173.
R22	499471.	191350.	173.
R23	499436.	191309.	173.
R24	499408.	191335.	173.
R25	499350.	191291.	168.
R26	499325.	191286.	165.
R27	499226.	191272.	173.
R28	499208.	191257.	175.
R29	499181.	191264.	176.
R30	499136.	191241.	174.
R31	499109.	191232.	173.

22 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
24 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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25 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0
26 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0
27 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
28 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

1

RECEIVER	LEQ(H)	L10
R1	61.9	65.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

2	1	2	3	
	56.6	50.9	46.1	
3	1	2	3	
	58.3	51.6	46.4	
12	1	3	6	7
	40.5	40.1	42.3	40.3

1

RECEIVER	LEQ(H)	L10
R2	60.0	63.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1 1
41.6
2 1 2 3
50.1 52.6 50.8
3 1 2 3
50.9 53.7 51.5
12 1 3 6 7
40.7 40.5 42.8 40.9

1

RECEIVER LEQ(H) L10
R3 51.6 54.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1 1
41.5
12 1 3 5 6 7 8
40.5 41.0 40.8 44.7 43.4 40.9

1

RECEIVER LEQ(H) L10
R4 51.1 53.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 3 5 6 7 8
40.2 40.7 40.6 44.6 43.5 41.0

1

RECEIVER LEQ(H) L10
R5 52.1 55.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1 1
42.4
2 3
42.2
3 3
42.6
12 1 3 5 6 7
40.3 40.5 40.1 43.6 42.1

1

RECEIVER LEQ(H) L10

R6 54.1 57.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1						
		48.9					
2	3						
		40.8					
3	3						
		40.7					
12	1	3	5	6	7	8	
		41.8	42.5	42.4	46.1	44.4	41.5

1

RECEIVER	LEQ(H)	L10
R7	53.5	56.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1						
		41.9					
2	1	2	3				
		41.2	40.9	45.3			
3	1	2	3				
		41.6	41.3	45.8			
12	1	3	6	7			
		40.3	40.3	43.0	41.3		

1

RECEIVER	LEQ(H)	L10
R8	54.4	56.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	3	5	6	7	8	
		41.3	42.7	43.6	48.8	48.9	46.7

1

RECEIVER	LEQ(H)	L10
R9	41.7	44.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R10	51.2	53.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 6 7 8
44.9 45.4 44.4

1

RECEIVER LEQ(H) L10
R11 51.2 53.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 6 7 8
44.8 45.6 45.0

1

RECEIVER LEQ(H) L10
R12 50.5 52.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 3 5 6 7 8
40.2 40.1 44.2 43.4 41.1

1

RECEIVER LEQ(H) L10
R13 56.4 59.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 3 5 6 7 8
40.9 41.3 47.8 50.9 53.3

1

RECEIVER LEQ(H) L10
R14 44.1 46.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R15 41.9 44.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R16 57.4 59.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
 42.5 40.9 44.6 40.8 46.1 52.0 52.5 49.7

1

RECEIVER LEQ(H) L10
R17 48.9 51.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 6 7 8
 40.7 43.4 44.9

1

RECEIVER LEQ(H) L10
R18 69.6 72.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 5 6
 69.5 50.9 45.7 42.4 42.6

1

RECEIVER LEQ(H) L10
R19 67.8 70.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6
 67.6 50.1 49.9 42.1 44.2 44.1

1

RECEIVER LEQ(H) L10
R20 67.3 70.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7
 67.0 50.9 51.2 42.6 44.6 44.5 40.0

1

RECEIVER LEQ(H) L10

R21 69.0 72.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6	7
	68.4	58.7	54.1	44.6	46.3	45.8	41.1

1

RECEIVER LEQ(H) L10

R22 66.4 69.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6	7
	65.7	54.9	52.7	43.7	45.6	45.3	40.7

1

RECEIVER LEQ(H) L10

R23 69.3 72.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6	7
	68.4	60.1	55.1	45.3	46.9	46.3	41.4

1

RECEIVER LEQ(H) L10

R24 65.7 68.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6	7
	63.7	59.1	55.6	45.7	47.4	46.7	41.8

1

RECEIVER LEQ(H) L10

R25 67.8 71.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6	7
	59.5	65.8	60.4	48.6	49.7	48.4	43.0

1

RECEIVER LEQ(H) L10
R26 67.9 71.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7
57.0 65.9 62.0 49.1 49.8 49.0 43.5

1

RECEIVER LEQ(H) L10
R27 68.1 71.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
55.8 60.6 66.0 55.2 55.2 52.3 45.7 41.4

1

RECEIVER LEQ(H) L10
R28 69.3 72.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
55.0 59.7 67.8 57.5 56.7 53.1 46.3 41.8

1

RECEIVER LEQ(H) L10
R29 68.0 70.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
53.9 57.5 66.0 58.4 57.8 54.1 46.9 42.4

1

RECEIVER LEQ(H) L10
R30 69.1 72.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
52.2 55.0 65.5 62.8 62.3 56.5 48.3 43.5

1

RECEIVER LEQ(H) L10
R31 69.9 73.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
51.4 53.7 63.6 64.8 65.3 58.2 49.2 44.2

1

RECEIVER LEQ(H) L10
R32 67.4 70.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
50.0 50.8 55.7 60.1 64.6 59.5 49.9 44.8

1

RECEIVER LEQ(H) L10
R33 69.8 72.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
46.0 45.9 51.3 49.1 57.0 68.8 60.0 51.5

1

RECEIVER LEQ(H) L10
R34 71.0 74.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
45.5 45.0 50.1 47.6 55.0 69.8 63.5 53.4

1

RECEIVER LEQ(H) L10
R35 70.6 73.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12 1 2 3 4 5 6 7 8
44.9 44.3 49.1 46.3 53.3 68.2 66.3 55.1

1

RECEIVER LEQ(H) L10
R36 71.2 74.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6	7	8
	44.5	43.7	48.3	45.4	52.1	66.7	68.9	56.9

1

RECEIVER LEQ(H) L10
R37 68.6 71.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6	7	8
	46.4	46.6	52.2	50.3	58.5	67.4	57.7	50.2

1

RECEIVER LEQ(H) L10
R38 43.3 45.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R39 42.9 45.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/30/97 15:04:12
 INPUT FILE - 1-39PM_2.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN NO BUILD ** RECEIVERS R1-R39 ** ROAD SET #2 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 NORTH GROUNDS CONNECTOR Aii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED		
	CARS	1.	50.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
A9	498624.	190870.	186.	1	
A10	498622.	190951.	185.	1	
A11	498618.	191091.	187.	1	

ROADWAY 2 NORTH GROUNDS CONNECTOR Bii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED		
	CARS	1.	50.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
B9	498612.	190870.	186.	1	
B10	498610.	190951.	185.	1	
B11	498606.	191091.	187.	1	

ROADWAY 3 ROUTE 250 Dii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED		
	CARS	1.	90.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
D3	499109.	191156.	163.	1	
D4	498918.	191108.	166.	1	
D5	498752.	191065.	172.	1	

D6 498701. 191051. 174. 1

ROADWAY 4 ROUTE 250 Eii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E3	499106.	191170.	163.	1
E4	498914.	191120.	166.	1
E5	498749.	191077.	172.	1
E6	498698.	191063.	174.	1

ROADWAY 5 RAMP 5ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	4000.	90.	
	HT	210.	90.	
	MT	150.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
J6	498593.	191102.	187.	0
J7	498519.	191087.	190.	0
J8	498418.	191053.	192.	0
J9	498294.	190989.	191.	0
J10	498191.	190911.	189.	0
J11	498115.	190832.	186.	0
J12	497972.	190544.	165.	0
J13	497933.	190435.	163.	0
J14	497865.	190239.	162.	0

ROADWAY 6 OLD RAMP 5iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
OLDJ11	498115.	190832.	180.	1
OLDJ12	498008.	190664.	170.	1
OLDJ13	497973.	190583.	166.	1

ROADWAY 7 RAMP 6iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K7	498270.	190824.	182.	1
K12	498156.	190747.	180.	1
K13	498075.	190654.	175.	1
K14	497998.	190478.	172.	1

OROADWAY 8 ROUTE 250 Div

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D11	498048.	190668.	171.	1
D12	497980.	190541.	165.	1
D13	497941.	190433.	163.	1

OROADWAY 9 ROUTE 250 Eiv

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E9	498243.	190892.	179.	1
E10	498151.	190816.	177.	1
E11	498034.	190676.	171.	1
E12	497965.	190547.	165.	1

OROADWAY 10 ROUTE 250 Ev

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E12	497965.	190547.	165.	1
E13	497925.	190438.	163.	1

OROADWAY 11 IVY ROAD V

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	895.	72.	
	HT	54.	72.	
	MT	21.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H1	497975.	190297.	170.	1

H3 497919. 190355. 170. 1

ROADWAY 12 IVY ROAD V11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	895.	72.
HT	54.	72.
MT	21.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H33	497893.	190383.	170.	1
H5	497838.	190442.	170.	1

ROADWAY 13 IVY ROAD W

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	737.	72.
HT	45.	72.
MT	18.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H2	497969.	190288.	170.	1
H4	497915.	190345.	170.	1

ROADWAY 14 IVY ROAD W11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	737.	72.
HT	35.	72.
MT	18.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H44	497879.	190383.	170.	1
H6	497832.	190432.	170.	1

ROADWAY 15 IVY ROAD W111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	932.	72.
HT	56.	72.
MT	22.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H6	497832.	190432.	170.	1
H7	497793.	190456.	170.	1
H9	497703.	190532.	170.	1

OROADWAY 16 IVY ROAD Viii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1351.	72.
HT	78.	72.
MT	31.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H5	497838.	190442.	170.	1
H8	497803.	190463.	170.	1
H10	497771.	190540.	170.	1

OROADWAY 17 ROUTE 250 Ev1

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
E13	497925.	190438.	163.	1
E14	497858.	190241.	162.	1

OROADWAY 18 ROUTE 250 Dv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
D13	497941.	190433.	163.	1
D14	497873.	190236.	162.	1

OROADWAY 19 OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	556.	60.
HT	8.	60.
MT	16.	60.

0

-----COORDINATES-----

	X	Y	Z	GRADE
OI1	498121.	190435.	179.	0
OI2	497955.	190488.	176.	0
OI3	497935.	190494.	166.	0
OI4	497876.	190513.	167.	0
OI5	497775.	190562.	165.	0

OROADWAY 20 RAMP TO OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	340.	60.
HT	7.	60.
MT	13.	60.

0

-----COORDINATES-----

	X	Y	Z	GRADE
OIR1	498074.	190788.	181.	0
OIR2	497906.	190644.	169.	0

OROADWAY 21 RIO ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1450.	70.
HT	20.	70.
MT	60.	70.

0

-----COORDINATES-----

	X	Y	Z	GRADE
RIO0	500455.	193741.	177.	0
RIO1	500712.	193980.	173.	0
RIO2	501033.	194280.	172.	0
RIO3	501629.	194648.	170.	0

OROADWAY 22 BARRACKS ROAD SOUTH

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	950.	80.
HT	20.	80.
MT	30.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
BARR1	498418.	192490.	170.	0
BARR2	498695.	192305.	183.	0

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0

BB2	498530.	191155.	208.	100.
BB3	498551.	191287.	202.	100.
BB4	498546.	191355.	198.	100.

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0

GG2 498905. 193305. 165. 100.
GG3 498921. 193352. 162. 100.

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16- NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
PP1	498644.	191089.	189.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ0	498761.	191156.	177.	177.	0.	0
QQ2	498938.	191167.	171.	171.		
QQ3	499036.	191179.	166.	166.		
QQ4	499100.	191210.	166.	166.		
QQ5	499127.	191217.	170.	170.		
QQ6	499219.	191236.	168.	168.		
QQ7	499324.	191249.	162.	162.		
QQ8	499420.	191279.	170.	170.		
QQ9A	499557.	191305.	151.	151.		

1

BARRIER 18 TYPE(R) WALL 18 (NAT WALL AT WOODBURN)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 EXT OF NAT WALL 17 NEAR US 250

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
R1	498986.	190403.	180.
R2	498973.	190433.	181.
R3	498809.	190542.	188.
R4	498774.	190542.	189.
R5	498856.	190479.	187.
R6	498884.	190603.	182.
R7	498904.	190441.	184.
R8	498704.	190763.	189.
R9	498636.	190672.	189.
R10	498506.	190696.	206.
R11	498446.	190743.	206.
R12	498717.	190539.	187.
R13	498446.	191131.	203.
R14	498459.	191216.	197.
R15	498396.	191268.	192.
R16	498749.	190860.	187.
R17	498208.	191096.	200.
R18	499621.	191354.	156.
R19	499534.	191350.	163.
R20	499514.	191350.	166.
R21	499455.	191317.	173.
R22	499471.	191350.	173.
R23	499436.	191309.	173.
R24	499408.	191335.	173.
R25	499350.	191291.	168.
R26	499325.	191286.	165.
R27	499226.	191272.	173.
R28	499208.	191257.	175.
R29	499181.	191264.	176.
R30	499136.	191241.	174.
R31	499109.	191232.	173.
R32	499081.	191242.	168.
R33	498887.	191200.	173.
R34	498852.	191189.	178.
R35	498821.	191187.	179.
R36	498795.	191179.	179.
R37	498913.	191215.	173.
R38	497959.	190614.	171.
R39	497950.	190587.	171.

1

14 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
15 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
16 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
17 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
18 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
19 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
20 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
21 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
22 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
2 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
3 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
4 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0

18 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

1

RECEIVER	LEQ(H)	L10
R1	47.6	49.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	6
	41.2

1

RECEIVER	LEQ(H)	L10
R2	48.0	49.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	6
	41.5

1

RECEIVER	LEQ(H)	L10
R3	50.7	52.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	5	6	8
	40.8	41.9	42.5	41.3	40.2	44.1	40.1

1

RECEIVER LEQ(H) L10
R4 51.2 53.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4 5 6 8
41.1 42.3 42.8 41.9 40.7 44.6 40.5

1

RECEIVER LEQ(H) L10
R5 49.6 51.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 2 3 4 6
40.5 41.1 40.2 43.2

1

RECEIVER LEQ(H) L10
R6 50.0 52.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4 6
41.2 42.0 42.2 40.6 43.2

1

RECEIVER LEQ(H) L10
R7 48.8 50.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 3 6
40.2 42.4

1

RECEIVER LEQ(H) L10
R8 54.5 56.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4 5 6 8
46.8 47.6 47.5 45.0 43.4 46.2 40.4

1

RECEIVER	LEQ(H)	L10
R9	53.7	55.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	2	3	4	5	6	7	8
44.5	46.8	45.8	44.3	47.5	40.9	41.9	

1

RECEIVER	LEQ(H)	L10
R10	56.9	58.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	5	6	7	8
45.7	47.9	49.6	49.0	47.5	50.4	43.1	43.6	

1

RECEIVER	LEQ(H)	L10
R11	58.8	60.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	5	6	7	8
46.7	49.5	51.9	51.6	49.9	52.0	43.8	44.0	

1

RECEIVER	LEQ(H)	L10
R12	51.7	53.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	5	6	8
41.4	41.1	43.5	42.7	41.6	45.6	41.3	

1

RECEIVER	LEQ(H)	L10
R13	68.5	71.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	5	6
---	---	---	---	---	---	---

60.0 66.4 61.4 52.9 47.8 48.0

1

RECEIVER LEQ(H) L10
R14 61.1 63.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4 5 6
44.0 58.3 55.6 50.2 45.9 46.5

1

RECEIVER LEQ(H) L10
R15 55.7 59.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 2 3 4 5 6
51.4 50.9 46.8 42.8 43.4

1

RECEIVER LEQ(H) L10
R16 55.0 57.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4 5 6
48.9 48.8 47.8 45.2 41.6 45.2

1

RECEIVER LEQ(H) L10
R17 63.4 65.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3 4 5 6 7 8
47.5 52.4 58.5 59.0 53.9 52.1 41.9 41.9

1

RECEIVER LEQ(H) L10
R18 41.9 43.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10

R19 42.7 44.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R20 42.9 44.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R21 43.6 45.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R22 43.3 45.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R23 43.8 45.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R24 44.0 46.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R25 44.7 46.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R26 45.0 47.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R27 46.3 48.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10

R28 46.6 48.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R29 46.9 49.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2
40.1 40.1

1

RECEIVER LEQ(H) L10
R30 47.6 49.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3
41.1 40.9 40.2

1

RECEIVER LEQ(H) L10
R31 48.0 50.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3
41.7 41.4 40.6

1

RECEIVER LEQ(H) L10
R32 48.4 50.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2 3
42.2 41.9 41.0

1

RECEIVER LEQ(H) L10
R33 52.2 54.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	6
	47.5	46.3	44.6	41.8	40.1

1

RECEIVER	LEQ(H)	L10
R34	53.3	56.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	6
	48.8	47.4	45.5	42.4	41.4

1

RECEIVER	LEQ(H)	L10
R35	54.1	56.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	5	6
	50.0	48.3	46.2	43.0	40.2	41.5

1

RECEIVER	LEQ(H)	L10
R36	55.0	57.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	5	6
	51.1	49.2	46.9	43.5	40.7	41.2

1

RECEIVER	LEQ(H)	L10
R37	51.5	54.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	6
	46.5	45.6	44.0	41.2	40.1

1

RECEIVER	LEQ(H)	L10
R38	72.0	75.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

ROADWAY	SEGMENT	2	3	4	5	6	7	8
5		41.0	44.5	47.2	50.1	71.2	62.1	55.1
11		41.5						
12		44.4						
13		40.2						
14		41.8						
15		42.0	45.2					
16		43.6	47.0					
19		44.6	43.1	43.4				
20		51.6						

1

RECEIVER	LEQ(H)	L10
R39	72.6	75.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

ROADWAY	SEGMENT	2	3	4	5	6	7	8
5		40.6	43.9	46.5	49.1	71.3	65.5	56.5
11		42.7						
12		45.9						
13		41.4						
14		43.2						
15		43.4	46.2					
16		45.0	48.2					
19		46.3	41.6	46.0	45.2			
20		48.6						

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/26/97 03:33:29
 INPUT FILE - 40-78P_1.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN NO BUILD CONDITIONS ** RECEIVERS R40-R78 ** ROAD SET #1 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 MASSIE ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	588.	56.
HT	6.	56.
MT	6.	56.

0

-----COORDINATES-----

	X	Y	Z	GRADE
I1	498983.	190641.	178.	1
I2	498935.	190545.	177.	1

OROADWAY 2 North Grounds Connector A

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	485.	50.
HT	8.	50.
MT	7.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
A1	499008.	190362.	175.	1
A2	499010.	190422.	176.	1
A3	499000.	190461.	177.	1
A4	498949.	190524.	178.	1

OROADWAY 3 North Grounds Connector B

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	500.	50.
HT	8.	50.

	MT	8.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B1	499004.	190362.	175.	0
B2	499006.	190422.	176.	0
B3	498997.	190460.	177.	0
B4	498945.	190518.	178.	0

ROADWAY 4 ROUTE 250 D

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
0	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
D0	499702.	191313.	151.	1
D1	499405.	191234.	161.	1
D2	499296.	191205.	162.	1

ROADWAY 5 ROUTE 250 E

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
0	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
E0	499699.	191325.	151.	1
E1	499402.	191247.	161.	1
E2	499293.	191219.	162.	1

ROADWAY 6 US 29 A1

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
0	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498384.	191582.	204.	0
A16	498327.	191713.	203.	1
A17	498302.	191973.	201.	1
A18	498293.	192173.	194.	1
A19	498328.	192371.	186.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

OROADWAY 7 US 29 Aii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	GRADE
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	
A25	498959.	193591.	144.	0
A26	499050.	193746.	143.	0
A27	499248.	193915.	150.	0
A28	499391.	193973.	159.	0
A29	499647.	193996.	161.	0
A30	500026.	194064.	161.	0
A31	500144.	194098.	162.	0
A32	500318.	194124.	166.	0
A33	500630.	194201.	172.	0
A34	500770.	194309.	172.	1
A35	500919.	194448.	168.	1
A36	501055.	194544.	161.	1
A37	501271.	194666.	155.	1
A38	501441.	194770.	158.	1

OROADWAY 8 US 29 Aiii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	GRADE
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	
A38	501441.	194770.	158.	0
A39	501584.	194914.	162.	0
A40	501749.	195110.	168.	0
A41	501873.	195195.	170.	0
A42	502086.	195281.	173.	0
A43	502262.	195347.	173.	0
A44	502438.	195437.	171.	1
A45	502645.	195605.	164.	1
A46	502758.	195744.	161.	1
A47	502866.	195961.	151.	1
A48	502976.	196182.	143.	1
A49	503099.	196365.	137.	1
A50	503297.	196697.	135.	1

OROADWAY 9 US 29 Bi

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	GRADE
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	

B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498395.	191589.	204.	1
B16	498339.	191716.	203.	0
B17	498314.	191973.	201.	0
B18	498306.	192173.	194.	0
B19	498340.	192368.	186.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

OROADWAY 10 US 29 B11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B25	498982.	193577.	147.	1
B26	499053.	193696.	148.	1
B27	499148.	193798.	153.	1
B28	499311.	193905.	157.	1
B29	499644.	193960.	161.	1
B30	499996.	194035.	162.	1
B31	500129.	194079.	162.	1
B32	500319.	194110.	166.	1
B33	500636.	194189.	172.	1
B34	500780.	194299.	172.	0
B35	500929.	194437.	168.	0
B36	501065.	194527.	162.	0
B37	501266.	194641.	157.	0
B38	501455.	194749.	160.	0

OROADWAY 11 US 29 B111

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B38	501455.	194749.	160.	1
B39	501617.	194867.	165.	1
B40	501794.	195075.	169.	1
B41	501890.	195166.	171.	1
B42	502092.	195262.	173.	1
B43	502269.	195328.	173.	0
B44	502449.	195421.	171.	0
B45	502660.	195593.	164.	0

B46	502773.	195731.	161.	0
B47	502885.	195955.	151.	0
B48	502993.	196171.	143.	0
B49	503115.	196354.	137.	0
B50	503297.	196625.	135.	0
B51	503379.	196720.	135.	0

OROADWAY 12 RAMP 5

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	4000.	90.
HT	210.	90.
MT	150.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
JA	499700.	191319.	151.	0
JB	499404.	191240.	161.	0
JC	499295.	191213.	162.	0
JO	499147.	191181.	163.	0
J1	499105.	191176.	164.	0
J2	499006.	191162.	167.	0
J3	498817.	191135.	177.	0
J4	498692.	191117.	183.	0
J5	498613.	191105.	187.	0

OROADWAY 13 RAMP 6

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0 -----COORDINATES-----

	X	Y	Z	GRADE
K1	499051.	191136.	165.	1
K2	498895.	191052.	173.	1
K3	498756.	190969.	173.	1
K4	498713.	190950.	167.	1

OROADWAY 14 RAMP 3

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0 -----COORDINATES-----

	X	Y	Z	GRADE
G1	498238.	190898.	179.	1
G2	498363.	190970.	180.	1
G3	498497.	191051.	180.	1

OROADWAY 15 RAMP 41

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K8	498265.	190835.	182.	1
K10	498202.	190808.	181.	1
K11	498115.	190746.	178.	1

OROADWAY 16 RAMP 4

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
F2	498048.	190668.	171.	1
F3	498115.	190746.	178.	1
F4	498239.	190845.	181.	1
F5	498385.	190922.	187.	1
F6	498489.	190977.	191.	1
F7	498502.	190986.	195.	1

OROADWAY 17 LAMBS ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	178.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
L1	500009.	193771.	172.	0
L2	500030.	193946.	168.	0
L3	500033.	193990.	168.	0
L4	500038.	194045.	169.	0

OROADWAY 18 ROSLYN ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	59.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
M1	500708.	193948.	173.	1
M2	500638.	194048.	175.	1
M3	500586.	194157.	180.	1

OROADWAY 19 HYDRAULIC ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2673.	70.
HT	14.	70.
MT	13.	70.

0 -----COORDINATES-----

	X	Y	Z	GRADE
N0	500882.	194280.	175.	1
N1	500878.	194289.	176.	1
N2	500882.	194387.	178.	1

OROADWAY 20 WOODBURN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	58.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
P1	501962.	195048.	183.	0
P2	501999.	195162.	182.	0
P3	502036.	195234.	181.	0

OROADWAY 21 LAMBS ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	178.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
L44	500040.	194074.	169.	0
L5	500043.	194110.	168.	0
L6	500059.	194248.	164.	0

OROADWAY 22 ROSLYN RD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	59.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
M33	500582.	194192.	178.	0

M4	500587.	194234.	177.	0
M5	500601.	194304.	172.	0
M6	500604.	194392.	169.	0
M7	500545.	194537.	159.	0

OROADWAY 23 HYDRAULIC ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2673.	70.
HT	14.	70.
MT	13.	70.

-----COORDINATES-----				
	X	Y	Z	GRADE
0				
N3	500884.	194426.	178.	1
N4	500886.	194634.	173.	1
N5	500877.	194754.	165.	1

OROADWAY 24 WOODBURN ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	58.	50.
HT	1.	50.
MT	1.	50.

-----COORDINATES-----				
	X	Y	Z	GRADE
0				
P4	502068.	195284.	180.	0
P44	502191.	195407.	174.	0
P5	502300.	195476.	171.	0
P6	502717.	195738.	165.	0
P7	502763.	195796.	159.	0
P8	502802.	195873.	156.	0
P9	502837.	195987.	155.	0
P10	502842.	196087.	154.	0
P11	502834.	196156.	151.	0

OROADWAY 25 RAMP 3ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

-----COORDINATES-----				
	X	Y	Z	GRADE
0				
G4	498546.	191113.	182.	1
G5	498579.	191209.	188.	1
G6	498581.	191270.	207.	1
G7	498521.	191418.	187.	1

OROADWAY 26 RAMP 4ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
F8	498606.	191117.	196.	1
F9	498630.	191196.	197.	1
F10	498632.	191265.	197.	1
F11	498590.	191374.	198.	1
F12	498443.	191535.	200.	1

ROADWAY 27 RAMP 6ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K5	498605.	190922.	185.	1
K6	498536.	190904.	184.	1
K60	498412.	190872.	183.	1

ROADWAY 28 ROUTE 250 Diii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D7	498541.	191010.	179.	1
D8	498373.	190952.	180.	1
D9	498251.	190881.	179.	1
D10	498161.	190806.	177.	1
D11	498048.	190668.	171.	1

ROADWAY 29 ROUTE 250 Eiii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E7	498538.	191021.	179.	1
E8	498368.	190963.	180.	1
E9	498243.	190892.	179.	1

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	191036.	214.	100.		
DD8	498250.	192132.	200.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----
X Y Z Z0 DELZ P
MM1 501415. 194702. 164. 100. 0. 0
MM2 501487. 194738. 167. 100.

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----
X Y Z Z0 DELZ P
NN1 501856. 195108. 173. 100. 0. 0
NN2 501937. 195157. 179. 100.
NN3 501966. 195181. 177. 100.

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----
X Y Z Z0 DELZ P
OO1 502037. 195215. 178. 100. 0. 0
OO2 502109. 195243. 179. 100.

1

BARRIER 16 TYPE(R) WALL 16-NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----
X Y Z Z0 DELZ P
PP1 498644. 191089. 189. 100. 0. 0
PP2 498711. 191108. 182. 100.
PP3 498745. 191110. 180. 100.
PP4 498810. 191123. 166. 100.
PP5 498843. 191126. 173. 100.
PP6 498909. 191136. 166. 100.

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----
X Y Z Z0 DELZ P
QQ0 498761. 191156. 181. 181. 0. 0
QQ2 498938. 191167. 171. 171.
QQ3 499036. 191179. 166. 166.
QQ4 499100. 191210. 166. 166.
QQ5 499127. 191217. 170. 170.
QQ6 499219. 191236. 168. 168.
QQ7 499324. 191249. 162. 162.
QQ8 499420. 191279. 170. 170.
QQ9A 499557. 191305. 151. 151.

1

BARRIER 18 TYPE(R) WALL 18 (NAT WALL AT WOODBURN)

-----COORDINATES-----
X Y Z Z0 DELZ P
RR1 502052. 195277. 182. 100. 0. 0
RR2 502084. 195322. 180. 100.
RR3 502159. 195391. 178. 100.
RR4 502241. 195450. 173. 100.

1

BARRIER 19 TYPE(R) WALL 19 - EXTENSION OF NAT WALL 17 AT US 250

-----COORDINATES-----
X Y Z Z0 DELZ P
QQ9B 499559. 191307. 151. 151. 0. 0
QQ10 499575. 191324. 158. 158.

1

RECEIVER

-----COORDINATES-----
X Y Z
R40 497926. 190528. 171.
R41 497985. 190438. 173.
R42 498775. 191232. 183.
R43 498771. 191257. 183.
R44 498760. 191320. 183.
R45 498742. 191352. 182.
R46 498160. 191923. 202.
R47 498447. 191978. 245.
R48 498089. 192007. 198.
R49 498092. 192047. 194.
R50 498319. 192107. 211.
R51 498224. 192243. 178.
R52 498187. 192162. 185.
R53 498168. 192117. 190.
R54 498535. 192249. 190.
R55 498598. 192516. 187.
R56 498671. 192575. 178.
R57 498585. 192726. 171.
R58 498615. 192779. 170.
R59 498668. 192757. 176.
R60 498708. 192885. 166.
R61 498753. 192958. 170.
R62 498728. 192929. 169.
R63 498790. 193033. 168.
R64 498911. 193315. 167.
R65 499446. 193904. 167.
R66 500003. 194010. 169.
R67 500016. 194127. 167.
R68 499997. 193909. 174.
R69 500020. 194158. 169.
R70 500547. 194112. 178.

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23 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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24 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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25 *	.0	.0	4.0	4.0	4.0	4.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26 *	.0	.0	2.0	2.0	2.0	2.0	.0	.0	.0	.0
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27 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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28 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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29 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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1

RECEIVER	LEQ(H)	L10
R40	42.3	44.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R41	42.4	44.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R42	62.5	66.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6	7	8
	41.0	40.3	44.7	41.6	47.9	58.0	59.2	52.8

1

RECEIVER LEQ(H) L10
R43 60.9 64.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	2	3	4	5	6	7	8
	40.8	40.2	44.4	41.3	47.5	56.5	57.1	51.7

1

RECEIVER LEQ(H) L10
R44 57.7 61.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	3	4	5	6	7	8
	40.5	43.6	40.5	46.2	53.2	53.0	49.1

1

RECEIVER LEQ(H) L10
R45 56.2 59.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

12	1	3	5	6	7	8
	40.1	42.8	45.1	51.5	51.2	48.1

1

RECEIVER LEQ(H) L10
R46 36.1 38.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R47 45.7 47.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R48 34.3 36.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10

R49 33.3 35.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R50	40.1	40.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1*** NO SOLUTION FOR RECEIVER 12 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 12, BARRIER 20 AND ROADWAY 27

1

RECEIVER	LEQ(H)	L10
R51	.0	.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R52	32.9	36.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R53	32.8	36.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R54	43.3	45.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R55	41.2	43.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R56	40.9	43.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R57	41.0	43.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R58	41.1	43.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R59	39.7	43.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R60	39.4	42.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R61	38.9	42.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R62	39.5	42.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R63	38.6	41.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R64	37.7	40.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R65	35.3	38.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R66	50.0	52.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

17 2 3
 43.3 47.5

1

RECEIVER LEQ(H) L10
R67 50.6 53.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2
 44.0 49.0

1

RECEIVER LEQ(H) L10
R68 50.8 53.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

17 1
 50.1

1

RECEIVER LEQ(H) L10
R69 50.8 53.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2
 50.1

1

RECEIVER LEQ(H) L10
R70 46.2 48.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

18 2
 42.7

1

RECEIVER LEQ(H) L10
R71 53.2 56.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	1	2
	45.7	51.2
23	1	
	45.3	

1

RECEIVER	LEQ(H)	L10
R72	49.3	52.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	40.8	
22	3	4
	44.1	40.7
23	1	
	43.1	

1

RECEIVER	LEQ(H)	L10
R73	64.2	67.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	48.5	
23	1	2
	63.9	49.6

1

RECEIVER	LEQ(H)	L10
R74	55.2	58.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	48.7	
23	1	2
	53.3	45.1

1

RECEIVER	LEQ(H)	L10
R75	54.1	57.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	45.7	
23	1	2
	52.2	46.1

1

RECEIVER	LEQ(H)	L10
R76	56.5	60.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	44.8	
23	1	2
	55.1	49.2

1

RECEIVER	LEQ(H)	L10
R77	51.6	55.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	1	2
	44.3	49.3
23	1	
	43.9	

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/26/97 03:37:19
 INPUT FILE - 40-78P_2.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN NO BUILD ** RECEIVERS R40-R78 ** ROAD SET #2 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 NORTH GROUNDS CONNECTOR Aii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED		
	CARS	1.	50.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
A9	498624.	190870.	186.	1	
A10	498622.	190951.	185.	1	
A11	498618.	191091.	187.	1	

ROADWAY 2 NORTH GROUNDS CONNECTOR Bii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED		
	CARS	1.	50.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
B9	498612.	190870.	186.	1	
B10	498610.	190951.	185.	1	
B11	498606.	191091.	187.	1	

ROADWAY 3 ROUTE 250 Dii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED		
	CARS	1.	90.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
D3	499109.	191156.	163.	1	
D4	498918.	191108.	166.	1	
D5	498752.	191065.	172.	1	

D6 498701. 191051. 174. 1

OROADWAY 4 ROUTE 250 Eii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E3	499106.	191170.	163.	1
E4	498914.	191120.	166.	1
E5	498749.	191077.	172.	1
E6	498698.	191063.	174.	1

OROADWAY 5 RAMP 5ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	4000.	90.	
	HT	210.	90.	
	MT	150.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
J6	498593.	191102.	187.	0
J7	498519.	191087.	190.	0
J8	498418.	191053.	192.	0
J9	498294.	190989.	191.	0
J10	498191.	190911.	189.	0
J11	498115.	190832.	186.	0
J12	497972.	190544.	165.	0
J13	497933.	190435.	163.	0
J14	497865.	190239.	162.	0

OROADWAY 6 OLD RAMP 5iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
OLD J11	498115.	190832.	180.	1
OLD J12	498008.	190664.	170.	1
OLD J13	497973.	190583.	166.	1

OROADWAY 7 RAMP 6iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K7	498270.	190824.	182.	1
K12	498156.	190747.	180.	1
K13	498075.	190654.	175.	1
K14	497998.	190478.	172.	1

OROADWAY 8 ROUTE 250 Div

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D11	498048.	190668.	171.	1
D12	497980.	190541.	165.	1
D13	497941.	190433.	163.	1

OROADWAY 9 ROUTE 250 Eiv

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E9	498243.	190892.	179.	1
E10	498151.	190816.	177.	1
E11	498034.	190676.	171.	1
E12	497965.	190547.	165.	1

OROADWAY 10 ROUTE 250 Ev

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E12	497965.	190547.	165.	1
E13	497925.	190438.	163.	1

OROADWAY 11 IVY ROAD V

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	895.	72.	
	HT	54.	72.	
	MT	21.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H1	497975.	190297.	170.	1

H3 497919. 190355. 170. 1

ROADWAY 12 IVY ROAD Vii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	895.	72.
HT	54.	72.
MT	21.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H33	497893.	190383.	170.	1
H5	497838.	190442.	170.	1

ROADWAY 13 IVY ROAD W

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	737.	72.
HT	45.	72.
MT	18.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H2	497969.	190288.	170.	1
H4	497915.	190345.	170.	1

ROADWAY 14 IVY ROAD Wii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	737.	72.
HT	35.	72.
MT	18.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H44	497879.	190383.	170.	1
H6	497832.	190432.	170.	1

ROADWAY 15 IVY ROAD Wiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	932.	72.
HT	56.	72.
MT	22.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H6	497832.	190432.	170.	1
H7	497793.	190456.	170.	1
H9	497703.	190532.	170.	1

ROADWAY 16 IVY ROAD Vill

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1351.	72.
HT	78.	72.
MT	31.	72.

0

	-----COORDINATES-----			
	X	Y	Z	GRADE
H5	497838.	190442.	170.	1
H8	497803.	190463.	170.	1
H10	497711.	190540.	170.	1

ROADWAY 17 ROUTE 250 Evi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	90.

0

	-----COORDINATES-----			
	X	Y	Z	GRADE
E13	497925.	190438.	163.	1
E14	497858.	190241.	162.	1

ROADWAY 18 ROUTE 250 Dv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	90.

0

	-----COORDINATES-----			
	X	Y	Z	GRADE
D13	497941.	190433.	163.	1
D14	497873.	190236.	162.	1

ROADWAY 19 OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	556.	60.
HT	8.	60.
MT	16.	60.

0

	-----COORDINATES-----			
	X	Y	Z	GRADE
OI1	498121.	190435.	179.	0
OI2	497955.	190488.	176.	0
OI3	497935.	190494.	166.	0
OI4	497876.	190513.	167.	0
OI5	497775.	190562.	165.	0

OROADWAY 20 RAMP TO OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	340.	60.
HT	7.	60.
MT	13.	60.

0

-----COORDINATES-----

	X	Y	Z	GRADE
OIR1	498074.	190788.	181.	0
OIR2	497906.	190644.	169.	0

OROADWAY 21 RIO ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1450.	70.
HT	20.	70.
MT	60.	70.

0

-----COORDINATES-----

	X	Y	Z	GRADE
RIO0	500455.	193741.	177.	0
RIO1	500712.	193980.	173.	0
RIO2	501033.	194280.	172.	0
RIO3	501629.	194648.	170.	0

OROADWAY 22 BARRACKS ROAD SOUTH

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	950.	80.
HT	20.	80.
MT	30.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
BARR1	498418.	192490.	170.	0
BARR2	498695.	192305.	183.	0

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0

BB2	498530.	191155.	208.	100.
BB3	498551.	191287.	202.	100.
BB4	498546.	191355.	198.	100.

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0

GG2 498905. 193305. 165. 100.
GG3 498921. 193352. 162. 100.

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
PP1	498644.	191089.	189.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ0	498761.	191156.	177.	177.	0.	0
QQ2	498938.	191167.	171.	171.		
QQ3	499036.	191179.	166.	166.		
QQ4	499100.	191210.	166.	166.		
QQ5	499127.	191217.	170.	170.		
QQ6	499219.	191236.	168.	168.		
QQ7	499324.	191249.	162.	162.		
QQ8	499420.	191279.	170.	170.		
QQ9A	499557.	191305.	151.	151.		

1

BARRIER 18 TYPE(R) WALL 18 (NAT BARRIER NEAR WOODBURN ROAD)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 EXTENSION OF NAT WALL 17 NEAR US 250

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
R40	497926.	190528.	171.
R41	497985.	190438.	173.
R42	498775.	191232.	183.
R43	498771.	191257.	183.
R44	498760.	191320.	183.
R45	498742.	191352.	182.
R46	498160.	191923.	202.
R47	498447.	191978.	245.
R48	498089.	192007.	198.
R49	498092.	192047.	194.
R50	498319.	192107.	211.
R51	498224.	192243.	178.
R52	498187.	192162.	185.
R53	498168.	192117.	190.
R54	498535.	192249.	190.
R55	498598.	192516.	187.
R56	498671.	192575.	178.
R57	498585.	192726.	171.
R58	498615.	192779.	170.
R59	498668.	192757.	176.
R60	498708.	192885.	166.
R61	498753.	192958.	170.
R62	498728.	192929.	169.
R63	498790.	193033.	168.
R64	498911.	193315.	167.
R65	499446.	193904.	167.
R66	500003.	194010.	169.
R67	500016.	194127.	167.
R68	499997.	193909.	174.
R69	500020.	194158.	169.
R70	500547.	194112.	178.
R71	500803.	194225.	180.
R72	500566.	194367.	181.
R73	500922.	194507.	180.
R74	501004.	194447.	168.
R75	501031.	194491.	163.
R76	500972.	194556.	175.
R77	500855.	194177.	179.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	1.0	.0	4.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

1

RECEIVER LEQ(H) L10
R40 72.9 76.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	3	4	5	6	7	8
	42.8	45.0	47.2	65.9	71.1	60.6
11	1					
	45.6					
12	1					
	50.3					
13	1					
	44.2					
14	1					
	47.3					
15	1	2				
	47.2	48.7				
16	1	2				
	49.1	51.0				
19	1	2	3	4		
	50.4	50.9	57.1	49.8		
20	1					
	43.5					

1

RECEIVER LEQ(H) L10
R41 71.3 74.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	3	4	5	6	7	8
	42.1	44.0	45.8	60.1	68.7	66.0
11	1					
	51.4					
12	1					
	51.1					
13	1					
	49.6					
14	1					
	48.0					
15	1	2				
	45.0	45.5				
16	1	2				
	46.5	47.5				
19	1	2	3	4		
	56.7	45.8	45.7	41.8		

1

RECEIVER	LEQ(H)	L10
R42	54.9	57.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	5	6
	50.9	49.1	46.8	43.4	40.5	42.6

1

RECEIVER	LEQ(H)	L10
R43	54.6	57.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	3	4	5	6
	50.4	48.8	46.6	43.3	40.4	42.4

1

RECEIVER	LEQ(H)	L10
R44	52.1	55.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	1	2	6
	49.0	47.2	40.7

1

RECEIVER	LEQ(H)	L10
R45	51.0	54.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 1 2
 48.5 46.0

1

RECEIVER LEQ(H) L10
R46 45.5 47.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R47 46.6 49.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
 41.9

1

RECEIVER LEQ(H) L10
R48 45.0 47.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R49 44.9 47.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1*** NO SOLUTION FOR RECEIVER 11 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 11, BARRIER 20 AND ROADWAY 5

1

RECEIVER LEQ(H) L10
R50 .0 2.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R51 45.9 49.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
44.2

1

RECEIVER	LEQ(H)	L10
R52	45.2	48.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
42.0

1

RECEIVER	LEQ(H)	L10
R53	45.0	47.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
40.5

1

RECEIVER	LEQ(H)	L10
R54	52.7	56.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
52.3

1

RECEIVER	LEQ(H)	L10
R55	54.5	58.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
54.4

1

RECEIVER	LEQ(H)	L10
R56	46.3	49.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
45.4

1

RECEIVER	LEQ(H)	L10
R57	45.8	49.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
45.3

1

RECEIVER	LEQ(H)	L10
R58	44.2	47.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
43.4

1

RECEIVER	LEQ(H)	L10
R59	44.5	47.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
43.5

1

RECEIVER	LEQ(H)	L10
R60	41.7	44.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
40.1

1

RECEIVER	LEQ(H)	L10
R61	40.5	43.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R62 40.9 44.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R63 39.5 42.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R64 36.7 39.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R65 35.7 37.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R66 41.1 44.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R67 40.6 43.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R68 41.5 44.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R69 40.6 43.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R70 51.7 54.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2
 48.8 48.0

1

RECEIVER LEQ(H) L10
R71 56.1 59.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2 3
 44.1 55.4 45.5

1

RECEIVER LEQ(H) L10
R72 45.6 48.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2 3
 40.9 41.1 40.2

1

RECEIVER LEQ(H) L10
R73 50.3 53.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 46.1 47.9

1

RECEIVER LEQ(H) L10
R74 53.9 57.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 48.6 52.3

1

RECEIVER LEQ(H) L10
R75 53.0 55.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	46.6	51.7

1

RECEIVER	LEQ(H)	L10
R76	50.0	52.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	44.6	48.2

1

RECEIVER	LEQ(H)	L10
R77	62.4	65.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	1	2	3
	44.5	62.2	46.5

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/26/97 03:39:03
 INPUT FILE - 79-116P1.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN NO BUILD ** RECEIVERS R79-R116 ** ROAD SET #1 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 MASSIE ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	588.	56.
HT	6.	56.
MT	6.	56.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
I1	498983.	190641.	178.	1
I2	498935.	190545.	177.	1

ROADWAY 2 North Grounds Connector A

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	485.	50.
HT	8.	50.
MT	7.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A1	499008.	190362.	175.	1
A2	499010.	190422.	176.	1
A3	499000.	190461.	177.	1
A4	498949.	190524.	178.	1

ROADWAY 3 North Grounds Connector B

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	500.	50.
HT	8.	50.

	MT	8.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B1	499004.	190362.	175.	0
B2	499006.	190422.	176.	0
B3	498997.	190460.	177.	0
B4	498945.	190518.	178.	0

OROADWAY 4 ROUTE 250 D

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
0	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
D0	499702.	191313.	151.	1
D1	499405.	191234.	161.	1
D2	499296.	191205.	162.	1

OROADWAY 5 ROUTE 250 E

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
0	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
E0	499699.	191325.	151.	1
E1	499402.	191247.	161.	1
E2	499293.	191219.	162.	1

OROADWAY 6 US 29 Ai

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
0	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498384.	191582.	204.	0
A16	498327.	191713.	203.	1
A17	498302.	191973.	201.	1
A18	498293.	192173.	194.	1
A19	498328.	192371.	186.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

ROADWAY 7 US 29 Aii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A25	498959.	193591.	144.	0
A26	499050.	193746.	143.	0
A27	499248.	193915.	150.	0
A28	499391.	193973.	159.	0
A29	499647.	193996.	161.	0
A30	500026.	194064.	161.	0
A31	500144.	194098.	162.	0
A32	500318.	194124.	166.	0
A33	500630.	194201.	172.	0
A34	500770.	194309.	172.	1
A35	500919.	194448.	168.	1
A36	501055.	194544.	161.	1
A37	501271.	194666.	155.	1
A38	501441.	194770.	158.	1

ROADWAY 8 US 29 Aiii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A38	501441.	194770.	158.	0
A39	501584.	194914.	162.	0
A40	501749.	195110.	168.	0
A41	501873.	195195.	170.	0
A42	502086.	195281.	173.	0
A43	502262.	195347.	173.	0
A44	502438.	195437.	171.	1
A45	502645.	195605.	164.	1
A46	502758.	195744.	161.	1
A47	502866.	195961.	151.	1
A48	502976.	196182.	143.	1
A49	503099.	196365.	137.	1
A50	503297.	196697.	135.	1

ROADWAY 9 US 29 Bi

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE

B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498395.	191589.	204.	1
B16	498339.	191716.	203.	0
B17	498314.	191973.	201.	0
B18	498306.	192173.	194.	0
B19	498340.	192368.	186.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

OROADWAY 10 US 29 Bii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B25	498982.	193577.	147.	1
B26	499053.	193696.	148.	1
B27	499148.	193798.	153.	1
B28	499311.	193905.	157.	1
B29	499644.	193960.	161.	1
B30	499996.	194035.	162.	1
B31	500129.	194079.	162.	1
B32	500319.	194110.	166.	1
B33	500636.	194189.	172.	1
B34	500780.	194299.	172.	0
B35	500929.	194437.	168.	0
B36	501065.	194527.	162.	0
B37	501266.	194641.	157.	0
B38	501455.	194749.	160.	0

OROADWAY 11 US 29 Biii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B38	501455.	194749.	160.	1
B39	501617.	194867.	165.	1
B40	501794.	195075.	169.	1
B41	501890.	195166.	171.	1
B42	502092.	195262.	173.	1
B43	502269.	195328.	173.	0
B44	502449.	195421.	171.	0
B45	502660.	195593.	164.	0

B46	502773.	195731.	161.	0
B47	502885.	195955.	151.	0
B48	502993.	196171.	143.	0
B49	503115.	196354.	137.	0
B50	503297.	196625.	135.	0
B51	503379.	196720.	135.	0

OROADWAY 12 RAMP 5

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	4000.	80.
HT	150.	80.
MT	210.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
JA	499700.	191319.	151.	0
JB	499404.	191240.	161.	0
JC	499295.	191213.	162.	0
J0	499147.	191181.	163.	0
J1	499105.	191176.	164.	0
J2	499006.	191162.	167.	0
J3	498817.	191135.	177.	0
J4	498692.	191117.	183.	0
J5	498613.	191105.	187.	0

OROADWAY 13 RAMP 6

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K1	499051.	191136.	165.	1
K2	498895.	191052.	173.	1
K3	498756.	190969.	173.	1
K4	498713.	190950.	167.	1

OROADWAY 14 RAMP 3

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
G1	498238.	190898.	179.	1
G2	498363.	190970.	180.	1
G3	498497.	191051.	180.	1

OROADWAY 15 RAMP 41

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K8	498265.	190835.	182.	1
K10	498202.	190808.	181.	1
K11	498115.	190746.	178.	1

OROADWAY 16 RAMP 4

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
F2	498048.	190668.	171.	1
F3	498115.	190746.	178.	1
F4	498239.	190845.	181.	1
F5	498385.	190922.	187.	1
F6	498489.	190977.	191.	1
F7	498502.	190986.	195.	1

OROADWAY 17 LAMBS ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	178.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
L1	500009.	193771.	172.	0
L2	500030.	193946.	168.	0
L3	500033.	193990.	168.	0
L4	500038.	194045.	169.	0

OROADWAY 18 ROSLYN ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	59.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
M1	500708.	193948.	173.	1
M2	500638.	194048.	175.	1
M3	500586.	194157.	180.	1

OROADWAY 19 HYDRAULIC ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2673.	70.
HT	14.	70.
MT	13.	70.

0

-----COORDINATES-----

	X	Y	Z	GRADE
NO	500882.	194280.	175.	1
N1	500878.	194289.	176.	1
N2	500882.	194387.	178.	1

OROADWAY 20 WOODBURN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	58.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
P1	501962.	195048.	183.	0
P2	501999.	195162.	182.	0
P3	502036.	195234.	181.	0

OROADWAY 21 LAMBS ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	178.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
L44	500040.	194074.	169.	0
L5	500043.	194110.	168.	0
L6	500059.	194248.	164.	0

OROADWAY 22 ROSLYN RD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	59.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
M33	500582.	194192.	178.	0

M4	500587.	194234.	177.	0
M5	500601.	194304.	172.	0
M6	500604.	194392.	169.	0
M7	500545.	194537.	159.	0

OROADWAY 23 HYDRAULIC ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	2673.	70.	
	HT	14.	70.	
	MT	13.	70.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
N3	500884.	194426.	178.	1
N4	500886.	194634.	173.	1
N5	500877.	194754.	165.	1

OROADWAY 24 WOODBURN ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	58.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
P4	502068.	195284.	180.	0
P44	502191.	195407.	174.	0
P5	502300.	195476.	171.	0
P6	502717.	195738.	165.	0
P7	502763.	195796.	159.	0
P8	502802.	195873.	156.	0
P9	502837.	195987.	155.	0
P10	502842.	196087.	154.	0
P11	502834.	196156.	151.	0

OROADWAY 25 RAMP 3ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
G4	498546.	191113.	182.	1
G5	498579.	191209.	188.	1
G6	498581.	191270.	207.	1
G7	498521.	191418.	187.	1

OROADWAY 26 RAMP 4ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
F8	498606.	191117.	196.	1
F9	498630.	191196.	197.	1
F10	498632.	191265.	197.	1
F11	498590.	191374.	198.	1
F12	498443.	191535.	200.	1

OROADWAY 27 RAMP 611

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K5	498605.	190922.	185.	1
K6	498536.	190904.	184.	1
K60	498412.	190872.	183.	1

OROADWAY 28 ROUTE 250 D111

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D7	498541.	191010.	179.	1
D8	498373.	190952.	180.	1
D9	498251.	190881.	179.	1
D10	498161.	190806.	177.	1
D11	498048.	190668.	171.	1

OROADWAY 29 ROUTE 250 E111

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E7	498538.	191021.	179.	1
E8	498368.	190963.	180.	1
E9	498243.	190892.	179.	1

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	211.	100.		
DD4	498231.	191905.	214.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

```
-----COORDINATES-----
      X      Y      Z      Z0      DELZ      P
MM1    501415.  194702.  164.    100.     0.     0
MM2    501487.  194738.  167.    100.
```

1

BARRIER 14 TYPE(R) WALL 14

```
-----COORDINATES-----
      X      Y      Z      Z0      DELZ      P
NN1    501856.  195108.  173.    100.     0.     0
NN2    501937.  195157.  179.    100.
NN3    501966.  195181.  177.    100.
```

1

BARRIER 15 TYPE(R) WALL 15

```
-----COORDINATES-----
      X      Y      Z      Z0      DELZ      P
OO1    502037.  195215.  178.    100.     0.     0
OO2    502109.  195243.  179.    100.
```

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

```
-----COORDINATES-----
      X      Y      Z      Z0      DELZ      P
PP1    498644.  191089.  189.    100.     0.     0
PP2    498711.  191108.  182.    100.
PP3    498745.  191110.  180.    100.
PP4    498810.  191123.  166.    100.
PP5    498843.  191126.  173.    100.
PP6    498909.  191136.  166.    100.
```

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

```
-----COORDINATES-----
      X      Y      Z      Z0      DELZ      P
QQ0    498761.  191156.  181.    181.     0.     0
QQ2    498938.  191167.  191.    191.
QQ3    499036.  191179.  166.    166.
QQ4    499100.  191210.  166.    166.
QQ5    499127.  191217.  170.    170.
QQ6    499219.  191236.  168.    168.
QQ7    499324.  191249.  162.    162.
QQ8    499420.  191279.  170.    170.
QQ9A   499557.  191305.  151.    151.
```

1

BARRIER 18 TYPE(R) WALL 18 NAT WALL AT WOODBURN

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 EXT OF NAT WALL 17

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
R79	500857.	194547.	182.
R80	500837.	194628.	174.
R81	500927.	194617.	178.
R82	500980.	194607.	175.
R83	500991.	194651.	175.
R84	500971.	194678.	176.
R85	500916.	194709.	170.
R86	500955.	194718.	170.
R87	501094.	194612.	158.
R88	501150.	194518.	161.
R89	501260.	194568.	166.
R90	501519.	194630.	172.
R91	501513.	194708.	172.
R92	501813.	194972.	180.
R93	502067.	195190.	182.
R94	502010.	195307.	173.
R95	501962.	195326.	169.
R96	501993.	195339.	175.
R97	502002.	195357.	175.
R98	502021.	195370.	175.
R99	502060.	195383.	173.
R100	502082.	195385.	176.
R101	502093.	195397.	175.
R102	502013.	195112.	184.
R103	502295.	195386.	175.
R104	502194.	195435.	178.
R105	502261.	195467.	172.
R106	502220.	195404.	178.
R107	502338.	195414.	175.
R108	502293.	195427.	175.
R109	502564.	195561.	169.

	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.0	.5		
26 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.0	.5		
27 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.0	.5		
28 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.0	.5		
29 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.0	.5		

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
2 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
3 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
4 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
5 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
6 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
7 *	3.0	2.0	3.0	3.0	3.0	3.0	4.0	4.0	.0	4.0
	.0	.0	1.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
8 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	1.0	.0	.0	.0	2.0	2.0	2.0	2.0
	2.0	2.0	2.0	.0	2.0	1.0	2.0	.0	.0	.0

	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
23 *	.0	2.0	1.0	2.0	2.0	2.0	1.0	2.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
24 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
25 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
26 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
27 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
28 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
29 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

1

RECEIVER	LEQ(H)	L10
R79	66.0	69.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	46.2	
23	1	2
	65.8	52.7

1

RECEIVER	LEQ(H)	L10
R80	61.0	64.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
----	---	--

42.3
23 1 2
57.9 57.9

1

RECEIVER LEQ(H) L10
R81 62.8 66.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19 2
42.7
23 1 2
60.8 58.4

1

RECEIVER LEQ(H) L10
R82 55.9 59.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19 2
42.5
23 1 2
53.5 51.5

1

RECEIVER LEQ(H) L10
R83 54.9 58.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19 2
40.8
23 1 2
51.1 52.2

1

RECEIVER LEQ(H) L10
R84 56.3 59.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19 2
40.1
23 1 2

51.0 54.6

1

RECEIVER	LEQ(H)	L10
R85	64.1	67.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23	1	2
	52.3	63.8

1

RECEIVER	LEQ(H)	L10
R86	57.1	60.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23	1	2
	49.3	56.2

1

RECEIVER	LEQ(H)	L10
R87	51.1	54.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	40.2	
23	1	2
	48.2	46.9

1

RECEIVER	LEQ(H)	L10
R88	48.9	52.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	40.9	
23	1	2
	46.2	43.1

1

RECEIVER	LEQ(H)	L10
R89	45.6	48.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23 1 2
 42.3 40.6

1

RECEIVER	LEQ(H)	L10
R90	39.8	43.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R91	39.9	43.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R92	36.6	40.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R93	44.0	45.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

20 2
 42.0

1

RECEIVER	LEQ(H)	L10
R94	39.5	41.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R95	37.3	40.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R96	38.0	40.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R97 37.8 40.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R98 38.1 40.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R99 38.7 40.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R100 40.2 42.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R101 39.9 41.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R102 47.9 49.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

20 1
47.2

1

RECEIVER LEQ(H) L10
R103 42.9 44.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R104 48.6 49.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24 1 2
 41.6 47.3
1

RECEIVER LEQ(H) L10
R105 53.1 54.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24 2 3
 52.8 40.3
1

RECEIVER LEQ(H) L10
R106 51.0 52.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24 1 2
 42.9 50.1
1

RECEIVER LEQ(H) L10
R107 43.0 45.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R108 46.4 48.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24 2
 44.8
1

RECEIVER LEQ(H) L10
R109 43.9 45.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24 3
 42.0
1

RECEIVER LEQ(H) L10
R110 44.5 46.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24 3
43.3

1

RECEIVER LEQ(H) L10
R111 37.6 40.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R112 37.3 40.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R113 39.5 41.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R114 31.5 33.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

*** ANGLE SUBTENDED AT RECEIVER BY ROAD SEGMENT IS APPROACHING ZERO

INITIAL PT. OF ROAD SEGMENT ***** 567.5848
END PT. OF ROAD SEGMENT***** 567.5853
RECEIVER POINT .0000 .0000 .0000

1

RECEIVER LEQ(H) L10
IGNO -946.4 -944.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R116 29.0 32.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

STAMINA 2.0/BCR
FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/26/97 03:48:02
INPUT FILE - 300-PM_2.INC
(INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN NO BUILD ** RECEIVERS R1-R39 ** ROAD SET #2 CENTRAL
OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 NORTH GROUNDS CONNECTOR A11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
A9	498624.	190870.	186.	1
A10	498622.	190951.	185.	1
A11	498618.	191091.	187.	1

ROADWAY 2 NORTH GROUNDS CONNECTOR B11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B9	498612.	190870.	186.	1
B10	498610.	190951.	185.	1
B11	498606.	191091.	187.	1

ROADWAY 3 ROUTE 250 D11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D3	499109.	191156.	163.	1
D4	498918.	191108.	166.	1
D5	498752.	191065.	172.	1

D6 498701. 191051. 174. 1

ROADWAY 4 ROUTE 250 Eii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E3	499106.	191170.	163.	1
E4	498914.	191120.	166.	1
E5	498749.	191077.	172.	1
E6	498698.	191063.	174.	1

ROADWAY 5 RAMP 5ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	4000.	90.	
	HT	210.	90.	
	MT	150.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
J6	498593.	191102.	187.	0
J7	498519.	191087.	190.	0
J8	498418.	191053.	192.	0
J9	498294.	190989.	191.	0
J10	498191.	190911.	189.	0
J11	498115.	190832.	186.	0
J12	497972.	190544.	165.	0
J13	497933.	190435.	163.	0
J14	497865.	190239.	162.	0

ROADWAY 6 RAMP 5iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
J11	498115.	190832.	180.	1
J12	498008.	190664.	170.	1
J13	497973.	190583.	166.	1

ROADWAY 7 RAMP 6iii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K7	498270.	190824.	182.	1
K12	498156.	190747.	180.	1
K13	498075.	190654.	175.	1
K14	497998.	190478.	172.	1

OROADWAY 8 ROUTE 250 Div

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D11	498048.	190668.	171.	1
D12	497980.	190541.	165.	1
D13	497941.	190433.	163.	1

OROADWAY 9 ROUTE 250 Eiv

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E9	498243.	190892.	179.	1
E10	498151.	190816.	177.	1
E11	498034.	190676.	171.	1
E12	497965.	190547.	165.	1

OROADWAY 10 ROUTE 250 Ev

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E12	497965.	190547.	165.	1
E13	497925.	190438.	163.	1

OROADWAY 11 IVY ROAD V

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	895.	72.	
	HT	54.	72.	
	MT	21.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H1	497975.	190297.	170.	1

H3 497919. 190355. 170. 1

ROADWAY 12 IVY ROAD Vii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	895.	72.
HT	54.	72.
MT	21.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H33	497893.	190383.	170.	1
H5	497838.	190442.	170.	1

ROADWAY 13 IVY ROAD W

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	737.	72.
HT	45.	72.
MT	18.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H2	497969.	190288.	170.	1
H4	497915.	190345.	170.	1

ROADWAY 14 IVY ROAD Wii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	737.	72.
HT	35.	72.
MT	18.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H44	497879.	190383.	170.	1
H6	497832.	190432.	170.	1

ROADWAY 15 IVY ROAD Wiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	932.	72.
HT	56.	72.
MT	22.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H6	497832.	190432.	170.	1
H7	497793.	190456.	170.	1
H9	497703.	190532.	170.	1

OROADWAY 16 IVY ROAD Vill

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1351.	72.	
	HT	78.	72.	
	MT	31.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H5	497838.	190442.	170.	1
H8	497803.	190463.	170.	1
H10	497771.	190540.	170.	1

OROADWAY 17 ROUTE 250 Evi

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E13	497925.	190438.	163.	1
E14	497858.	190241.	162.	1

OROADWAY 18 ROUTE 250 Dv

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D13	497941.	190433.	163.	1
D14	497873.	190236.	162.	1

OROADWAY 19 OLD IVY ROAD

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	556.	60.	
	HT	8.	60.	
	MT	16.	60.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
OI1	498121.	190435.	179.	0
OI2	497955.	190488.	176.	0
OI3	497935.	190494.	166.	0
OI4	497876.	190513.	167.	0
OI5	497775.	190562.	165.	0

OROADWAY 20 RAMP TO OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	340.	60.
HT	7.	60.
MT	13.	60.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
OIR1	498074.	190788.	181.	0
OIR2	497906.	190644.	169.	0

OROADWAY 21 RIO ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1450.	70.
HT	20.	70.
MT	60.	70.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
RIO0	500455.	193741.	177.	0
RIO1	500712.	193980.	173.	0
RIO2	501033.	194280.	172.	0
RIO3	501629.	194648.	170.	0

OROADWAY 22 BARRACKS ROAD SOUTH

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	950.	80.
HT	20.	80.
MT	30.	80.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
BARR1	498418.	192490.	170.	0
BARR2	498695.	192305.	183.	0

1
BARRIER 1 TYPE (R) WALL 1

-----COORDINATES-----						
	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1
BARRIER 2 TYPE (R) WALL 2

-----COORDINATES-----						
	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0

BB2	498530.	191155.	208.	100.
BB3	498551.	191287.	202.	100.
BB4	498546.	191355.	198.	100.

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		

GG3 498921. 193352. 162. 100.
1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----
X Y Z Z0 DELZ P
HH1 499359. 193902. 162. 100. 0. 0
HH2 499481. 193928. 165. 100.

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----
X Y Z Z0 DELZ P
II1 499982. 194070. 167. 100. 0. 0
II2 500032. 194092. 167. 100.

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----
X Y Z Z0 DELZ P
JJ1 500051. 194098. 166. 100. 0. 0
JJ2 500076. 194107. 164. 100.

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----
X Y Z Z0 DELZ P
KK1 500045. 194026. 169. 100. 0. 0
KK2 500114. 194056. 164. 100.

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----
X Y Z Z0 DELZ P
LL1 500599. 194141. 177. 100. 0. 0
LL2 500659. 194168. 183. 100.
LL3 500747. 194228. 183. 100.
LL4 500861. 194339. 178. 100.

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----
X Y Z Z0 DELZ P
MM1 501415. 194702. 164. 100. 0. 0
MM2 501487. 194738. 167. 100.

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
PP1	498644.	191089.	189.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ0	498761.	191156.	181.	181.	0.	0
QQ2	498938.	191167.	171.	171.		
QQ3	499036.	191179.	166.	166.		
QQ4	499100.	191210.	166.	166.		
QQ5	499127.	191217.	170.	170.		
QQ6	499219.	191236.	168.	168.		
QQ7	499324.	191249.	162.	162.		
QQ8	499420.	191279.	170.	170.		
QQ9A	499557.	191305.	151.	151.		

1

BARRIER 18 TYPE(R) WALL 18 NAT BARRIER NEAR WOODBURN ROAD

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 - EXT OF WALL 17 NEAR US 250

	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0			
18 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0			
19 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0			
20 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0			
21 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0			
22 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0			

1

RECEIVER	LEQ(H)	L10
R300	41.6	44.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R301	37.9	40.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R302	45.9	48.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	1	
	44.4	

1

RECEIVER	LEQ(H)	L10
R303	52.2	55.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	1	2
	51.1	44.8

1

RECEIVER	LEQ(H)	L10
----------	--------	-----

R304 46.3 49.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
42.5 43.1

1

RECEIVER LEQ(H) L10
R305 50.5 53.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
47.4 47.2

1

RECEIVER LEQ(H) L10
R306 57.7 61.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2 3
41.0 56.7 50.4

1

RECEIVER LEQ(H) L10
R307 59.7 63.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
50.7 59.1

1

RECEIVER LEQ(H) L10
R308 62.4 66.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
62.4

1

RECEIVER LEQ(H) L10
R309 48.8 51.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
41.4 47.8

1

RECEIVER LEQ(H) L10
R310 47.3 50.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
46.4

1

RECEIVER LEQ(H) L10
R311 30.0 32.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R312 21.4 24.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R313 45.8 48.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
40.1

1

RECEIVER LEQ(H) L10
R314 46.2 48.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
41.9

1

RECEIVER	LEQ(H)	L10
R315	45.8	48.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22	1
	41.4

1*** NO SOLUTION FOR RECEIVER 17 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 17, BARRIER 20 AND ROADWAY 5

1

RECEIVER	LEQ(H)	L10
R316	.0	2.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R317	46.3	49.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22	1
	45.7

1

RECEIVER	LEQ(H)	L10
R318	46.6	49.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22	1
	41.9

1

RECEIVER	LEQ(H)	L10
R47M	45.4	47.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1*** NO SOLUTION FOR RECEIVER 21 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 21, BARRIER 20 AND ROADWAY 5

1

RECEIVER	LEQ(H)	L10
----------	--------	-----

R50M .0 2.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R51M 45.9 49.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
44.1

1

RECEIVER LEQ(H) L10
R55M 50.5 54.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
50.2

1

RECEIVER LEQ(H) L10
R319 43.2 46.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1
41.1

1

RECEIVER LEQ(H) L10
R320 34.2 36.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R321 32.1 34.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R322 30.9 33.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA



1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/26/97 03:43:13
 INPUT FILE - 79-116P2.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN NO BUILD ** RECEIVERS R79-R116 ** ROAD SET #2 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 NORTH GROUNDS CONNECTOR Aii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED		
	CARS	1.	50.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
A9	498624.	190870.	186.	1	
A10	498622.	190951.	185.	1	
A11	498618.	191091.	187.	1	

ROADWAY 2 NORTH GROUNDS CONNECTOR Bii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED		
	CARS	1.	50.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
B9	498612.	190870.	186.	1	
B10	498610.	190951.	185.	1	
B11	498606.	191091.	187.	1	

ROADWAY 3 ROUTE 250 Di1

	VEHICLE TYPE	VEHICLES/HOUR	SPEED		
	CARS	1.	90.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
D3	499109.	191156.	163.	1	
D4	498918.	191108.	166.	1	
D5	498752.	191065.	172.	1	

D6 498701. 191051. 174. 1

ROADWAY 4 ROUTE 250 E11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E3	499106.	191170.	163.	1
E4	498914.	191120.	166.	1
E5	498749.	191077.	172.	1
E6	498698.	191063.	174.	1

ROADWAY 5 RAMP 511

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	4000.	90.	
	HT	210.	90.	
	MT	150.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
J6	498593.	191102.	187.	0
J7	498519.	191087.	190.	0
J8	498418.	191053.	192.	0
J9	498294.	190989.	191.	0
J10	498191.	190911.	190.	0
J11	498115.	190832.	186.	0
J12	497972.	190544.	165.	0
J13	497933.	190435.	163.	0
J14	497865.	190239.	162.	0

ROADWAY 6 OLD RAMP 5111

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
OLD J11	498115.	190832.	180.	1
OLD J12	498008.	190664.	170.	1
OLD J13	497973.	190583.	166.	1

ROADWAY 7 RAMP 6111

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K7	498270.	190824.	182.	1
K12	498156.	190747.	180.	1
K13	498075.	190654.	175.	1
K14	497998.	190478.	172.	1

OROADWAY 8 ROUTE 250 Div

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D11	498048.	190668.	171.	1
D12	497980.	190541.	165.	1
D13	497941.	190433.	163.	1

OROADWAY 9 ROUTE 250 Eiv

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E9	498243.	190892.	179.	1
E10	498151.	190816.	177.	1
E11	498034.	190676.	171.	1
E12	497965.	190547.	165.	1

OROADWAY 10 ROUTE 250 Ev

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E12	497965.	190547.	165.	1
E13	497925.	190438.	163.	1

OROADWAY 11 IVY ROAD V

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	895.	72.	
	HT	54.	72.	
	MT	21.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H1	497975.	190297.	170.	1

H3 497919. 190355. 170. 1

ROADWAY 12 IVY ROAD Vii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	895.	72.
HT	54.	72.
MT	21.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H33	497893.	190383.	170.	1
H5	497838.	190442.	170.	1

ROADWAY 13 IVY ROAD W

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	737.	72.
HT	45.	72.
MT	18.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H2	497969.	190288.	170.	1
H4	497915.	190345.	170.	1

ROADWAY 14 IVY ROAD Wii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	737.	72.
HT	45.	72.
MT	18.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H44	497879.	190383.	170.	1
H6	497832.	190432.	170.	1

ROADWAY 15 IVY ROAD Wiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	932.	72.
HT	56.	72.
MT	22.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H6	497832.	190432.	170.	1
H7	497793.	190456.	170.	1
H9	497703.	190532.	170.	1

OROADWAY 16 IVY ROAD Viii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1351.	72.	
	HT	78.	72.	
	MT	31.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H5	497838.	190442.	170.	1
H8	497803.	190463.	170.	1
H10	497711.	190540.	170.	1

OROADWAY 17 ROUTE 250 Evi

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E13	497925.	190438.	170.	1
E14	497858.	190241.	170.	1

OROADWAY 18 ROUTE 250 Dv

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D13	497941.	190433.	170.	1
D14	497873.	190236.	170.	1

OROADWAY 19 OLD IVY ROAD

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	556.	60.	
	HT	8.	60.	
	MT	16.	60.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
OI1	498121.	190435.	179.	0
OI2	497955.	190488.	176.	0
OI3	497935.	190494.	166.	0
OI4	497876.	190513.	167.	0
OI5	497906.	190644.	169.	0

OROADWAY 20 RAMP TO OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	340.	60.
HT	7.	60.
MT	13.	60.

0

-----COORDINATES-----

	X	Y	Z	GRADE
OIR1	498074.	190788.	181.	0
OIR2	497906.	190644.	169.	0

OROADWAY 21 RIO ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1450.	70.
HT	20.	70.
MT	60.	70.

0

-----COORDINATES-----

	X	Y	Z	GRADE
RIO0	500455.	193741.	177.	0
RIO1	500712.	193980.	173.	0
RIO2	501033.	194280.	172.	0
RIO3	501629.	194648.	170.	0

OROADWAY 22 BARRACKS ROAD SOUTH

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	950.	80.
HT	20.	80.
MT	30.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
BARR1	498418.	192490.	170.	0
BARR2	498695.	192305.	183.	0

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0

BB2	498530.	191155.	208.	100.
BB3	498551.	191287.	202.	100.
BB4	498546.	191355.	198.	100.

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0

GG2 498905. 193305. 165. 100.
GG3 498921. 193352. 162. 100.

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
PP1	498644.	191089.	189.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ0	498761.	191156.	181.	181.	0.	0
QQ2	498938.	191167.	171.	171.		
QQ3	499036.	191179.	166.	166.		
QQ4	499100.	191210.	166.	166.		
QQ5	499127.	191217.	170.	170.		
QQ6	499219.	191236.	168.	168.		
QQ7	499324.	191249.	162.	162.		
QQ8	499420.	191279.	170.	170.		
QQ9A	499557.	191305.	151.	151.		

1

BARRIER 18 TYPE(R) WALL 18 NAT BARRIER NEAR WOODBURN

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 - EXTENSION OF NAT WALL 17 NEAR US 250

-----COORDINATES-----
X Y Z ZO DELZ P
QQ9B 499559. 191307. 151. 151. 0. 0
QQ10 499575. 191324. 158. 158.

1

RECEIVERS

-----COORDINATES-----
X Y Z
R79 500857. 194547. 182.
R80 500837. 194628. 174.
R81 500927. 194617. 178.
R82 500980. 194607. 175.
R83 500991. 194651. 175.
R84 500971. 194678. 176.
R85 500916. 194709. 170.
R86 500955. 194718. 170.
R87 501094. 194612. 158.
R88 501150. 194518. 161.
R89 501260. 194568. 166.
R90 501519. 194630. 172.
R91 501513. 194708. 172.
R92 501813. 194972. 180.
R93 502067. 195190. 182.
R94 502010. 195307. 173.
R95 501962. 195326. 169.
R96 501993. 195339. 175.
R97 502002. 195357. 175.
R98 502021. 195370. 175.
R99 502060. 195383. 173.
R100 502082. 195385. 176.
R101 502093. 195397. 175.
R102 502013. 195112. 184.
R103 502295. 195386. 175.
R104 502194. 195435. 178.
R105 502261. 195467. 172.
R106 502220. 195404. 178.
R107 502338. 195414. 175.
R108 502293. 195427. 175.
R109 502564. 195561. 169.
R110 502600. 195598. 165.
R111 502696. 195541. 153.
R112 502952. 195884. 135.
R113 502947. 195993. 144.
R114 502957. 196315. 148.
IGNORE 0. 0. 0.
R116 503220. 196194. 130.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0		
19 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0		
20 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0		
21 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0		
22 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0		

1

RECEIVER	LEQ(H)	L10
R79	48.3	51.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	44.4	45.6

1

RECEIVER	LEQ(H)	L10
R80	46.2	48.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	41.6	44.0

1

RECEIVER	LEQ(H)	L10
R81	47.9	50.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	42.8	46.0

1

RECEIVER LEQ(H) L10
R82 48.9 51.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
43.1 47.3

1

RECEIVER LEQ(H) L10
R83 48.1 50.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
42.0 46.6

1

RECEIVER LEQ(H) L10
R84 47.3 49.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
41.3 45.7

1

RECEIVER LEQ(H) L10
R85 45.9 48.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
40.3 44.2

1

RECEIVER LEQ(H) L10
R86 46.2 48.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
40.3 44.7

1

RECEIVER LEQ(H) L10
R87 50.5 53.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
42.4 49.6

1

RECEIVER LEQ(H) L10
R88 54.8 57.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
44.2 54.3

1

RECEIVER LEQ(H) L10
R89 55.5 58.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
41.3 55.3

1

RECEIVER LEQ(H) L10
R90 62.8 66.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
62.7

1

RECEIVER LEQ(H) L10
R91 55.2 58.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
55.1

1

RECEIVER	LEQ(H)	L10
R92	42.5	45.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	3
	42.0

1

RECEIVER	LEQ(H)	L10
R93	37.2	40.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R94	36.3	39.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R95	36.6	39.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R96	36.2	39.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R97	36.0	38.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R98	35.7	38.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R99	35.3	38.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R100 35.0 37.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R101 34.9 37.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R102 38.4 41.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R103 33.9 36.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R104 33.9 36.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R105 33.4 36.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R106 34.1 36.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R107 33.4 36.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R108 33.5 36.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R109 31.1 33.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R110 30.7 33.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R111 30.4 33.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R112 27.5 30.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R113 27.0 29.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R114 24.9 27.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
IGNO -941.3 -939.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R116 25.0 27.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/26/97 03:45:09
 INPUT FILE - 300-PM_1.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN NO BUILD ** RECEIVERS R300- ** ROAD SET #1 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 Massie Rd.

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	588.	56.
HT	6.	56.
MT	6.	56.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
I1	498983.	190641.	178.	1
I2	498935.	190545.	177.	1

ROADWAY 2 North Grounds Connector A

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	485.	50.
HT	8.	50.
MT	7.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A1	499008.	190362.	175.	1
A2	499010.	190422.	176.	1
A3	499000.	190461.	177.	1
A4	498949.	190524.	178.	1

ROADWAY 3 North Grounds Connector B

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	500.	50.
HT	8.	50.

	MT	8.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B1	499004.	190362.	175.	0
B2	499006.	190422.	176.	0
B3	498997.	190460.	177.	0
B4	498945.	190518.	178.	0

OROADWAY 4 ROUTE 250 D

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
0	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
D0	499702.	191313.	151.	1
D1	499405.	191234.	161.	1
D2	499296.	191205.	162.	1

OROADWAY 5 ROUTE 250 E

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
0	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
E0	499699.	191325.	151.	1
E1	499402.	191247.	161.	1
E2	499293.	191219.	162.	1

OROADWAY 6 US 29 Ai

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
0	CARS	1.	90.	
	-----COORDINATES-----			
	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498384.	191582.	204.	0
A16	498327.	191713.	203.	1
A17	498302.	191973.	201.	1
A18	498293.	192173.	194.	1
A19	498328.	192371.	186.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

ROADWAY 7 US 29 Aii

	VEHICLE TYPE	VEHICLES/HOUR		SPEED	
	CARS	1.	90.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
A25	498959.	193591.	144.	0	
A26	499050.	193746.	143.	0	
A27	499248.	193915.	150.	0	
A28	499391.	193973.	159.	0	
A29	499647.	193996.	161.	0	
A30	500026.	194064.	161.	0	
A31	500144.	194098.	162.	0	
A32	500318.	194124.	166.	0	
A33	500630.	194201.	172.	0	
A34	500770.	194309.	172.	1	
A35	500919.	194448.	168.	1	
A36	501055.	194544.	161.	1	
A37	501271.	194666.	155.	1	
A38	501441.	194770.	158.	1	

ROADWAY 8 US 29 Aiii

	VEHICLE TYPE	VEHICLES/HOUR		SPEED	
	CARS	1.	90.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
A38	501441.	194770.	158.	0	
A39	501584.	194914.	162.	0	
A40	501749.	195110.	168.	0	
A41	501873.	195195.	170.	0	
A42	502086.	195281.	173.	0	
A43	502262.	195347.	173.	0	
A44	502438.	195437.	171.	1	
A45	502645.	195605.	164.	1	
A46	502758.	195744.	161.	1	
A47	502866.	195961.	151.	1	
A48	502976.	196182.	143.	1	
A49	503099.	196365.	137.	1	
A50	503297.	196697.	135.	1	

ROADWAY 9 US 29 B1

	VEHICLE TYPE	VEHICLES/HOUR		SPEED	
	CARS	1.	90.		
0	-----COORDINATES-----				
	X	Y	Z	GRADE	

B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498395.	191589.	204.	1
B16	498339.	191716.	203.	0
B17	498314.	191973.	201.	0
B18	498306.	192173.	194.	0
B19	498340.	192368.	186.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

OROADWAY 10 US 29 Bii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B25	498982.	193577.	147.	1
B26	499053.	193696.	148.	1
B27	499148.	193798.	153.	1
B28	499311.	193905.	157.	1
B29	499644.	193960.	161.	1
B30	499996.	194035.	162.	1
B31	500129.	194079.	162.	1
B32	500319.	194110.	166.	1
B33	500636.	194189.	172.	1
B34	500780.	194299.	172.	0
B35	500929.	194437.	168.	0
B36	501065.	194527.	162.	0
B37	501266.	194641.	157.	0
B38	501455.	194749.	160.	0

OROADWAY 11 US 29 Biii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B38	501455.	194749.	160.	1
B39	501617.	194867.	165.	1
B40	501794.	195075.	169.	1
B41	501890.	195166.	171.	1
B42	502092.	195262.	173.	1
B43	502269.	195328.	173.	0
B44	502449.	195421.	171.	0
B45	502660.	195593.	164.	0

B46	502773.	195731.	161.	0
B47	502885.	195955.	151.	0
B48	502993.	196171.	143.	0
B49	503115.	196354.	137.	0
B50	503297.	196625.	135.	0
B51	503379.	196720.	135.	0

OROADWAY 12 RAMP 5

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	4000.	90.	
	HT	210.	90.	
	MT	150.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
JA	499700.	191319.	162.	0
JB	499404.	191240.	161.	0
JC	499295.	191213.	162.	0
JO	499147.	191181.	163.	0
J1	499105.	191176.	164.	0
J2	499006.	191162.	167.	0
J3	498817.	191135.	177.	0
J4	498692.	191117.	183.	0
J5	498613.	191105.	187.	0

OROADWAY 13 RAMP 6

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K1	499051.	191136.	165.	1
K2	498895.	191052.	173.	1
K3	498756.	190969.	173.	1
K4	498713.	190950.	167.	1

OROADWAY 14 RAMP 3

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
G1	498238.	190898.	179.	1
G2	498363.	190970.	180.	1
G3	498497.	191051.	180.	1

OROADWAY 15 RAMP 41

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K8	498265.	190835.	182.	1
K10	498202.	190808.	181.	1
K11	498115.	190746.	178.	1

OROADWAY 16 RAMP 4

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
F2	498048.	190668.	171.	1
F3	498115.	190746.	178.	1
F4	498239.	190845.	181.	1
F5	498385.	190922.	187.	1
F6	498489.	190977.	191.	1
F7	498502.	190986.	195.	1

OROADWAY 17 LAMBS ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	178.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
L1	500009.	193771.	172.	0
L2	500030.	193946.	168.	0
L3	500033.	193990.	168.	0
L4	500038.	194045.	169.	0

OROADWAY 18 ROSLYN ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	59.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
M1	500708.	193948.	173.	1
M2	500638.	194048.	175.	1
M3	500586.	194157.	180.	1

OROADWAY 19 HYDRAULIC ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2673.	70.
HT	14.	70.
MT	13.	70.

0 -----COORDINATES-----

	X	Y	Z	GRADE
NO	500882.	194280.	175.	1
N1	500878.	194289.	176.	1
N2	500882.	194387.	178.	1

OROADWAY 20 WOODBURN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	58.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
P1	501962.	195048.	183.	0
P2	501999.	195162.	182.	0
P3	502036.	195234.	181.	0

OROADWAY 21 LAMBS ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	178.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
L44	500040.	194074.	169.	0
L5	500043.	194110.	168.	0
L6	500059.	194248.	164.	0

OROADWAY 22 ROSLYN RD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	59.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
M33	500582.	194192.	178.	0

M4	500587.	194234.	177.	0
M5	500601.	194304.	172.	0
M6	500604.	194392.	169.	0
M7	500545.	194537.	159.	0

OROADWAY 23 HYDROLIC ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	2673.	70.	
	HT	14.	70.	
	MT	13.	70.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
N3	500884.	194426.	178.	1
N4	500886.	194634.	173.	1
N5	500877.	194754.	165.	1

OROADWAY 24 WOODBURN ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	58.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
P4	502068.	195284.	180.	0
P44	502191.	195407.	174.	0
P5	502300.	195476.	171.	0
P6	502717.	195738.	165.	0
P7	502763.	195796.	159.	0
P8	502802.	195873.	156.	0
P9	502837.	195987.	155.	0
P10	502842.	196087.	154.	0
P11	502834.	196156.	151.	0

OROADWAY 25 RAMP 311

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
G4	498546.	191113.	182.	1
G5	498579.	191209.	188.	1
G6	498581.	191270.	207.	1
G7	498521.	191418.	187.	1

OROADWAY 26 RAMP 411

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
F8	498606.	191117.	196.	1
F9	498630.	191196.	197.	1
F10	498632.	191265.	197.	1
F11	498590.	191374.	198.	1
F12	498443.	191535.	200.	1

OROADWAY 27 RAMP 6ii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
K5	498605.	190922.	185.	1
K6	498536.	190904.	184.	1
K60	498412.	190872.	183.	1

OROADWAY 28 ROUTE 250 Diii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D7	498541.	191010.	179.	1
D8	498373.	190952.	180.	1
D9	498251.	190881.	179.	1
D10	498161.	190806.	177.	1
D11	498048.	190668.	171.	1

OROADWAY 29 ROUTE 250 Eiii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E7	498538.	191021.	179.	1
E8	498368.	190963.	180.	1
E9	498243.	190892.	179.	1

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

X	Y	Z	Z0	DELZ	P
498655.	190672.	197.	100.	0.	0
498625.	190701.	199.	100.		

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

```
-----COORDINATES-----
      X      Y      Z      Z0      DELZ      P
MM1    501415.  194702.  164.  100.      0.      0
MM2    501487.  194738.  167.  100.
```

1

BARRIER 14 TYPE(R) WALL 14

```
-----COORDINATES-----
      X      Y      Z      Z0      DELZ      P
NN1    501856.  195108.  173.  100.      0.      0
NN2    501937.  195157.  179.  100.
NN3    501966.  195181.  177.  100.
```

1

BARRIER 15 TYPE(R) WALL 15

```
-----COORDINATES-----
      X      Y      Z      Z0      DELZ      P
OO1    502037.  195215.  178.  100.      0.      0
OO2    502109.  195243.  179.  100.
```

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

```
-----COORDINATES-----
      X      Y      Z      Z0      DELZ      P
PP1    498644.  191089.  189.  100.      0.      0
PP2    498711.  191108.  182.  100.
PP3    498745.  191110.  180.  100.
PP4    498810.  191123.  166.  100.
PP5    498843.  191126.  173.  100.
PP6    498909.  191136.  166.  100.
```

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

```
-----COORDINATES-----
      X      Y      Z      Z0      DELZ      P
QQ0    498761.  191156.  181.  181.      0.      0
QQ2    498938.  191167.  171.  171.
QQ3    499036.  191179.  166.  166.
QQ4    499100.  191210.  166.  166.
QQ5    499127.  191217.  170.  170.
QQ6    499219.  191236.  168.  168.
QQ7    499324.  191249.  162.  162.
QQ8    499420.  191279.  170.  170.
QQ9A   499557.  191305.  151.  151.
```

1

BARRIER 18 TYPE(R) WALL 18 NAT BARRIER AT WOODBURN ROAD

-----COORDINATES-----
X Y Z ZO DELZ P
RR1 502052. 195277. 182. 100. 0. 0
RR2 502084. 195322. 180. 100.
RR3 502159. 195391. 178. 100.
RR4 502241. 195450. 173. 100.

1

BARRIER 19 TYPE(R) WALL 19 EXTENSION OF NATURAL WALL 17 AT US 250

-----COORDINATES-----
X Y Z ZO DELZ P
QQ9B 499559. 191307. 151. 151. 0. 0
QQ10 499575. 191324. 158. 158.

1

RECEIVERS

-----COORDINATES-----
X Y Z
R300 498768. 192878. 171.
R301 499851. 194148. 157.
R302 500216. 193939. 157.
R304 500723. 194486. 177.
R305 500866. 194455. 178.
R306 500907. 194289. 172.
R307 501074. 194387. 166.
R308 501463. 194599. 168.
R309 501070. 194662. 161.
R310 501114. 194754. 157.
R311 502641. 195688. 164.
R312 503302. 196494. 108.
R313 498250. 191999. 214.
R314 498324. 192036. 219.
R315 498280. 192041. 214.
R316 498345. 192111. 210.
R317 498313. 192207. 188.
R318 498447. 191978. 243.
R47MOD 498160. 191923. 199.
R50MOD 498319. 192106. 208.
R51MOD 498223. 192242. 176.
R55MOD 498580. 192482. 0.
R303 500229. 194005. 155.
R319 500307. 194256. 156.
R320 502126. 195453. 172.
R321 502383. 195539. 172.
R322 502515. 195625. 170.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

	.0	.0	.0	.0	.0	.0	.0	.0	.0
25 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
26 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
27 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
28 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
29 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0

1

RECEIVER	LEQ(H)	L10
R300	38.9	42.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R301	38.5	42.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R302	39.9	43.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R304	53.2	56.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19	2	
	45.4	
23	1	2
	51.2	45.6

1

RECEIVER	LEQ(H)	L10
R305	68.7	72.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19 2
 53.5
23 1 2
 68.6 46.9

1

RECEIVER LEQ(H) L10
R306 64.6 67.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19 1 2
 59.4 62.8
23 1 2
 48.9 40.6

1

RECEIVER LEQ(H) L10
R307 51.0 54.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

19 2
 46.3
23 1 2
 47.9 41.9

1

RECEIVER LEQ(H) L10
R308 40.9 44.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R309 48.3 51.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23 1 2
 44.4 44.8

1

RECEIVER LEQ(H) L10
R310 45.3 48.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

23 1 2
 40.6 42.2

1

RECEIVER LEQ(H) L10
R311 61.1 60.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24 3
 61.0

1

RECEIVER LEQ(H) L10
R312 27.9 28.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R313 38.7 41.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R314 39.4 40.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R315 39.4 40.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R316 39.2 42.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R317 46.5 45.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

9 7
43.7

1

RECEIVER LEQ(H) L10
R318 45.7 47.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R47M 33.9 37.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R50M 40.2 40.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1*** NO SOLUTION FOR RECEIVER 21 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 21, BARRIER 20 AND ROADWAY 27

1

RECEIVER LEQ(H) L10
R51M .0 -.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R55M 38.3 41.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R303 40.0 43.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R319 40.9 44.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R320 39.0 41.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R321	55.4	55.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24	3
	55.3

1

RECEIVER	LEQ(H)	L10
R322	53.8	54.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

24	3
	53.7

APPENDIX D

STAMINA PRINTOUT FOR 2022 BUILD ALTERNATIVE

CENTRAL ALIGNMENT

NOISE LEVELS

NOTE:

THE RESULTS FOR EACH RECEPTOR ARE CONTAINED IN TWO STAMINA PRINTOUTS (ONE FOR EACH SET OF ROADS) AND MUST BE COMBINED (REFER SECTION 5.4 IN REPORT).

FOR SITES 50 AND 51 SEE LAST STAMINA OUTPUTS IN THIS APPENDIX. ANY OTHER PROJECTIONS FOR THESE SITES SHOULD BE IGNORED.

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/30/97 14:55:03
 INPUT FILE - 1-39PM_1.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN ** RECEIVERS R1-R39 ** ROAD SET #1 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 Massie Rd.

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	588.	56.
HT	6.	56.
MT	6.	56.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
I1	498983.	190641.	178.	1
I2	498935.	190545.	177.	1

OROADWAY 2 North Grounds Connector A

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	755.	50.
HT	8.	50.
MT	7.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A1	499008.	190362.	175.	1
A2	499010.	190422.	176.	1
A3	499000.	190461.	177.	1
A4	498949.	190524.	178.	1
A5	498839.	190572.	179.	1
A6	498748.	190611.	186.	1
A7	498681.	190667.	189.	1
A8	498639.	190744.	188.	1
A9	498624.	190870.	186.	1

OROADWAY 3 North Grounds Connector B

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	804.	50.
HT	8.	50.
MT	8.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
B1	499004.	190362.	175.	0
B2	499006.	190422.	176.	0
B3	498997.	190460.	177.	0
B4	498945.	190518.	178.	0
B5	498834.	190561.	179.	0
B6	498741.	190600.	186.	0
B7	498671.	190660.	189.	0
B8	498627.	190740.	188.	0
B9	498612.	190870.	186.	0

ROADWAY 4 ROUTE 250 D

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1181.	90.
HT	28.	90.
MT	21.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
D0	499702.	191313.	151.	1
D1	499405.	191234.	161.	1
D2	499296.	191205.	162.	1
D3	499109.	191156.	163.	1

ROADWAY 5 ROUTE 250 E

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2582.	90.
HT	62.	90.
MT	46.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
E0	499699.	191325.	151.	1
E1	499402.	191247.	161.	1
E2	499293.	191219.	162.	1
E3	499106.	191170.	163.	1

ROADWAY 6 US 29 Ai

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.

HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498384.	191582.	204.	0
A16	498327.	191713.	203.	1
A17	498302.	191973.	201.	1
A18	498293.	192173.	194.	1
A19	498328.	192371.	186.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

OROADWAY 7 US 29 Aii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.
HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A25	498959.	193591.	144.	0
A26	499050.	193746.	143.	0
A27	499248.	193915.	150.	0
A28	499391.	193973.	159.	0
A29	499647.	193996.	161.	0
A30	500026.	194064.	161.	0
A31	500144.	194098.	162.	0
A32	500318.	194124.	166.	0
A33	500630.	194201.	172.	0
A34	500770.	194309.	172.	1
A35	500919.	194448.	168.	1
A36	501055.	194544.	161.	1
A37	501271.	194666.	155.	1
A38	501441.	194770.	158.	1

OROADWAY 8 US 29 Aiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.
HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE

A38	501441.	194770.	158.	0
A39	501584.	194914.	162.	0
A40	501749.	195110.	168.	0
A41	501873.	195195.	170.	0
A42	502086.	195281.	173.	0
A43	502262.	195347.	173.	0
A44	502438.	195437.	171.	1
A45	502645.	195605.	164.	1
A46	502758.	195744.	161.	1
A47	502866.	195961.	151.	1
A48	502976.	196182.	143.	1
A49	503099.	196365.	137.	1
A50	503297.	196697.	135.	1

OROADWAY 9 US 29 Bi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498395.	191589.	204.	1
B16	498339.	191716.	203.	0
B17	498314.	191973.	201.	0
B18	498306.	192173.	194.	0
B19	498340.	192368.	186.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

OROADWAY 10 US 29 Bi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
B25	498982.	193577.	147.	1
B26	499053.	193696.	148.	1
B27	499148.	193798.	153.	1
B28	499311.	193905.	157.	1
B29	499644.	193960.	161.	1

B30	499996.	194035.	162.	1
B31	500129.	194079.	162.	1
B32	500319.	194110.	166.	1
B33	500636.	194189.	172.	1
B34	500780.	194299.	172.	0
B35	500929.	194437.	168.	0
B36	501065.	194527.	162.	0
B37	501266.	194641.	157.	0
B38	501455.	194749.	160.	0

ROADWAY 11 US 29 B111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
B38	501455.	194749.	160.	1
B39	501617.	194867.	165.	1
B40	501794.	195075.	169.	1
B41	501890.	195166.	171.	1
B42	502092.	195262.	173.	1
B43	502269.	195328.	173.	0
B44	502449.	195421.	171.	0
B45	502660.	195593.	164.	0
B46	502773.	195731.	161.	0
B47	502885.	195955.	151.	0
B48	502993.	196171.	143.	0
B49	503115.	196354.	137.	0
B50	503297.	196625.	135.	0
B51	503379.	196720.	135.	0

ROADWAY 12 RAMP 5

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	605.	80.
HT	26.	80.
MT	20.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
J0	499147.	191181.	163.	1
J1	499105.	191176.	164.	1
J2	499006.	191162.	166.	1
J3	498817.	191135.	175.	1
J4	498692.	191117.	183.	1
J5	498613.	191105.	187.	1

ROADWAY 13 RAMP 6

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	183.	80.
HT	4.	80.
MT	3.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K1	499051.	191136.	165.	1
K2	498895.	191052.	173.	1
K3	498756.	190969.	173.	1
K4	498713.	190950.	167.	1

ROADWAY 14 RAMP 3

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	564.	80.
HT	20.	80.
MT	16.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
G1	498238.	190898.	179.	1
G2	498363.	190970.	180.	1
G3	498497.	191051.	180.	1

ROADWAY 15 RAMP 41

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	39.	80.
HT	1.	80.
MT	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K8	498265.	190835.	182.	1
K10	498202.	190808.	181.	1
K11	498115.	190746.	178.	1

ROADWAY 16 RAMP 4

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	558.	80.
HT	24.	80.
MT	18.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
F2	498048.	190668.	171.	1
F3	498115.	190746.	178.	1

F4	498239.	190845.	181.	1
F5	498385.	190922.	187.	1
F6	498489.	190977.	191.	1
F7	498502.	190986.	195.	1

OROADWAY 17 LAMBS ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	178.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
L1	500009.	193771.	172.	0
L2	500030.	193946.	168.	0
L3	500033.	193990.	168.	0
L4	500038.	194045.	169.	0

OROADWAY 18 ROSLYN ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	59.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
M1	500708.	193948.	173.	1
M2	500638.	194048.	175.	1
M3	500586.	194157.	180.	1

OROADWAY 19 HYDRAULIC ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	2673.	70.	
	HT	14.	70.	
	MT	13.	70.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
N0	500882.	194280.	175.	1
N1	500878.	194289.	176.	1
N2	500882.	194387.	178.	1

OROADWAY 20 WOODBURN ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED
	CARS	58.	50.

HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
P1	501962.	195048.	183.	0
P2	501999.	195162.	182.	0
P3	502036.	195234.	181.	0

ROADWAY 21 LAMBS ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	178.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
L44	500040.	194074.	169.	0
L5	500043.	194110.	168.	0
L6	500059.	194248.	164.	0

ROADWAY 22 ROSLYN RD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	59.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
M33	500582.	194192.	178.	0
M4	500587.	194234.	177.	0
M5	500601.	194304.	172.	0
M6	500604.	194392.	169.	0
M7	500545.	194537.	159.	0

ROADWAY 23 HYDROLIC ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2673.	70.
HT	14.	70.
MT	13.	70.

0 -----COORDINATES-----

	X	Y	Z	GRADE
N3	500884.	194426.	178.	1
N4	500886.	194634.	173.	1
N5	500877.	194754.	165.	1

ROADWAY 24 WOODBURN ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	58.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
P4	502068.	195284.	180.	0
P44	502191.	195407.	174.	0
P5	502300.	195476.	171.	0
P6	502717.	195738.	165.	0
P7	502763.	195796.	159.	0
P8	502802.	195873.	156.	0
P9	502837.	195987.	155.	0
P10	502842.	196087.	154.	0
P11	502834.	196156.	151.	0

ROADWAY 25 RAMP 3ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	564.	80.
HT	20.	80.
MT	16.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
G4	498546.	191113.	182.	1
G5	498579.	191209.	188.	1
G6	498581.	191270.	207.	1
G7	498521.	191418.	187.	1

ROADWAY 26 RAMP 4ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	558.	80.
HT	24.	80.
MT	18.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
F8	498606.	191117.	196.	1
F9	498630.	191196.	197.	1
F10	498632.	191265.	197.	1
F11	498590.	191374.	198.	1
F12	498443.	191535.	200.	1

ROADWAY 27 RAMP 6ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
--------------	---------------	-------

CARS	304.	80.
HT	3.	80.
MT	3.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K5	498605.	190922.	185.	1
K6	498536.	190904.	184.	1
K60	498412.	190872.	183.	1

OROADWAY 28 ROUTE 250 D111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	978.	90.
HT	35.	90.
MT	27.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
D7	498541.	191010.	179.	1
D8	498373.	190952.	180.	1
D9	498251.	190881.	179.	1
D10	498161.	190806.	177.	1
D11	498048.	190668.	171.	1

OROADWAY 29 ROUTE 250 E111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
E7	498538.	191021.	179.	1
E8	498368.	190963.	180.	1
E9	498243.	190892.	179.	1

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		

BB3 498551. 191287. 202. 100.
BB4 498546. 191355. 198. 100.

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192035.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		

GG3 498921. 193352. 162. 100.
1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16 -NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
PP1	498644.	191089.	190.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ0	498761.	191156.	177.	100.	0.	0
QQ2	498938.	191167.	171.	100.		
QQ3	499036.	191179.	166.	100.		
QQ4	499100.	191210.	166.	100.		
QQ5	499127.	191217.	170.	100.		
QQ6	499219.	191236.	168.	100.		
QQ7	499324.	191249.	162.	100.		
QQ8	499420.	191279.	170.	100.		
QQ9A	499557.	191305.	151.	151.		

1

BARRIER 18 TYPE(R) WALL 17 WOODBURN NAT WALL

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 (EXT OF WALL 17 OFF US 250)

	-----COORDINATES-----					
	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

	-----COORDINATES-----		
	X	Y	Z
R1	498986.	190403.	180.
R2	498973.	190433.	181.
R3	498809.	190542.	188.
R4	498774.	190542.	189.
R5	498856.	190479.	187.
R6	498884.	190603.	182.
R7	498904.	190441.	184.
R8	498704.	190763.	189.
R9	498636.	190672.	189.
R10	498506.	190696.	206.
R11	498446.	190743.	206.
R12	498717.	190539.	187.
R13	498446.	191131.	203.
R14	498459.	191216.	197.
R15	498396.	191268.	192.
R16	498749.	190860.	187.
R17	498208.	191096.	200.
R18	499621.	191354.	156.
R19	499534.	191350.	163.
R20	499514.	191350.	166.
R21	499455.	191317.	173.
R22	499471.	191350.	173.
R23	499436.	191309.	173.
R24	499408.	191335.	173.
R25	499350.	191291.	168.
R26	499325.	191286.	165.
R27	499226.	191272.	173.
R28	499208.	191257.	175.
R29	499181.	191264.	176.
R30	499136.	191241.	174.
R31	499109.	191232.	173.
R32	499081.	191242.	168.
R33	498887.	191200.	173.
R34	498852.	191189.	178.
R35	498821.	191187.	179.
R36	498795.	191179.	179.
R37	498913.	191215.	173.
R38	497959.	190614.	171.
R39	497950.	190587.	171.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

	.0	.0	.0	.0	.0	.0	.0	.0	.0
25 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
26 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
27 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
28 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
29 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0

1

RECEIVER	LEQ(H)	L10
R1	63.0	66.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

2	1	2	3	4
	57.6	51.9	47.1	41.4
3	1	2	3	4
	59.3	52.6	47.5	41.8

1

RECEIVER	LEQ(H)	L10
R2	61.1	64.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1			
	41.6			
2	1	2	3	4
	51.0	53.5	51.8	43.9
3	1	2	3	4
	52.0	54.7	52.6	44.5

1

RECEIVER	LEQ(H)	L10
R3	61.2	64.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1			
	41.5			
2	4	5	6	
	50.7	55.6	43.6	
3	4	5	6	
	52.5	56.6	43.4	
29	1			
	40.6			

1

RECEIVER	LEQ(H)	L10
R4	59.2	62.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

2	4	5	6	
	46.0	53.8	45.7	
3	4	5	6	
	46.9	54.3	45.9	
29	1			
	40.8			

1

RECEIVER	LEQ(H)	L10
R5	56.3	59.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1			
	42.4			
2	3	4	5	
	43.2	48.6	45.8	
3	3	4	5	
	43.7	50.0	44.7	

1

RECEIVER	LEQ(H)	L10
R6	58.9	62.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1			
	48.9			
2	3	4	5	6

	41.8	52.9	50.4	40.4
3	3	4	5	
	41.7	51.4	47.3	
5	3			
	40.1			
29	1			
	41.0			

1

RECEIVER	LEQ(H)	L10
R7	55.7	58.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	1				
	41.9				
2	1	2	3	4	5
	42.1	41.9	46.2	46.0	41.5
3	1	2	3	4	5
	42.7	42.3	46.9	47.0	40.1

1

RECEIVER	LEQ(H)	L10
R8	58.2	61.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

2	5	6	7	8
	41.0	44.1	48.8	49.2
3	6	7	8	
	43.0	47.5	48.1	
5	3			
	40.4			
12	3	4		
	40.5	42.3		
16	4			
	41.1			
28	1			
	44.6			
29	1			
	47.3			

1

RECEIVER	LEQ(H)	L10
R9	56.9	60.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

2	5	6	7
	42.4	49.6	43.5
3	5	6	7
	40.5	50.5	50.3
28	1		
	41.3		
29	1		
	44.0		

1

RECEIVER	LEQ(H)	L10
R10	56.9	59.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

2	8			
	41.4			
3	7	8		
	40.0	42.5		
14	1	2		
	40.6	40.7		
16	2	3	4	
	40.6	44.2	43.4	
28	1	2	3	4
	45.1	44.8	42.6	43.1
29	1	2		
	48.0	47.3		

1

RECEIVER	LEQ(H)	L10
R11	58.8	61.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	8			
	40.4			
14	1	2		
	43.6	42.9		
16	1	2	3	4
	41.2	43.3	47.7	46.1
28	1	2	3	4
	48.1	48.0	45.5	45.1
29	1	2		
	50.6	50.4		

1

RECEIVER	LEQ(H)	L10
R12	56.3	59.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

2	4	5	6	
	41.1	49.0	46.5	
3	4	5	6	7
	41.7	48.7	47.4	40.2

1

RECEIVER	LEQ(H)	L10
R13	61.9	64.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	2	3		
	45.1	43.3		
9	1	2	3	4
	41.5	46.2	44.8	40.2
12	4	5		
	43.9	44.7		
14	1	2		
	44.1	51.9		
16	3	4	5	
	44.2	47.7	42.6	
25	2	3		
	41.3	47.4		
26	1	4		
	42.5	42.5		
28	1	2	3	4
	52.9	47.0	41.6	40.3
29	1	2		
	56.6	50.3		

1

RECEIVER	LEQ(H)	L10
R14	60.1	63.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	1	2	3	4	
	41.1	48.8	46.2	41.4	
9	1	2	3	4	5
	42.7	49.8	47.7	42.2	40.7
14	1	2			
	40.7	46.0			
16	3	4			
	41.2	43.4			
25	2	3			
	43.7	51.7			
26	3	4			

	40.6	45.8
28	1	2
	48.3	43.7
29	1	2
	51.8	47.0

1

RECEIVER	LEQ(H)	L10
R15	59.0	62.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	2	3	4	5	
	49.7	48.1	43.2	41.1	
9	1	2	3	4	5
	40.9	50.6	49.4	43.9	42.1
14	2				
	40.2				
25	2	3			
	41.5	50.3			
26	3	4			
	40.0	46.6			
28	1				
	42.8				
29	1	2			
	46.2	43.0			

1

RECEIVER	LEQ(H)	L10
R16	57.5	60.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

2	8		
	44.0		
3	8		
	43.4		
5	3		
	42.4		
6	1		
	40.3		
9	1		
	41.7		
12	3	4	5
	43.8	45.9	41.1
13	2	3	
	43.1	44.9	
16	4		
	41.2		
28	1	2	

45.4 40.4
29 1 2
48.0 43.2

1

RECEIVER LEQ(H) L10
R17 58.8 61.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6 2 3
40.3 40.6
9 2 3
41.5 42.1
14 1 2
46.3 44.4
16 1 2 3 4
40.0 42.2 45.5 43.1
25 3
40.4
28 1 2 3 4
47.0 48.6 45.9 44.3
29 1 2
50.4 52.3

1

RECEIVER LEQ(H) L10
R18 68.3 71.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 1 2 3
61.9 43.7 40.2
5 1 2 3
67.1 46.6 42.1

1

RECEIVER LEQ(H) L10
R19 66.4 69.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 1 2 3
60.2 43.6 42.3
5 1 2 3
65.0 44.4 47.1

1

RECEIVER LEQ(H) L10
R20 65.9 69.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 1 2 3
59.7 43.9 44.0
5 1 2 3
64.4 45.8 48.0

1

RECEIVER LEQ(H) L10
R21 67.6 70.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 1 2 3
60.9 51.5 47.1
5 1 2 3
65.9 53.8 50.8

1

RECEIVER LEQ(H) L10
R22 64.8 68.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 1 2 3
58.4 47.4 45.8
5 1 2 3
63.0 50.4 49.5

1

RECEIVER LEQ(H) L10
R23 67.8 71.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 1 2 3
60.9 52.6 48.1
5 1 2 3
66.0 55.7 51.8

1

RECEIVER LEQ(H) L10
R24 63.8 67.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4	1	2	3
	56.5	51.3	48.5
5	1	2	3
	60.9	54.8	52.3

1

RECEIVER	LEQ(H)	L10
R25	65.4	68.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4	1	2	3
	52.4	57.7	53.0
5	1	2	3
	56.0	61.9	57.1
12	3		
	40.2		

1

RECEIVER	LEQ(H)	L10
R26	65.6	69.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4	1	2	3
	48.7	57.5	54.6
5	1	2	3
	53.6	62.3	58.3
12	3		
	40.7		

1

RECEIVER	LEQ(H)	L10
R27	65.6	68.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4	1	2	3
	48.8	53.1	58.2
5	1	2	3
	51.6	57.3	62.6
12	1	2	3
	45.5	45.4	44.1

1

RECEIVER LEQ(H) L10
R28 66.9 70.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4	1	2	3
	48.2	52.2	59.6
5	1	2	3
	51.7	56.2	64.8
12	1	2	3
	47.7	46.9	44.9

1

RECEIVER LEQ(H) L10
R29 65.3 68.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4	1	2	3	
	47.1	50.1	58.2	
5	1	2	3	
	50.2	54.0	62.9	
12	1	2	3	4
	48.7	48.0	45.8	40.3

1

RECEIVER LEQ(H) L10
R30 65.8 69.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4	1	2	3	
	45.4	47.7	59.0	
5	1	2	3	
	48.7	51.3	63.3	
12	1	2	3	4
	53.0	52.5	48.3	41.6
13	1			
	41.9			

1

RECEIVER LEQ(H) L10
R31 65.9 69.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4	1	2	3	
	44.6	46.4	58.3	
5	1	2	3	
	47.9	50.0	63.2	
9	1			
	40.3			
12	1	2	3	4
	55.0	55.6	50.0	42.5
13	1			
	43.6			

1

RECEIVER	LEQ(H)	L10
R32	61.8	65.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4	1	2	3	
	43.3	42.9	53.2	
5	1	2	3	
	46.4	46.9	56.9	
9	1			
	40.9			
12	1	2	3	4
	50.1	54.7	51.0	43.3
13	1			
	44.0			

1

RECEIVER	LEQ(H)	L10
R33	62.1	65.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4	3			
	45.9			
5	1	2	3	
	42.5	42.1	49.6	
6	1	2		
	44.6	41.4		
9	1	2	3	
	46.3	43.0	41.1	
12	2	3	4	5
	46.8	59.2	53.2	42.8
13	1	2		
	45.4	40.8		
25	1	2	3	
	40.7	40.3	42.7	

26 1 2 3
 40.3 40.1 40.9

1

RECEIVER LEQ(H) L10
 R34 63.9 67.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 3
 44.7
 5 1 2 3
 42.1 41.2 48.2
 6 1 2
 45.8 42.1
 9 1 2 3
 47.4 43.6 41.6
 12 2 3 4 5
 45.2 61.4 56.9 44.6
 13 1 2
 44.6 41.7
 25 1 2 3
 42.0 41.6 43.6
 26 1 2 3
 42.0 41.7 42.0
 29 1
 41.5

1

RECEIVER LEQ(H) L10
 R35 64.1 67.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 3
 43.6
 5 1 2 3
 41.5 40.5 47.2
 6 1 2 3
 46.9 42.9 40.3
 9 1 2 3
 48.6 44.4 42.1
 12 2 3 4 5
 43.6 59.9 59.7 46.3
 13 1 2
 43.2 41.7
 25 1 2 3
 43.3 42.9 44.6
 26 1 2 3 4
 43.5 43.3 43.2 40.7

29 1 2
 43.7 40.3
1

RECEIVER LEQ(H) L10
R36 64.7 68.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 3
 42.8
5 1 3
 41.1 46.3
6 1 2
 44.9 40.4
9 1 2
 46.5 41.9
12 2 3 4 5
 42.4 58.4 62.3 48.2
13 1 2
 42.2 41.8
25 1 2 3
 41.5 41.0 42.3
26 1 2 3
 42.1 41.7 41.0
28 1
 40.5
29 1 2
 45.4 40.9

1

RECEIVER LEQ(H) L10
R37 61.3 64.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 3
 46.9
5 1 2 3
 42.9 42.7 50.6
6 1 2
 43.9 41.0
9 1 2 3
 45.5 42.5 40.8
12 1 2 3 4 5
 40.5 48.3 58.0 51.0 41.5
13 1
 45.5
25 3
 42.0

26 3
 40.1

1

RECEIVER LEQ(H) L10
 R38 56.9 60.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

16 1 2
 51.7 43.4
28 3 4
 42.8 53.2
29 1 2
 40.4 42.8

1

RECEIVER LEQ(H) L10
 R39 55.5 59.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

16 1 2
 49.9 42.4
28 3 4
 42.0 51.5
29 2
 42.2

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/30/97 14:57:12
 INPUT FILE - 1-39PM_2.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN ** RECEIVERS R1-R39 ** ROAD SET #2 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 NORTH GROUNDS CONNECTOR A11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	627.	50.
HT	7.	50.
MT	6.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A9	498624.	190870.	186.	1
A10	498622.	190951.	185.	1
A11	498618.	191091.	187.	1

ROADWAY 2 NORTH GROUNDS CONNECTOR B11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	735.	50.
HT	8.	50.
MT	7.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
B9	498612.	190870.	186.	1
B10	498610.	190951.	185.	1
B11	498606.	191091.	187.	1

ROADWAY 3 ROUTE 250 D11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	978.	90.
HT	35.	90.

	MT	27.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D3	499109.	191156.	163.	1
D4	498918.	191108.	166.	1
D5	498752.	191065.	172.	1
D6	498701.	191051.	174.	1

OROADWAY 4 ROUTE 250 E11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

0	-----COORDINATES-----			
	X	Y	Z	GRADE
E3	499106.	191170.	163.	1
E4	498914.	191120.	166.	1
E5	498749.	191077.	172.	1
E6	498698.	191063.	174.	1

OROADWAY 5 RAMP 511

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	480.	80.
HT	17.	80.
MT	13.	80.

0	-----COORDINATES-----			
	X	Y	Z	GRADE
J6	498593.	191102.	187.	1
J7	498519.	191087.	190.	1
J8	498418.	191053.	192.	1
J9	498294.	190989.	190.	1
J10	498191.	190911.	185.	1
J11	498115.	190832.	180.	1

OROADWAY 6 RAMP 5111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	141.	80.
HT	5.	80.
MT	4.	80.

0	-----COORDINATES-----			
	X	Y	Z	GRADE
J11	498115.	190832.	180.	1
J12	498008.	190664.	170.	1
J13	497973.	190583.	166.	1

OROADWAY 7 RAMP 6iii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	265.	80.
HT	3.	80.
MT	3.	80.

0 -----COORDINATES-----

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K7	498270.	190824.	182.	1
K12	498156.	190747.	180.	1
K13	498075.	190654.	175.	1
K14	497998.	190478.	172.	1

OROADWAY 8 ROUTE 250 Div

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1579.	90.
HT	57.	90.
MT	44.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
D11	498048.	190668.	171.	1
D12	497980.	190541.	165.	1
D13	497941.	190433.	163.	1

OROADWAY 9 ROUTE 250 Eiv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2482.	90.
HT	90.	90.
MT	68.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E9	498243.	190892.	179.	1
E10	498151.	190816.	177.	1
E11	498034.	190676.	171.	1
E12	497965.	190547.	165.	1

OROADWAY 10 ROUTE 250 Ev

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2623.	90.
HT	95.	90.
MT	73.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E12	497965.	190547.	165.	1
E13	497925.	190438.	163.	1

OROADWAY 11 IVY ROAD V

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	995.	72.	
	HT	54.	72.	
	MT	21.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H1	497975.	190297.	170.	1
H3	497919.	190355.	170.	1

OROADWAY 12 IVY ROAD Vii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	995.	72.	
	HT	54.	72.	
	MT	21.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H33	497893.	190383.	170.	1
H5	497838.	190442.	170.	1

OROADWAY 13 IVY ROAD W

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	837.	72.	
	HT	45.	72.	
	MT	18.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H2	497969.	190288.	170.	1
H4	497915.	190345.	170.	1

OROADWAY 14 IVY ROAD Wii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	837.	72.	
	HT	35.	72.	
	MT	18.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H44	497879.	190383.	170.	1

H6 497832. 190432. 170. 1

OROADWAY 15 IVY ROAD Wiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1032.	72.
HT	56.	72.
MT	22.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H6	497832.	190432.	170.	1
H7	497793.	190456.	170.	1
H9	497703.	190532.	170.	1

OROADWAY 16 IVY ROAD Viii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1451.	72.
HT	78.	72.
MT	31.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H5	497838.	190442.	170.	1
H8	497803.	190463.	170.	1
H10	497771.	190540.	170.	1

OROADWAY 17 ROUTE 250 Evi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E13	497925.	190438.	163.	1
E14	497858.	190241.	162.	1

OROADWAY 18 ROUTE 250 Dv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	996.	90.
HT	36.	90.
MT	28.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
D13	497941.	190433.	163.	1

D14 497873. 190236. 162. 1

OROADWAY 19 OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	556.	60.
HT	8.	60.
MT	16.	60.

0

-----COORDINATES-----

	X	Y	Z	GRADE
OI1	498121.	190435.	179.	0
OI2	497955.	190488.	176.	0
OI3	497935.	190494.	166.	0
OI4	497876.	190513.	167.	0
OI5	497775.	190562.	165.	0

OROADWAY 20 RAMP TO OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	340.	60.
HT	7.	60.
MT	13.	60.

0

-----COORDINATES-----

	X	Y	Z	GRADE
OIR1	498074.	190788.	181.	0
OIR2	497906.	190644.	169.	0

OROADWAY 21 RIO ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1450.	70.
HT	20.	70.
MT	60.	70.

0

-----COORDINATES-----

	X	Y	Z	GRADE
RIO0	500455.	193741.	177.	0
RIO1	500712.	193980.	173.	0
RIO2	501033.	194280.	172.	0
RIO3	501629.	194648.	170.	0

OROADWAY 22 BARRACKS ROAD SOUTH

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	950.	80.
HT	20.	80.
MT	30.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
BARR1	498418.	192490.	170.	0
BARR2	498695.	192305.	183.	0

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		

EE4	498376.	191956.	232.	100.
EE5	498359.	192024.	226.	100.
EE6	498385.	192028.	229.	100.
EE7	498320.	192192.	193.	100.

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----
X Y Z Z0 DELZ P
LL1 500599. 194141. 177. 100. 0. 0
LL2 500659. 194168. 183. 100.
LL3 500747. 194228. 183. 100.
LL4 500861. 194339. 178. 100.

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----
X Y Z Z0 DELZ P
MM1 501415. 194702. 164. 100. 0. 0
MM2 501487. 194738. 167. 100.

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----
X Y Z Z0 DELZ P
NN1 501856. 195108. 173. 100. 0. 0
NN2 501937. 195157. 179. 100.
NN3 501966. 195181. 177. 100.

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----
X Y Z Z0 DELZ P
OO1 502037. 195215. 178. 100. 0. 0
OO2 502109. 195243. 179. 100.

1

BARRIER 16 TYPE(R) WALL 16- NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----
X Y Z Z0 DELZ P
PP1 498644. 191089. 189. 100. 0. 0
PP2 498711. 191108. 182. 100.
PP3 498745. 191110. 180. 100.
PP4 498810. 191123. 166. 100.
PP5 498843. 191126. 173. 100.
PP6 498909. 191136. 166. 100.

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----
X Y Z Z0 DELZ P
QQ0 498761. 191156. 177. 177. 0. 0
QQ2 498938. 191167. 171. 171.

QQ3	499036.	191179.	166.	166.
QQ4	499100.	191210.	166.	166.
QQ5	499127.	191217.	170.	170.
QQ6	499219.	191236.	168.	168.
QQ7	499324.	191249.	162.	162.
QQ8	499420.	191279.	170.	170.
QQ9A	499557.	191305.	151.	151.

1

BARRIER 18 TYPE(R) WALL 18 (NAT WALL AT WOODBURN)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 EXT OF NAT WALL 17 NEAR US 250

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
R1	498986.	190403.	180.
R2	498973.	190433.	181.
R3	498809.	190542.	188.
R4	498774.	190542.	189.
R5	498856.	190479.	187.
R6	498884.	190603.	182.
R7	498904.	190441.	184.
R8	498704.	190763.	189.
R9	498636.	190672.	189.
R10	498506.	190696.	206.
R11	498446.	190743.	206.
R12	498717.	190539.	187.
R13	498446.	191131.	203.
R14	498459.	191216.	197.
R15	498396.	191268.	192.
R16	498749.	190860.	187.
R17	498208.	191096.	200.
R18	499621.	191354.	156.
R19	499534.	191350.	163.
R20	499514.	191350.	166.
R21	499455.	191317.	173.
R22	499471.	191350.	173.

	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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15 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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16 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	3.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

1

RECEIVER	LEQ(H)	L10
R1	47.5	49.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R2	47.9	50.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
----------	--------	-----

R3 50.3 52.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 1 2
40.4 42.0

1

RECEIVER LEQ(H) L10
R4 50.5 52.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 1 2
40.2 42.0
9 2
40.5

1

RECEIVER LEQ(H) L10
R5 49.2 51.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 2
40.7

1

RECEIVER LEQ(H) L10
R6 50.5 53.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3 2
40.7
4 1 2
42.0 43.3

1

RECEIVER LEQ(H) L10
R7 48.5 50.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10

R8 54.3 57.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	2	3
	40.9	44.7	41.5
4	1	2	3
	43.7	47.3	44.0
9	1	2	
	40.5	42.4	

1

RECEIVER	LEQ(H)	L10
R9	50.6	53.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

9	1	2	3
	42.7	43.6	41.1

1

RECEIVER	LEQ(H)	L10
R10	54.6	56.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	2		
	40.3		
4	2	3	
	43.1	40.1	
8	1		
	42.0		
9	1	2	3
	46.3	46.8	43.7
10	1		
	40.2		

1

RECEIVER	LEQ(H)	L10
R11	56.1	58.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	2		
	40.2		
4	2	3	

	43.0	40.2		
5	3	4	5	
	40.6	41.4	40.1	
7	1			
	41.2			
8	1			
	43.2			
9	1	2	3	
	49.1	48.8	44.9	
10	1			
	40.9			

1

RECEIVER	LEQ(H)	L10
R12	50.9	53.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4	2		
	41.8		
9	2		
	41.4		

1

RECEIVER	LEQ(H)	L10
R13	59.0	62.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

2	2			
	40.0			
3	2	3		
	42.6	41.8		
4	1	2	3	
	41.9	45.4	43.6	
5	1	2	3	4
	49.7	55.1	50.1	42.7
9	1	2	3	
	45.8	44.4	40.4	

1

RECEIVER	LEQ(H)	L10
R14	52.5	56.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	2	3
	47.0	44.3

9 1 2
 43.6 42.8

1

RECEIVER LEQ(H) L10
R15 48.5 52.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 2
 40.1
9 1
 40.3

1

RECEIVER LEQ(H) L10
R16 57.0 60.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1 1
 41.0
2 1
 40.8
3 1 2 3
 43.8 48.8 45.9
4 1 2 3
 46.5 51.3 48.2
9 2
 41.4

1

RECEIVER LEQ(H) L10
R17 56.8 60.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5 2 3 4 5
 41.0 47.2 48.8 44.1
8 1
 41.6
9 1 2 3
 50.5 48.6 43.6

1

RECEIVER LEQ(H) L10
R18 45.0 47.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 1
40.4

1

RECEIVER LEQ(H) L10
R19 46.6 49.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 1
42.1

1

RECEIVER LEQ(H) L10
R20 46.9 49.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

4 1
42.5

1

RECEIVER LEQ(H) L10
R21 48.2 51.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3 1
41.1
4 1 2
44.2 40.2

1

RECEIVER LEQ(H) L10
R22 47.6 50.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3 1
40.4
4 1
43.4

1

RECEIVER	LEQ(H)	L10
R23	48.7	51.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	
	41.7	
4	1	2
	44.7	40.6

1

RECEIVER	LEQ(H)	L10
R24	49.0	51.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	
	42.0	
4	1	2
	45.1	40.8

1

RECEIVER	LEQ(H)	L10
R25	50.8	53.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	
	44.2	
4	1	2
	47.2	42.4

1

RECEIVER	LEQ(H)	L10
R26	51.2	54.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	
	45.0	
4	1	2
	47.4	42.9

1

RECEIVER LEQ(H) L10
R27 55.0 58.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	2
	49.0	42.3
4	1	2
	52.2	45.4

1

RECEIVER LEQ(H) L10
R28 56.2 59.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	2
	50.2	43.0
4	1	2
	53.5	46.0

1

RECEIVER LEQ(H) L10
R29 57.0 60.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	2
	51.1	43.7
4	1	2
	54.5	46.7

1

RECEIVER LEQ(H) L10
R30 60.4 63.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	2
	54.5	45.4
4	1	2
	58.3	48.4

1

RECEIVER LEQ(H) L10
R31 62.6 66.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	2	
	56.6	46.5	
4	1	2	3
	60.8	49.5	40.6

1

RECEIVER	LEQ(H)	L10
R32	62.1	65.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	2	
	56.0	47.2	
4	1	2	3
	60.1	50.1	41.1

1

RECEIVER	LEQ(H)	L10
R33	62.0	65.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	2	3
	53.2	54.1	45.1
4	1	2	3
	56.4	57.3	48.2

1

RECEIVER	LEQ(H)	L10
R34	64.7	68.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	2	3
	53.6	57.5	47.2
4	1	2	3
	57.2	61.5	50.5

1

RECEIVER	LEQ(H)	L10
R35	64.1	67.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	2	3
	51.7	57.2	48.5
4	1	2	3
	55.2	61.1	51.3

1

RECEIVER	LEQ(H)	L10
R36	64.1	67.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	2	3
	50.4	57.4	49.3
4	1	2	3
	53.8	61.4	50.8
5	1		
	40.9		

1

RECEIVER	LEQ(H)	L10
R37	61.9	65.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	2	3
	54.2	53.1	43.8
4	1	2	3
	57.4	56.1	47.0

1

RECEIVER	LEQ(H)	L10
R38	72.2	75.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	5		
	40.3		
6	1	2	
	47.6	58.5	
7	3	4	
	42.2	49.0	
8	1	2	
	65.1	56.7	
9	1	2	3
	46.9	57.6	70.0

10	1		
	59.7		
11	1		
	41.7		
12	1		
	44.5		
13	1		
	40.4		
14	1		
	41.9		
15	1	2	
	42.1	45.3	
16	1	2	
	43.7	47.1	
17	1		
	51.0		
18	1		
	48.1		
19	1	3	4
	44.6	43.1	43.4
20	1		
	51.6		

1

RECEIVER	LEQ(H)	L10
R39	72.9	76.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	1	2	
	45.1	56.2	
7	3	4	
	40.8	49.2	
8	1	2	
	65.2	59.7	
9	1	2	3
	46.1	55.8	70.5
10	1		
	63.4		
11	1		
	42.8		
12	1		
	46.0		
13	1		
	41.5		
14	1		
	43.4		
15	1	2	
	43.5	46.3	
16	1	2	
	45.1	48.3	
17	1		

	52.5			
18	1			
	49.5			
19	1	2	3	4
	46.3	41.6	46.0	45.2
20	1			
	48.6			

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/25/97 22:58:20
 INPUT FILE - 40-78P_1.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN ** [REDACTED] ** ROAD SET #1 CENTRAL
 PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 MASSIE ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	588.	56.
HT	6.	56.
MT	6.	56.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
I1	498983.	190641.	178.	1
I2	498935.	190545.	177.	1

ROADWAY 2 North Grounds Connector A

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	755.	50.
HT	8.	50.
MT	7.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A1	499008.	190362.	175.	1
A2	499010.	190422.	176.	1
A3	499000.	190461.	177.	1
A4	498949.	190524.	178.	1
A5	498839.	190572.	179.	1
A6	498748.	190611.	186.	1
A7	498681.	190667.	189.	1
A8	498639.	190744.	188.	1
A9	498624.	190870.	186.	1

ROADWAY 3 North Grounds Connector B

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	804.	50.
HT	8.	50.
MT	8.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
B1	499004.	190362.	175.	0
B2	499006.	190422.	176.	0
B3	498997.	190460.	177.	0
B4	498945.	190518.	178.	0
B5	498834.	190561.	179.	0
B6	498741.	190600.	186.	0
B7	498671.	190660.	189.	0
B8	498627.	190740.	188.	0
B9	498612.	190870.	186.	0

ROADWAY 4 ROUTE 250 D

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1181.	90.
HT	28.	90.
MT	21.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
D0	499702.	191313.	151.	1
D1	499405.	191234.	161.	1
D2	499296.	191205.	162.	1
D3	499109.	191156.	163.	1

ROADWAY 5 ROUTE 250 E

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2582.	90.
HT	62.	90.
MT	46.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
E0	499699.	191325.	151.	1
E1	499402.	191247.	161.	1
E2	499293.	191219.	162.	1
E3	499106.	191170.	163.	1

ROADWAY 6 US 29 Ai

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.

HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498384.	191582.	204.	0
A16	498327.	191713.	203.	1
A17	498302.	191973.	201.	1
A18	498293.	192173.	194.	1
A19	498328.	192371.	186.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

OROADWAY 7 US 29 Aii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.
HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
A25	498959.	193591.	144.	0
A26	499050.	193746.	143.	0
A27	499248.	193915.	150.	0
A28	499391.	193973.	159.	0
A29	499647.	193996.	161.	0
A30	500026.	194064.	161.	0
A31	500144.	194098.	162.	0
A32	500318.	194124.	166.	0
A33	500630.	194201.	172.	0
A34	500770.	194309.	172.	1
A35	500919.	194448.	168.	1
A36	501055.	194544.	161.	1
A37	501271.	194666.	155.	1
A38	501441.	194770.	158.	1

OROADWAY 8 US 29 Aiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.
HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----

X	Y	Z	GRADE
---	---	---	-------

A38	501441.	194770.	158.	0
A39	501584.	194914.	162.	0
A40	501749.	195110.	168.	0
A41	501873.	195195.	170.	0
A42	502086.	195281.	173.	0
A43	502262.	195347.	173.	0
A44	502438.	195437.	171.	1
A45	502645.	195605.	164.	1
A46	502758.	195744.	161.	1
A47	502866.	195961.	151.	1
A48	502976.	196182.	143.	1
A49	503099.	196365.	137.	1
A50	503297.	196697.	135.	1

OROADWAY 9 US 29 Bi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498395.	191589.	204.	1
B16	498339.	191716.	203.	0
B17	498314.	191973.	201.	0
B18	498306.	192173.	194.	0
B19	498340.	192368.	186.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

OROADWAY 10 US 29 Bi i

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
B25	498982.	193577.	147.	1
B26	499053.	193696.	148.	1
B27	499148.	193798.	153.	1
B28	499311.	193905.	157.	1
B29	499644.	193960.	161.	1

B30	499996.	194035.	162.	1
B31	500129.	194079.	162.	1
B32	500319.	194110.	166.	1
B33	500636.	194189.	172.	1
B34	500780.	194299.	172.	0
B35	500929.	194437.	168.	0
B36	501065.	194527.	162.	0
B37	501266.	194641.	157.	0
B38	501455.	194749.	160.	0

OROADWAY 11 US 29 Biii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
B38	501455.	194749.	160.	1
B39	501617.	194867.	165.	1
B40	501794.	195075.	169.	1
B41	501890.	195166.	171.	1
B42	502092.	195262.	173.	1
B43	502269.	195328.	173.	0
B44	502449.	195421.	171.	0
B45	502660.	195593.	164.	0
B46	502773.	195731.	161.	0
B47	502885.	195955.	151.	0
B48	502993.	196171.	143.	0
B49	503115.	196354.	137.	0
B50	503297.	196625.	135.	0
B51	503379.	196720.	135.	0

OROADWAY 12 RAMP 5

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	605.	80.
HT	26.	80.
MT	20.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
J0	499147.	191181.	163.	1
J1	499105.	191176.	164.	1
J2	499006.	191162.	166.	1
J3	498817.	191135.	175.	1
J4	498692.	191117.	183.	1
J5	498613.	191105.	187.	1

OROADWAY 13 RAMP 6

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	183.	80.
HT	4.	80.
MT	3.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K1	499051.	191136.	165.	1
K2	498895.	191052.	173.	1
K3	498756.	190969.	173.	1
K4	498713.	190950.	167.	1

ROADWAY 14 RAMP 3

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	564.	80.
HT	20.	80.
MT	16.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
G1	498238.	190898.	179.	1
G2	498363.	190970.	180.	1
G3	498497.	191051.	180.	1

ROADWAY 15 RAMP 41

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	39.	80.
HT	1.	80.
MT	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K8	498265.	190835.	182.	1
K10	498202.	190808.	181.	1
K11	498115.	190746.	178.	1

ROADWAY 16 RAMP 4

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	558.	80.
HT	24.	80.
MT	18.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
F2	498048.	190668.	171.	1
F3	498115.	190746.	178.	1

F4	498239.	190845.	181.	1
F5	498385.	190922.	187.	1
F6	498489.	190977.	191.	1
F7	498502.	190986.	195.	1

OROADWAY 17 LAMBS ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	178.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
L1	500009.	193771.	172.	0
L2	500030.	193946.	168.	0
L3	500033.	193990.	168.	0
L4	500038.	194045.	169.	0

OROADWAY 18 ROSLYN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	59.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
M1	500708.	193948.	173.	1
M2	500638.	194048.	175.	1
M3	500586.	194157.	180.	1

OROADWAY 19 HYDRAULIC ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2673.	70.
HT	14.	70.
MT	13.	70.

0

-----COORDINATES-----

	X	Y	Z	GRADE
N0	500882.	194280.	175.	1
N1	500878.	194289.	176.	1
N2	500882.	194387.	178.	1

OROADWAY 20 WOODBURN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	58.	50.

	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
P1	501962.	195048.	183.	0
P2	501999.	195162.	182.	0
P3	502036.	195234.	181.	0

ROADWAY 21 LAMBS ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	178.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
L44	500040.	194074.	169.	0
L5	500043.	194110.	168.	0
L6	500059.	194248.	164.	0

ROADWAY 22 ROSLYN RD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	59.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
M33	500582.	194192.	178.	0
M4	500587.	194234.	177.	0
M5	500601.	194304.	172.	0
M6	500604.	194392.	169.	0
M7	500545.	194537.	159.	0

ROADWAY 23 HYDRAULIC ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	2673.	70.	
	HT	14.	70.	
	MT	13.	70.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
N3	500884.	194426.	178.	1
N4	500886.	194634.	173.	1
N5	500877.	194754.	165.	1

ROADWAY 24 WOODBURN ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	58.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
P4	502068.	195284.	180.	0
P44	502191.	195407.	174.	0
P5	502300.	195476.	171.	0
P6	502717.	195738.	165.	0
P7	502763.	195796.	159.	0
P8	502802.	195873.	156.	0
P9	502837.	195987.	155.	0
P10	502842.	196087.	154.	0
P11	502834.	196156.	151.	0

OROADWAY 25 RAMP 3ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	564.	80.
HT	20.	80.
MT	16.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
G4	498546.	191113.	182.	1
G5	498579.	191209.	188.	1
G6	498581.	191270.	207.	1
G7	498521.	191418.	187.	1

OROADWAY 26 RAMP 4ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	558.	80.
HT	24.	80.
MT	18.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
F8	498606.	191117.	196.	1
F9	498630.	191196.	197.	1
F10	498632.	191265.	197.	1
F11	498590.	191374.	198.	1
F12	498443.	191535.	200.	1

OROADWAY 27 RAMP 6ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
--------------	---------------	-------

CARS	304.	80.
HT	3.	80.
MT	3.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K5	498605.	190922.	185.	1
K6	498536.	190904.	184.	1
K60	498412.	190872.	183.	1

OROADWAY 28 ROUTE 250 D111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	978.	90.
HT	35.	90.
MT	27.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
D7	498541.	191010.	179.	1
D8	498373.	190952.	180.	1
D9	498251.	190881.	179.	1
D10	498161.	190806.	177.	1
D11	498048.	190668.	171.	1

OROADWAY 29 ROUTE 250 E111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
E7	498538.	191021.	179.	1
E8	498368.	190963.	180.	1
E9	498243.	190892.	179.	1

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		

BB3 498551. 191287. 202. 100.
BB4 498546. 191355. 198. 100.

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	191036.	214.	100.		
DD8	498250.	192132.	200.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		

GG3 498921. 193352. 162. 100.

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16-NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
PP1	498644.	191089.	189.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
QQ0	498761.	191156.	181.	181.	0.	0
QQ2	498938.	191167.	171.	171.		
QQ3	499036.	191179.	166.	166.		
QQ4	499100.	191210.	166.	166.		
QQ5	499127.	191217.	170.	170.		
QQ6	499219.	191236.	168.	168.		
QQ7	499324.	191249.	162.	162.		
QQ8	499420.	191279.	170.	170.		
QQ9A	499557.	191305.	151.	151.		

1

BARRIER 18 TYPE(R) WALL 18 (NAT WALL AT WOODBURN)

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 - EXTENSION OF NAT WALL 17 AT US 250

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVER

-----COORDINATES-----

	X	Y	Z
R40	497926.	190528.	171.
R41	497985.	190438.	173.
R42	498775.	191232.	183.
R43	498771.	191257.	183.
R44	498760.	191320.	183.
R45	498742.	191352.	182.
R46	498160.	191923.	202.
R47	498447.	191978.	245.
R48	498089.	192007.	198.
R49	498092.	192047.	194.
R50	498319.	192107.	211.
R51	498224.	192243.	178.
R52	498187.	192162.	185.
R53	498168.	192117.	190.
R54	498535.	192249.	190.
R55	498598.	192516.	187.
R56	498671.	192575.	178.
R57	498585.	192726.	171.
R58	498615.	192779.	170.
R59	498668.	192757.	176.
R60	498708.	192885.	166.
R61	498753.	192958.	170.
R62	498728.	192929.	169.
R63	498790.	193033.	168.
R64	498911.	193315.	167.
R65	499446.	193904.	167.
R66	500003.	194010.	169.
R67	500016.	194127.	167.
R68	499997.	193909.	174.
R69	500020.	194158.	169.
R70	500547.	194112.	178.
R71	500803.	194225.	180.
R72	500566.	194367.	181.
R73	500922.	194507.	180.
R74	501004.	194447.	168.
R75	501031.	194491.	163.
R76	500972.	194556.	175.
R77	500855.	194177.	179.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

25 *	.0	.0	4.0	4.0	4.0	4.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26 *	.0	.0	2.0	2.0	2.0	2.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
27 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
28 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

1

RECEIVER	LEQ(H)	L10
R40	52.8	56.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

16	1	2
	46.5	40.2
28	3	4
	40.2	48.3
29	2	
	40.8	

1

RECEIVER	LEQ(H)	L10
R41	51.4	54.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

16	1	
	44.2	
28	4	
	46.2	
29	2	
	40.1	

1

RECEIVER	LEQ(H)	L10
R42	58.6	62.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	3			
	41.6			
6	1	2		
	45.8	41.1		
9	1	2		
	47.6	42.7		
12	3	4	5	
	48.8	52.1	44.0	
25	1	2	3	
	41.1	41.5	43.1	
26	1	2	3	4
	43.5	44.6	44.5	40.9
28	1			
	42.6			
29	1	2		
	45.7	40.7		

1

RECEIVER	LEQ(H)	L10
R43	58.2	61.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	3			
	41.4			
6	1	2		
	46.4	41.8		
9	1	2	3	
	48.2	43.4	40.3	
12	3	4	5	
	47.4	50.1	43.0	
25	1	2	3	
	40.8	41.7	43.7	
26	1	2	3	4
	43.0	44.7	45.3	41.6
28	1			
	42.2			
29	1	2		
	45.3	40.4		

1

RECEIVER	LEQ(H)	L10
R44	57.7	61.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

5	3			
	40.4			
6	1	2		
	47.0	43.4		
9	1	2	3	
	48.9	45.1	41.7	
12	3	4	5	
	44.1	46.1	40.4	
25	2	3		
	41.5	44.8		
26	1	2	3	4
	41.2	43.8	46.5	43.4
28	1			
	41.2			
29	1			
	44.3			

1

RECEIVER	LEQ(H)	L10
R45	57.8	61.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	1	2	3	
	47.7	44.7	40.8	
9	1	2	3	
	49.6	46.4	42.7	
12	3	4		
	42.4	44.4		
25	2	3		
	41.5	45.6		
26	1	2	3	4
	40.4	43.4	47.4	44.8
28	1			
	40.8			
29	1			
	44.0			

1

RECEIVER	LEQ(H)	L10
R46	55.4	58.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	5	6	7	
	42.6	50.4	43.5	
9	5	6	7	
	42.3	50.3	43.1	

1

RECEIVER LEQ(H) L10
R47 56.2 59.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	3	4	5	6	7	8
	40.4	43.2	44.2	46.4	46.5	42.3
9	3	4	5	6	7	8
	42.4	44.3	44.4	45.7	46.6	41.9

1

RECEIVER LEQ(H) L10
R48 53.3 56.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	5	6	7
	40.3	47.1	44.1
9	5	6	7
	41.2	46.8	43.6

1

RECEIVER LEQ(H) L10
R49 53.3 56.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	6	7	8
	46.6	45.2	40.2
9	5	6	7
	40.7	46.0	44.7

1

RECEIVER LEQ(H) L10
R50 74.2 77.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	4	5	6	7	8	9
	40.9	51.7	69.0	57.4	47.3	42.2
9	4	5	6	7	8	9
	41.7	52.7	72.2	57.6	46.8	41.6

1*** NO SOLUTION FOR RECEIVER 12 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 12, BARRIER 20 AND ROADWAY 27

1

RECEIVER LEQ(H) L10
R51 .0 3.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	5	6	7	8	9
	41.5	52.9	58.7	49.3	42.2
9	5	6	7	8	9
	43.9	52.7	57.3	48.5	41.5

1

RECEIVER LEQ(H) L10
R52 59.4 63.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	6	7	8	9
	52.2	53.9	45.5	40.1
9	6	7	8	
	51.6	53.0	44.9	

1

RECEIVER LEQ(H) L10
R53 57.1 60.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	6	7	8	
	49.6	51.2	43.9	
9	5	6	7	8
	40.9	48.6	50.5	43.3

1

RECEIVER LEQ(H) L10
R54 55.4 58.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	7	8	9
	48.0	47.2	43.2
9	7	8	9
	48.5	47.0	42.7

1

RECEIVER LEQ(H) L10
R55 58.1 61.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	7	8	9	10	11
	42.9	49.1	51.8	44.8	40.3
9	7	8	9	10	
	43.0	49.3	52.0	45.4	

1

RECEIVER LEQ(H) L10
R56 56.8 60.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	7	8	9	10	11
	40.2	45.3	50.1	46.4	42.1
9	7	8	9	10	11
	40.3	45.5	50.5	47.4	41.4

1

RECEIVER LEQ(H) L10
R57 71.4 75.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	7	8	9	10	11	12
	41.9	47.8	63.1	63.3	50.3	42.6
9	7	8	9	10	11	12
	41.9	47.9	66.3	67.1	49.1	43.7

1

RECEIVER LEQ(H) L10
R58 72.3 75.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	7	8	9	10	11	12
	40.6	45.7	57.3	65.9	53.8	44.1
9	7	8	9	10	11	12
	40.6	45.8	57.8	70.6	52.2	45.2

1

RECEIVER LEQ(H) L10
R59 63.9 67.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	8	9	10	11	12	
	44.2	53.2	57.7	51.5	43.0	
9	8	9	10	11	12	
	44.3	53.8	60.0	50.8	44.1	

1

RECEIVER	LEQ(H)	L10
R60	67.4	71.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	8	9	10	11	12	
	41.1	48.0	56.9	60.0	47.3	
9	8	9	10	11	12	13
	41.0	47.9	62.3	63.0	47.9	40.7

1

RECEIVER	LEQ(H)	L10
R61	66.9	70.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	8	9	10	11	12	13
	40.3	46.0	52.2	60.9	52.0	42.4
9	8	9	10	11	12	13
	40.2	45.9	54.8	64.2	54.0	43.5

1

RECEIVER	LEQ(H)	L10
R62	68.8	72.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	8	9	10	11	12	13
	41.1	47.3	54.7	61.9	50.4	41.6
9	8	9	10	11	12	13
	41.0	47.2	58.4	66.6	52.0	42.7

1

RECEIVER	LEQ(H)	L10
R63	66.9	70.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	9	10	11	12	13
	42.8	47.3	58.7	55.7	43.6
9	9	10	11	12	13
	42.6	49.0	63.8	60.2	44.7

1

RECEIVER	LEQ(H)	L10
R64	68.1	71.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	11	12	13	
	45.7	58.9	58.8	
7	1	2		
	44.8	41.3		
9	10	11	12	13
	40.8	45.7	63.5	63.8
10	1	2		
	45.5	42.0		

1

RECEIVER	LEQ(H)	L10
		67.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	2	3	4	5
	47.0	53.9	58.5	46.2
9	13			
	40.1			
10	2	3	4	5
	42.6	50.5	61.0	47.6

1

RECEIVER	LEQ(H)	L10
R66	70.9	74.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	4	5	6	7	8
	43.3	63.4	58.0	49.5	44.4
10	4	5	6	7	8
	44.7	66.6	66.4	52.0	45.5
17	2	3			
	43.3	47.5			

1

RECEIVER LEQ(H) L10
R67 62.5 66.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	4	5	6	7	8
	40.5	54.8	55.9	49.5	43.3
10	4	5	6	7	8
	41.7	53.8	56.0	51.5	44.3
21	1	2			
	44.0	49.0			

1

RECEIVER LEQ(H) L10
R68 58.3 61.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	5	6	7		
	51.1	45.4	42.6		
10	4	5	6	7	8
	40.3	52.9	48.9	45.0	40.3
17	1				
	50.1				

1

RECEIVER LEQ(H) L10
R69 60.3 63.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	5	6	7	8	
	51.8	52.8	48.3	42.4	
10	4	5	6	7	8
	40.3	51.3	53.1	50.1	43.4
21	2				
	50.1				

1

RECEIVER LEQ(H) L10
R70 67.2 70.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	5	6	7	8	9	10
	40.6	40.2	46.6	62.0	52.0	44.5
10	5	6	7	8	9	10
	40.8	41.1	48.0	64.7	53.3	45.4
18	2					
	42.7					

1

RECEIVER	LEQ(H)	L10
R71	58.6	61.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	8	9	10	11	12
	43.7	47.4	48.2	46.7	42.4
10	8	9	10	11	12
	44.5	48.1	49.6	46.9	43.1
19	1	2			
	45.7	51.2			
23	1				
	45.3				

1

RECEIVER	LEQ(H)	L10
R72	57.1	60.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	8	9	10	
	48.8	48.3	44.5	
10	7	8	9	10
	40.2	49.2	48.6	45.0
19	2			
	40.8			
22	3	4		
	44.1	40.7		
23	1			
	43.1			

1

RECEIVER	LEQ(H)	L10
R73	69.4	72.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	8	9	10	11	12	13
	42.5	45.8	58.1	64.4	51.7	42.0
10	8	9	10	11	12	13

43.4 46.8 58.1 62.0 52.0 43.6
 19 2
 48.5
 23 1 2
 63.9 49.6

1

RECEIVER LEQ(H) L10
 R74 70.4 73.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 8 9 10 11 12 13
 41.8 45.0 55.5 64.6 53.8 43.1
 10 8 9 10 11 12 13
 42.8 46.2 57.2 67.8 54.9 44.8
 19 2
 48.7
 23 1 2
 53.3 45.1

1

RECEIVER LEQ(H) L10
 R75 76.4 79.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 8 9 10 11 12 13
 40.8 43.5 52.4 68.5 58.5 44.5
 10 8 9 10 11 12 13
 41.8 44.6 53.6 75.3 60.0 46.2
 11 1
 40.5
 19 2
 45.7
 23 1 2
 52.2 46.1

1

RECEIVER LEQ(H) L10
 R76 65.3 68.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 9 10 11 12 13
 41.5 50.4 61.2 53.8 41.8
 10 9 10 11 12 13
 42.6 51.0 59.0 53.6 43.4

11	1	
	40.1	
19	2	
	44.8	
23	1	2
	55.1	49.2

1

RECEIVER	LEQ(H)	L10
R77	57.0	59.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	8	9	10	11	12
	40.9	41.8	46.8	46.0	42.2
10	8	9	10	11	12
	42.5	42.2	48.6	46.2	43.0
19	1	2			
	44.3	49.3			
23	1				
	43.9				

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/25/97 23:02:20
 INPUT FILE - 40-78P_2.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN ** RECEIVERS R40-R78 ** ROAD SET #2 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 NORTH GROUNDS CONNECTOR Aii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	627.	50.
HT	7.	50.
MT	6.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
A9	498624.	190870.	186.	1
A10	498622.	190951.	185.	1
A11	498618.	191091.	187.	1

OROADWAY 2 NORTH GROUNDS CONNECTOR Bii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	735.	50.
HT	8.	50.
MT	7.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
B9	498612.	190870.	186.	1
B10	498610.	190951.	185.	1
B11	498606.	191091.	187.	1

OROADWAY 3 ROUTE 250 Dii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	978.	90.
HT	35.	90.

	MT	27.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D3	499109.	191156.	163.	1
D4	498918.	191108.	166.	1
D5	498752.	191065.	172.	1
D6	498701.	191051.	174.	1

OROADWAY 4 ROUTE 250 Eii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

0	-----COORDINATES-----			
	X	Y	Z	GRADE
E3	499106.	191170.	163.	1
E4	498914.	191120.	166.	1
E5	498749.	191077.	172.	1
E6	498698.	191063.	174.	1

OROADWAY 5 RAMP 5ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	480.	80.
HT	17.	80.
MT	13.	80.

0	-----COORDINATES-----			
	X	Y	Z	GRADE
J6	498593.	191102.	187.	1
J7	498519.	191087.	190.	1
J8	498418.	191053.	192.	1
J9	498294.	190989.	190.	1
J10	498191.	190911.	185.	1
J11	498115.	190832.	180.	1

OROADWAY 6 RAMP 5iii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	141.	80.
HT	5.	80.
MT	4.	80.

0	-----COORDINATES-----			
	X	Y	Z	GRADE
J11	498115.	190832.	180.	1
J12	498008.	190664.	170.	1
J13	497973.	190583.	166.	1

OROADWAY 7 RAMP 6iii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	265.	80.
HT	3.	80.
MT	3.	80.

0 -----COORDINATES-----

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K7	498270.	190824.	182.	1
K12	498156.	190747.	180.	1
K13	498075.	190654.	175.	1
K14	497998.	190478.	172.	1

OROADWAY 8 ROUTE 250 Div

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1579.	90.
HT	57.	90.
MT	44.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
D11	498048.	190668.	171.	1
D12	497980.	190541.	165.	1
D13	497941.	190433.	163.	1

OROADWAY 9 ROUTE 250 Eiv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2482.	90.
HT	90.	90.
MT	68.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E9	498243.	190892.	179.	1
E10	498151.	190816.	177.	1
E11	498034.	190676.	171.	1
E12	497965.	190547.	165.	1

OROADWAY 10 ROUTE 250 Ev

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2623.	90.
HT	95.	90.
MT	73.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E12	497965.	190547.	165.	1
E13	497925.	190438.	163.	1

OROADWAY 11 IVY ROAD V

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	995.	72.
HT	54.	72.
MT	21.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H1	497975.	190297.	170.	1
H3	497919.	190355.	170.	1

OROADWAY 12 IVY ROAD Vi1

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	995.	72.
HT	54.	72.
MT	21.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H33	497893.	190383.	170.	1
H5	497838.	190442.	170.	1

OROADWAY 13 IVY ROAD W

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	837.	72.
HT	45.	72.
MT	18.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H2	497969.	190288.	170.	1
H4	497915.	190345.	170.	1

OROADWAY 14 IVY ROAD W11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	837.	72.
HT	35.	72.
MT	18.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H44	497879.	190383.	170.	1

H6 497832. 190432. 170. 1

ROADWAY 15 IVY ROAD W111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1032.	72.
HT	56.	72.
MT	22.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H6	497832.	190432.	170.	1
H7	497793.	190456.	170.	1
H9	497703.	190532.	170.	1

ROADWAY 16 IVY ROAD V111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1451.	72.
HT	78.	72.
MT	31.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H5	497838.	190442.	170.	1
H8	497803.	190463.	170.	1
H10	497711.	190540.	170.	1

ROADWAY 17 ROUTE 250 Evi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E13	497925.	190438.	163.	1
E14	497858.	190241.	162.	1

ROADWAY 18 ROUTE 250 Dv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	996.	90.
HT	36.	90.
MT	28.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
D13	497941.	190433.	163.	1

D14 497873. 190236. 162. 1

ROADWAY 19 OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	556.	60.
HT	8.	60.
MT	16.	60.

0 -----COORDINATES-----

	X	Y	Z	GRADE
OI1	498121.	190435.	179.	0
OI2	497955.	190488.	176.	0
OI3	497935.	190494.	166.	0
OI4	497876.	190513.	167.	0
OI5	497775.	190562.	165.	0

ROADWAY 20 RAMP TO OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	340.	60.
HT	7.	60.
MT	13.	60.

0 -----COORDINATES-----

	X	Y	Z	GRADE
OIR1	498074.	190788.	181.	0
OIR2	497906.	190644.	169.	0

ROADWAY 21 RIO ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1450.	70.
HT	20.	70.
MT	60.	70.

0 -----COORDINATES-----

	X	Y	Z	GRADE
RIO0	500455.	193741.	177.	0
RIO1	500712.	193980.	173.	0
RIO2	501033.	194280.	172.	0
RIO3	501629.	194648.	170.	0

ROADWAY 22 BARRACKS ROAD SOUTH

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	950.	80.
HT	20.	80.
MT	30.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
BARR1	498418.	192490.	170.	0
BARR2	498695.	192305.	183.	0

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		

EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----						
	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----						
	X	Y	Z	Z0	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----						
	X	Y	Z	Z0	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----						
	X	Y	Z	Z0	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----						
	X	Y	Z	Z0	DELZ	P
PP1	498644.	191089.	189.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----						
	X	Y	Z	Z0	DELZ	P
QQ0	498761.	191156.	177.	177.	0.	0
QQ2	498938.	191167.	171.	171.		

QQ3	499036.	191179.	166.	166.
QQ4	499100.	191210.	166.	166.
QQ5	499127.	191217.	170.	170.
QQ6	499219.	191236.	168.	168.
QQ7	499324.	191249.	162.	162.
QQ8	499420.	191279.	170.	170.
QQ9A	499557.	191305.	151.	151.

1

BARRIER 18 TYPE(R) WALL 18 (NAT BARRIER NEAR WOODBURN ROAD)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 EXTENSION OF NAT WALL 17 NEAR US 250

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
R40	497926.	190528.	171.
R41	497985.	190438.	173.
R42	498775.	191232.	183.
R43	498771.	191257.	183.
R44	498760.	191320.	183.
R45	498742.	191352.	182.
R46	498160.	191923.	202.
R47	498447.	191978.	245.
R48	498089.	192007.	198.
R49	498092.	192047.	194.
R50	498319.	192107.	211.
R51	498224.	192243.	178.
R52	498187.	192162.	185.
R53	498168.	192117.	190.
R54	498535.	192249.	190.
R55	498598.	192516.	187.
R56	498671.	192575.	178.
R57	498585.	192726.	171.
R58	498615.	192779.	170.
R59	498668.	192757.	176.
R60	498708.	192885.	166.
R61	498753.	192958.	170.

	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
14 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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15 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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16 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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17 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
18 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
19 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
20 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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21 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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22 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	1.0	.0	4.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		

1

RECEIVER	LEQ(H)	L10
R40	72.8	76.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	1	2	
	41.1	45.9	
7	4		
	48.2		
8	1	2	
	60.7	64.4	
9	1	2	3

	44.2	52.4	64.1
10	1		
	70.1		
11	1		
	45.7		
12	1		
	50.4		
13	1		
	44.3		
14	1		
	47.5		
15	1	2	
	47.3	48.8	
16	1	2	
	49.2	51.0	
17	1		
	56.6		
18	1		
	53.4		
19	1	2	3 4
	50.4	50.9	57.1 49.8
20	1		
	43.5		

1

RECEIVER	LEQ(H)	L10
R41	70.3	73.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	4			
	50.1			
8	1	2		
	55.5	65.2		
9	1	2	3	
	43.1	50.1	57.0	
10	1			
	64.6			
11	1			
	51.6			
12	1			
	51.2			
13	1			
	49.7			
14	1			
	48.1			
15	1	2		
	45.2	45.7		
16	1	2		
	46.6	47.6		
17	1			
	61.0			

18 1
 60.0
19 1 2 3 4
 56.7 45.8 45.7 41.8

1

RECEIVER LEQ(H) L10
R42 60.0 63.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3 1 2 3
 48.3 53.0 44.2
4 1 2 3
 51.6 56.6 45.2
5 1
 40.6

1

RECEIVER LEQ(H) L10
R43 58.5 61.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3 1 2 3
 47.5 51.4 42.0
4 1 2 3
 50.5 54.8 43.1
5 1
 40.1

1

RECEIVER LEQ(H) L10
R44 55.3 58.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3 1 2
 45.3 47.9
4 1 2
 48.3 50.8

1

RECEIVER LEQ(H) L10
R45 53.5 56.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

3	1	2
	43.9	46.0
4	1	2
	46.8	48.8

1

RECEIVER	LEQ(H)	L10
R46	41.9	44.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R47	45.7	48.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22	1
	41.9

1

RECEIVER	LEQ(H)	L10
R48	42.3	44.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R49	42.3	45.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1*** NO SOLUTION FOR RECEIVER 11 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 11, BARRIER 20 AND ROADWAY 5

1

RECEIVER	LEQ(H)	L10
R50	.0	2.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R51	45.2	48.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22	1
----	---

44.2

1

RECEIVER	LEQ(H)	L10
R52	43.8	47.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22	1
	42.0

1

RECEIVER	LEQ(H)	L10
R53	43.1	46.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22	1
	40.5

1

RECEIVER	LEQ(H)	L10
R54	52.5	56.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22	1
	52.3

1

RECEIVER	LEQ(H)	L10
R55	54.5	58.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22	1
	54.4

1

RECEIVER	LEQ(H)	L10
R56	46.1	49.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
45.4
1

RECEIVER	LEQ(H)	L10
R57	45.7	49.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
45.3
1

RECEIVER	LEQ(H)	L10
R58	44.0	47.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
43.4
1

RECEIVER	LEQ(H)	L10
R59	44.2	47.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
43.5
1

RECEIVER	LEQ(H)	L10
R60	41.3	44.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
40.1
1

RECEIVER	LEQ(H)	L10
R61	40.1	43.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R62 40.5 43.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R63 39.0 42.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R64 36.2 38.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R65 35.5 37.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R66 41.1 44.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R67 40.6 43.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R68 41.4 44.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R69 40.5 43.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA
1

RECEIVER LEQ(H) L10
R70 51.7 54.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2
 48.8 48.0

1

RECEIVER LEQ(H) L10
 R71 56.1 59.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2 3
 44.1 55.4 45.5

1

RECEIVER LEQ(H) L10
 R72 45.5 48.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2 3
 40.9 41.1 40.2

1

RECEIVER LEQ(H) L10
 R73 50.3 53.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 46.1 47.9

1

RECEIVER LEQ(H) L10
 R74 53.9 57.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 48.6 52.3

1

RECEIVER LEQ(H) L10
 R75 53.0 55.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 46.6 51.7

1

RECEIVER LEQ(H) L10
R76 50.0 52.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 44.6 48.2

1

RECEIVER LEQ(H) L10
R77 62.4 65.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2 3
 44.5 62.2 46.5

1

STAMINA 2.0/BCR
FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/25/97 23:04:02
INPUT FILE - 79-116P1.INC
(INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN ** [REDACTED] ** ROAD SET #1 CENTRAL
PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 MASSIE ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	588.	56.
HT	6.	56.
MT	6.	56.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
I1	498983.	190641.	178.	1
I2	498935.	190545.	177.	1

ROADWAY 2 North Grounds Connector A

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	755.	50.
HT	8.	50.
MT	7.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A1	499008.	190362.	175.	1
A2	499010.	190422.	176.	1
A3	499000.	190461.	177.	1
A4	498949.	190524.	178.	1
A5	498839.	190572.	179.	1
A6	498748.	190611.	186.	1
A7	498681.	190667.	189.	1
A8	498639.	190744.	188.	1
A9	498624.	190870.	186.	1

ROADWAY 3 North Grounds Connector B

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	804.	50.
HT	8.	50.
MT	8.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
B1	499004.	190362.	175.	0
B2	499006.	190422.	176.	0
B3	498997.	190460.	177.	0
B4	498945.	190518.	178.	0
B5	498834.	190561.	179.	0
B6	498741.	190600.	186.	0
B7	498671.	190660.	189.	0
B8	498627.	190740.	188.	0
B9	498612.	190870.	186.	0

ROADWAY 4 ROUTE 250 D

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1181.	90.
HT	28.	90.
MT	21.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
D0	499702.	191313.	151.	1
D1	499405.	191234.	161.	1
D2	499296.	191205.	162.	1
D3	499109.	191156.	163.	1

ROADWAY 5 ROUTE 250 E

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2582.	90.
HT	62.	90.
MT	46.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E0	499699.	191325.	151.	1
E1	499402.	191247.	161.	1
E2	499293.	191219.	162.	1
E3	499106.	191170.	163.	1

ROADWAY 6 US 29 A1

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.

HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498384.	191582.	204.	0
A16	498327.	191713.	203.	1
A17	498302.	191973.	201.	1
A18	498293.	192173.	194.	1
A19	498328.	192371.	186.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

OROADWAY 7 US 29 Aii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.
HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
A25	498959.	193591.	144.	0
A26	499050.	193746.	143.	0
A27	499248.	193915.	150.	0
A28	499391.	193973.	159.	0
A29	499647.	193996.	161.	0
A30	500026.	194064.	161.	0
A31	500144.	194098.	162.	0
A32	500318.	194124.	166.	0
A33	500630.	194201.	172.	0
A34	500770.	194309.	172.	1
A35	500919.	194448.	168.	1
A36	501055.	194544.	161.	1
A37	501271.	194666.	155.	1
A38	501441.	194770.	158.	1

OROADWAY 8 US 29 Aiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.
HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
--	---	---	---	-------

A38	501441.	194770.	158.	0
A39	501584.	194914.	162.	0
A40	501749.	195110.	168.	0
A41	501873.	195195.	170.	0
A42	502086.	195281.	173.	0
A43	502262.	195347.	173.	0
A44	502438.	195437.	171.	1
A45	502645.	195605.	164.	1
A46	502758.	195744.	161.	1
A47	502866.	195961.	151.	1
A48	502976.	196182.	143.	1
A49	503099.	196365.	137.	1
A50	503297.	196697.	135.	1

ROADWAY 9 US 29 Bi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498395.	191589.	204.	1
B16	498339.	191716.	203.	0
B17	498314.	191973.	201.	0
B18	498306.	192173.	194.	0
B19	498340.	192368.	186.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

ROADWAY 10 US 29 Bi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
B25	498982.	193577.	147.	1
B26	499053.	193696.	148.	1
B27	499148.	193798.	153.	1
B28	499311.	193905.	157.	1
B29	499644.	193960.	161.	1

B30	499996.	194035.	162.	1
B31	500129.	194079.	162.	1
B32	500319.	194110.	166.	1
B33	500636.	194189.	172.	1
B34	500780.	194299.	172.	0
B35	500929.	194437.	168.	0
B36	501065.	194527.	162.	0
B37	501266.	194641.	157.	0
B38	501455.	194749.	160.	0

OROADWAY 11 US 29 Biii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1367.	90.	
	HT	59.	90.	
	MT	44.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
B38	501455.	194749.	160.	1
B39	501617.	194867.	165.	1
B40	501794.	195075.	169.	1
B41	501890.	195166.	171.	1
B42	502092.	195262.	173.	1
B43	502269.	195328.	173.	0
B44	502449.	195421.	171.	0
B45	502660.	195593.	164.	0
B46	502773.	195731.	161.	0
B47	502885.	195955.	151.	0
B48	502993.	196171.	143.	0
B49	503115.	196354.	137.	0
B50	503297.	196625.	135.	0
B51	503379.	196720.	135.	0

OROADWAY 12 RAMP 5

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	605.	80.	
	HT	26.	80.	
	MT	20.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
J0	499147.	191181.	163.	1
J1	499105.	191176.	164.	1
J2	499006.	191162.	166.	1
J3	498817.	191135.	175.	1
J4	498692.	191117.	183.	1
J5	498613.	191105.	187.	1

OROADWAY 13 RAMP 6

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	183.	80.
HT	4.	80.
MT	3.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K1	499051.	191136.	165.	1
K2	498895.	191052.	173.	1
K3	498756.	190969.	173.	1
K4	498713.	190950.	167.	1

OROADWAY 14 RAMP 3

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	564.	80.
HT	20.	80.
MT	16.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
G1	498238.	190898.	179.	1
G2	498363.	190970.	180.	1
G3	498497.	191051.	180.	1

OROADWAY 15 RAMP 41

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	39.	80.
HT	1.	80.
MT	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K8	498265.	190835.	182.	1
K10	498202.	190808.	181.	1
K11	498115.	190746.	178.	1

OROADWAY 16 RAMP 4

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	558.	80.
HT	24.	80.
MT	18.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
F2	498048.	190668.	171.	1
F3	498115.	190746.	178.	1

F4	498239.	190845.	181.	1
F5	498385.	190922.	187.	1
F6	498489.	190977.	191.	1
F7	498502.	190986.	195.	1

ROADWAY 17 LAMBS ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	178.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
L1	500009.	193771.	172.	0
L2	500030.	193946.	168.	0
L3	500033.	193990.	168.	0
L4	500038.	194045.	169.	0

ROADWAY 18 ROSLYN ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	59.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
M1	500708.	193948.	173.	1
M2	500638.	194048.	175.	1
M3	500586.	194157.	180.	1

ROADWAY 19 HYDRAULIC ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	2673.	70.	
	HT	14.	70.	
	MT	13.	70.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
N0	500882.	194280.	175.	1
N1	500878.	194289.	176.	1
N2	500882.	194387.	178.	1

ROADWAY 20 WOODBURN ROAD S

	VEHICLE TYPE	VEHICLES/HOUR	SPEED
	CARS	58.	50.

	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
P1	501962.	195048.	183.	0
P2	501999.	195162.	182.	0
P3	502036.	195234.	181.	0

ROADWAY 21 LAMBS ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	178.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
L44	500040.	194074.	169.	0
L5	500043.	194110.	168.	0
L6	500059.	194248.	164.	0

ROADWAY 22 ROSLYN RD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	59.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
M33	500582.	194192.	178.	0
M4	500587.	194234.	177.	0
M5	500601.	194304.	172.	0
M6	500604.	194392.	169.	0
M7	500545.	194537.	159.	0

ROADWAY 23 HYDRAULIC ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	2673.	70.	
	HT	14.	70.	
	MT	13.	70.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
N3	500884.	194426.	178.	1
N4	500886.	194634.	173.	1
N5	500877.	194754.	165.	1

ROADWAY 24 WOODBURN ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	58.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
P4	502068.	195284.	180.	0
P44	502191.	195407.	174.	0
P5	502300.	195476.	171.	0
P6	502717.	195738.	165.	0
P7	502763.	195796.	159.	0
P8	502802.	195873.	156.	0
P9	502837.	195987.	155.	0
P10	502842.	196087.	154.	0
P11	502834.	196156.	151.	0

OROADWAY 25 RAMP 3ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	564.	80.
HT	20.	80.
MT	16.	80.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
G4	498546.	191113.	182.	1
G5	498579.	191209.	188.	1
G6	498581.	191270.	207.	1
G7	498521.	191418.	187.	1

OROADWAY 26 RAMP 4ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	558.	80.
HT	24.	80.
MT	18.	80.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
F8	498606.	191117.	196.	1
F9	498630.	191196.	197.	1
F10	498632.	191265.	197.	1
F11	498590.	191374.	198.	1
F12	498443.	191535.	200.	1

OROADWAY 27 RAMP 6ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
--------------	---------------	-------

CARS	304.	80.
HT	3.	80.
MT	3.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K5	498605.	190922.	185.	1
K6	498536.	190904.	184.	1
K60	498412.	190872.	183.	1

ROADWAY 28 ROUTE 250 Diii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	978.	90.
HT	35.	90.
MT	27.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
D7	498541.	191010.	179.	1
D8	498373.	190952.	180.	1
D9	498251.	190881.	179.	1
D10	498161.	190806.	177.	1
D11	498048.	190668.	171.	1

ROADWAY 29 ROUTE 250 Eiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
E7	498538.	191021.	179.	1
E8	498368.	190963.	180.	1
E9	498243.	190892.	179.	1

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		

BB3 498551. 191287. 202. 100.
BB4 498546. 191355. 198. 100.

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	211.	100.		
DD4	498231.	191905.	214.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		

GG3 498921. 193352. 162. 100.

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
PP1	498644.	191089.	189.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
QQ0	498761.	191156.	181.	181.	0.	0
QQ2	498938.	191167.	191.	191.		
QQ3	499036.	191179.	166.	166.		
QQ4	499100.	191210.	166.	166.		
QQ5	499127.	191217.	170.	170.		
QQ6	499219.	191236.	168.	168.		
QQ7	499324.	191249.	162.	162.		
QQ8	499420.	191279.	170.	170.		
QQ9A	499557.	191305.	151.	151.		

1

BARRIER 18 TYPE(R) WALL 18 NAT WALL AT WOODBURN

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 EXT OF NAT WALL 17

	-----COORDINATES-----					
	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

	-----COORDINATES-----		
	X	Y	Z
R79	500857.	194547.	182.
R80	500837.	194628.	174.
R81	500927.	194617.	178.
R82	500980.	194607.	175.
R83	500991.	194651.	175.
R84	500971.	194678.	176.
R85	500916.	194709.	170.
R86	500955.	194718.	170.
R87	501094.	194612.	158.
R88	501150.	194518.	161.
R89	501260.	194568.	166.
R90	501519.	194630.	172.
R91	501513.	194708.	172.
R92	501813.	194972.	180.
R93	502067.	195190.	182.
R94	502010.	195307.	173.
R95	501962.	195326.	169.
R96	501993.	195339.	175.
R97	502002.	195357.	175.
R98	502021.	195370.	175.
R99	502060.	195383.	173.
R100	502082.	195385.	176.
R101	502093.	195397.	175.
R102	502013.	195112.	184.
R103	502295.	195386.	175.
R104	502194.	195435.	178.
R105	502261.	195467.	172.
R106	502220.	195404.	178.
R107	502338.	195414.	175.
R108	502293.	195427.	175.
R109	502564.	195561.	169.
R110	502600.	195598.	165.
R111	502696.	195541.	153.
R112	502952.	195884.	135.
R113	502947.	195993.	144.
R114	502957.	196315.	148.
IGNORE	0.	0.	0.
R116	503220.	196194.	130.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

28 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.0	.5		
29 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.0	.5		

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
2 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
3 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
4 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
5 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
6 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
7 *	3.0	2.0	3.0	3.0	3.0	3.0	4.0	4.0	.0	4.0
	.0	.0	1.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
8 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	1.0	.0	.0	.0	2.0	2.0	2.0	2.0
	2.0	2.0	2.0	.0	2.0	1.0	2.0	.0	.0	.0
	.0	.0	.0	.0	.0	3.0	.0	.0		
9 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
10 *	3.0	2.0	3.0	3.0	3.0	3.0	4.0	4.0	.0	4.0
	.0	.0	1.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
11 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	1.0	.0	.0	.0	2.0	2.0	2.0	2.0

25 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
26 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
27 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
28 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		
29 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0		

1

RECEIVER	LEQ(H)	L10
R79	66.8	70.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	9	10	11	12	
	42.9	51.4	52.9	45.9	
10	8	9	10	11	12
	40.8	43.8	51.5	51.7	46.2
19	2				
	46.2				
23	1	2			
	65.8	52.7			

1

RECEIVER	LEQ(H)	L10
R80	62.4	66.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	9	10	11	12		
	41.7	47.6	49.6	46.0		
10	8	9	10	11	12	13
	40.6	42.5	48.0	48.7	46.1	40.3
19	2					
	42.3					
23	1	2				
	57.9	57.9				

1

RECEIVER LEQ(H) L10
R81 64.2 67.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 10 11 12 13
47.0 52.6 49.1 40.1
10 9 10 11 12 13
40.8 47.6 51.4 49.0 41.5
19 2
42.7
23 1 2
60.8 58.4

1

RECEIVER LEQ(H) L10
R82 61.8 65.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 10 11 12 13
46.6 55.2 52.7 41.5
10 9 10 11 12 13
40.3 47.3 53.7 52.2 43.0
11 1
40.6
19 2
42.5
23 1 2
53.5 51.5

1

RECEIVER LEQ(H) L10
R83 60.2 63.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 10 11 12 13
44.6 51.9 52.0 42.2
8 1
40.3
10 10 11 12 13
45.3 50.7 51.4 43.6
11 1
41.1
19 2

23 40.8
 1 2
 51.1 52.2

1

RECEIVER LEQ(H) L10
 R84 59.8 63.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 10 11 12 13
 43.9 49.9 50.0 41.6
8 1
 40.1
10 10 11 12 13
 44.6 48.9 49.6 43.0
11 1
 40.8
19 2
 40.1
23 1 2
 51.0 54.6

1

RECEIVER LEQ(H) L10
 R85 64.6 67.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 10 11 12
 42.3 46.4 45.9
10 10 11 12 13
 42.9 45.5 45.7 40.3
23 1 2
 52.3 63.8

1

RECEIVER LEQ(H) L10
 R86 59.1 62.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 10 11 12 13
 41.7 46.5 47.1 40.1
10 10 11 12 13
 42.4 45.7 46.8 41.4
11 1
 40.6

23 1 2
 49.3 56.2

1

RECEIVER LEQ(H) L10
 R87 68.7 72.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 9 10 11 12 13
 40.3 46.5 56.5 65.9 48.7
8 1
 42.2
10 9 10 11 12 13
 41.3 47.4 55.7 63.5 50.4
11 1
 43.1
19 2
 40.2
23 1 2
 48.2 46.9

1

RECEIVER LEQ(H) L10
 R88 63.8 67.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 10 11 12 13
 42.6 51.3 57.6 44.5
8 1
 42.0
10 10 11 12 13
 43.7 52.1 60.9 46.6
11 1
 43.1
19 2
 40.9
23 1 2
 46.2 43.1

1

RECEIVER LEQ(H) L10
 R89 66.3 69.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 10 11 12 13

	42.8	48.6	60.2	54.6
8	1	2		
	45.3	40.6		
10	10	11	12	13
	43.9	48.8	62.8	58.0
11	1	2		
	46.5	41.9		
23	1	2		
	42.3	40.6		

1

RECEIVER	LEQ(H)	L10
R90	59.9	62.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	11	12	13
	40.5	47.1	50.9
8	1	2	
	50.5	45.4	
10	11	12	13
	40.6	47.5	53.5
11	1	2	
	53.6	47.5	

1

RECEIVER	LEQ(H)	L10
R91	63.6	67.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	12	13
	46.0	53.7
8	1	2
	55.8	46.8
10	12	13
	46.2	56.0
11	1	2
	59.9	48.9

1

RECEIVER	LEQ(H)	L10
R92	63.8	66.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	13
	41.0

8	1	2	3	4	5
	46.8	55.3	51.7	47.4	41.0
10	13				
	42.3				
11	1	2	3	4	5
	48.1	61.0	54.7	47.9	41.7

1

RECEIVER	LEQ(H)	L10
R93	65.2	68.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	2	3	4	5	6	7
	44.3	47.9	59.2	54.8	46.0	41.4
11	2	3	4	5	6	7
	46.3	47.7	61.4	55.9	47.3	42.3
20	2					
	42.0					

1

RECEIVER	LEQ(H)	L10
R94	65.4	68.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	2	3	4	5
	44.2	48.6	62.8	43.4
11	2	3	4	5
	45.5	48.9	61.0	43.5

1

RECEIVER	LEQ(H)	L10
R95	60.6	64.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	2	3	4
	42.8	47.6	57.1
11	2	3	4
	44.0	47.5	56.0

1

RECEIVER	LEQ(H)	L10
R96	60.2	63.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	2	3	4	5	6
	41.9	46.1	56.5	43.1	40.7
11	2	3	4	5	6
	43.1	46.2	55.4	43.5	41.4

1

RECEIVER	LEQ(H)	L10
R97	59.0	62.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	2	3	4	5	6
	41.4	45.2	54.8	43.5	41.3
11	2	3	4	5	6
	42.6	45.3	54.0	44.0	42.0

1

RECEIVER	LEQ(H)	L10
R98	58.2	61.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	2	3	4	5	6	
	40.8	44.3	53.6	44.3	41.9	
11	2	3	4	5	6	7
	42.0	44.4	52.8	44.8	42.6	40.3

1

RECEIVER	LEQ(H)	L10
R99	56.8	60.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	3	4	5	6	7	
	42.9	51.7	44.2	41.0	40.1	
11	2	3	4	5	6	7
	41.2	43.2	50.9	44.3	41.4	40.4

1

RECEIVER	LEQ(H)	L10
R100	57.4	60.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	3	4	5	6	7	
	42.3	50.9	47.8	44.6	41.6	
11	2	3	4	5	6	7
	40.8	42.6	50.1	48.1	45.2	42.1

1

RECEIVER	LEQ(H)	L10
R101	56.7	60.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	3	4	5	6	7	
	41.7	49.9	46.9	44.3	41.9	
11	2	3	4	5	6	7
	40.5	42.1	49.1	47.1	44.7	42.5

1

RECEIVER	LEQ(H)	L10
[REDACTED]	[REDACTED]	65.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	1	2	3	4	5	6	
	40.1	46.7	50.0	55.6	48.9	43.2	RTa 29 BP
11	1	2	3	4	5	6	7
	41.2	49.1	51.0	57.2	49.8	44.4	40.5 RTa 29 BP
20	1						
	47.2						Woodburn Rd

1

RECEIVER	LEQ(H)	L10
R103	70.4	73.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	4	5	6	7
	44.9	56.9	68.5	49.0
11	4	5	6	7
	45.7	56.6	64.4	49.6

1

RECEIVER	LEQ(H)	L10
R104	61.9	65.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	4	5	6	7	
	47.4	55.7	53.8	46.4	
11	3	4	5	6	7
	40.3	48.0	55.1	53.7	46.9
24	1	2			
	41.6	47.3			

1

RECEIVER	LEQ(H)	L10
R105	61.3	64.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	4	5	6	7	
	42.3	51.7	55.1	48.2	
11	4	5	6	7	8
	44.0	51.6	54.6	48.6	40.1
24	2	3			
	52.8	40.3			

1

RECEIVER	LEQ(H)	L10
R106	65.5	68.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	4	5	6	7		
	47.4	60.1	58.3	48.1		
11	2	4	5	6	7	8
	40.3	49.4	58.9	57.7	48.7	40.6
24	1	2				
	42.9	50.1				

1

RECEIVER	LEQ(H)	L10
R107	71.1	74.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	4	5	6	7	8	9
	44.7	53.6	68.9	54.1	42.4	40.3
11	4	5	6	7	8	9
	46.0	54.1	65.8	54.5	43.2	40.4

1

RECEIVER	LEQ(H)	L10
R108	66.4	69.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	4	5	6	7	8
	44.4	55.5	62.7	51.6	41.6
11	4	5	6	7	8
	47.0	55.4	61.2	52.0	42.4
24	2				
	44.8				

1

RECEIVER	LEQ(H)	L10
R109	73.4	77.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	5	6	7	8	9	10
	42.3	49.1	71.8	54.4	46.9	40.8
11	5	6	7	8	9	10
	43.1	50.0	67.5	54.7	47.0	40.8
24	3					
	42.0					

1

RECEIVER	LEQ(H)	L10
R110	71.8	75.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	5	6	7	8	9	10
	41.0	46.9	69.5	60.0	48.8	41.9
11	5	6	7	8	9	10
	41.9	47.8	65.9	59.3	48.8	41.8
24	3					
	43.3					

1

RECEIVER	LEQ(H)	L10
R111	65.7	68.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	6	7	8	9	10	
	45.0	58.2	57.0	48.8	41.8	
11	5	6	7	8	9	10
	40.7	46.2	61.1	59.7	49.2	41.8

1

RECEIVER LEQ(H) L10
R112 63.8 66.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	7	8	9	10	11	12
	42.1	46.3	57.4	55.3	45.1	41.0
11	7	8	9	10	11	12
	43.1	47.3	59.2	56.5	46.1	41.7

1

RECEIVER LEQ(H) L10
R113 69.2 72.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	7	8	9	10	11	12
	40.5	43.8	56.3	63.5	49.0	43.1
11	7	8	9	10	11	12
	41.4	44.6	57.5	66.8	50.0	43.8

1

RECEIVER LEQ(H) L10
R114 60.7 64.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	9	10	11	12
	40.9	49.8	56.5	48.6
11	9	10	11	12
	41.0	49.3	55.4	48.9

*** ANGLE SUBTENDED AT RECEIVER BY ROAD SEGMENT IS APPROACHING ZERO

INITIAL PT. OF ROAD SEGMENT ***** 567.5848
END PT. OF ROAD SEGMENT***** 567.5853
RECEIVER POINT .0000 .0000 .0000

1

RECEIVER LEQ(H) L10
IGNO -939.7 -938.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R116 59.4 62.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	9	10	11	12	
	42.7	48.5	52.0	49.9	
11	9	10	11	12	13
	43.1	49.1	53.8	51.5	40.5

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/25/97 23:08:56
 INPUT FILE - 79-116P2.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN ** RECEIVERS R79-R116 ** ROAD SET #2 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 NORTH GROUNDS CONNECTOR Aii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	627.	50.
HT	7.	50.
MT	6.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A9	498624.	190870.	186.	1
A10	498622.	190951.	185.	1
A11	498618.	191091.	187.	1

OROADWAY 2 NORTH GROUNDS CONNECTOR Bii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	735.	50.
HT	8.	50.
MT	7.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
B9	498612.	190870.	186.	1
B10	498610.	190951.	185.	1
B11	498606.	191091.	187.	1

OROADWAY 3 ROUTE 250 Dii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	978.	90.
HT	35.	90.

	MT	27.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D3	499109.	191156.	163.	1
D4	498918.	191108.	166.	1
D5	498752.	191065.	172.	1
D6	498701.	191051.	174.	1

ROADWAY 4 ROUTE 250 Eii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

	X	Y	Z	GRADE
0	-----COORDINATES-----			
E3	499106.	191170.	163.	1
E4	498914.	191120.	166.	1
E5	498749.	191077.	172.	1
E6	498698.	191063.	174.	1

ROADWAY 5 RAMP 5ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	480.	80.
HT	17.	80.
MT	13.	80.

	X	Y	Z	GRADE
0	-----COORDINATES-----			
J6	498593.	191102.	187.	1
J7	498519.	191087.	190.	1
J8	498418.	191053.	192.	1
J9	498294.	190989.	190.	1
J10	498191.	190911.	185.	1
J11	498115.	190832.	180.	1

ROADWAY 6 RAMP 5iii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	141.	80.
HT	5.	80.
MT	4.	80.

	X	Y	Z	GRADE
0	-----COORDINATES-----			
J11	498115.	190832.	180.	1
J12	498008.	190664.	170.	1
J13	497973.	190583.	166.	1

OROADWAY 7 RAMP 6111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	265.	80.
HT	3.	80.
MT	3.	80.

0 -----COORDINATES-----

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K7	498270.	190824.	182.	1
K12	498156.	190747.	180.	1
K13	498075.	190654.	175.	1
K14	497998.	190478.	172.	1

OROADWAY 8 ROUTE 250 Div

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1579.	90.
HT	57.	90.
MT	44.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
D11	498048.	190668.	171.	1
D12	497980.	190541.	165.	1
D13	497941.	190433.	163.	1

OROADWAY 9 ROUTE 250 Eiv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2482.	90.
HT	90.	90.
MT	68.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E9	498243.	190892.	179.	1
E10	498151.	190816.	177.	1
E11	498034.	190676.	171.	1
E12	497965.	190547.	165.	1

OROADWAY 10 ROUTE 250 Ev

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2623.	90.
HT	95.	90.
MT	73.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E12	497965.	190547.	165.	1
E13	497925.	190438.	163.	1

OROADWAY 11 IVY ROAD V

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	995.	72.	
	HT	54.	72.	
	MT	21.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H1	497975.	190297.	170.	1
H3	497919.	190355.	170.	1

OROADWAY 12 IVY ROAD Vii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	995.	72.	
	HT	54.	72.	
	MT	21.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H33	497893.	190383.	170.	1
H5	497838.	190442.	170.	1

OROADWAY 13 IVY ROAD W

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	837.	72.	
	HT	45.	72.	
	MT	18.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H2	497969.	190288.	170.	1
H4	497915.	190345.	170.	1

OROADWAY 14 IVY ROAD Wii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	837.	72.	
	HT	45.	72.	
	MT	18.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H44	497879.	190383.	170.	1

H6 497832. 190432. 170. 1

ROADWAY 15 IVY ROAD Wiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1032.	72.
HT	56.	72.
MT	22.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H6	497832.	190432.	170.	1
H7	497793.	190456.	170.	1
H9	497703.	190532.	170.	1

ROADWAY 16 IVY ROAD Viii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1451.	72.
HT	78.	72.
MT	31.	72.

0

-----COORDINATES-----

	X	Y	Z	GRADE
H5	497838.	190442.	170.	1
H8	497803.	190463.	170.	1
H10	497711.	190540.	170.	1

ROADWAY 17 ROUTE 250 Evi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
E13	497925.	190438.	170.	1
E14	497858.	190241.	170.	1

ROADWAY 18 ROUTE 250 Dv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	996.	90.
HT	36.	90.
MT	28.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
D13	497941.	190433.	170.	1

D14 497873. 190236. 170. 1

ROADWAY 19 OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	556.	60.
HT	8.	60.
MT	16.	60.

0 -----COORDINATES-----

	X	Y	Z	GRADE
OI1	498121.	190435.	179.	0
OI2	497955.	190488.	176.	0
OI3	497935.	190494.	166.	0
OI4	497876.	190513.	167.	0
OI5	497906.	190644.	169.	0

ROADWAY 20 RAMP TO OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	340.	60.
HT	7.	60.
MT	13.	60.

0 -----COORDINATES-----

	X	Y	Z	GRADE
OIR1	498074.	190788.	181.	0
OIR2	497906.	190644.	169.	0

ROADWAY 21 RIO ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1450.	70.
HT	20.	70.
MT	60.	70.

0 -----COORDINATES-----

	X	Y	Z	GRADE
RIO0	500455.	193741.	177.	0
RIO1	500712.	193980.	173.	0
RIO2	501033.	194280.	172.	0
RIO3	501629.	194648.	170.	0

ROADWAY 22 BARRACKS ROAD SOUTH

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	950.	80.
HT	20.	80.
MT	30.	80.

-----COORDINATES-----				
	X	Y	Z	GRADE
BARR1	498418.	192490.	170.	0
BARR2	498695.	192305.	183.	0

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----						
	X	Y	Z	ZO	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----						
	X	Y	Z	ZO	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----						
	X	Y	Z	ZO	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----						
	X	Y	Z	ZO	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----						
	X	Y	Z	ZO	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		

EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
PP1	498644.	191089.	189.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ0	498761.	191156.	181.	181.	0.	0
QQ2	498938.	191167.	171.	171.		

QQ3	499036.	191179.	166.	166.
QQ4	499100.	191210.	166.	166.
QQ5	499127.	191217.	170.	170.
QQ6	499219.	191236.	168.	168.
QQ7	499324.	191249.	162.	162.
QQ8	499420.	191279.	170.	170.
QQ9A	499557.	191305.	151.	151.

1

BARRIER 18 TYPE(R) WALL 18 NAT BARRIER NEAR WOODBURN

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 - EXTENSION OF NAT WALL 17 NEAR US 250

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
R79	500857.	194547.	182.
R80	500837.	194628.	174.
R81	500927.	194617.	178.
R82	500980.	194607.	175.
R83	500991.	194651.	175.
R84	500971.	194678.	176.
R85	500916.	194709.	170.
R86	500955.	194718.	170.
R87	501094.	194612.	158.
R88	501150.	194518.	161.
R89	501260.	194568.	166.
R90	501519.	194630.	172.
R91	501513.	194708.	172.
R92	501813.	194972.	180.
R93	502067.	195190.	182.
R94	502010.	195307.	173.
R95	501962.	195326.	169.
R96	501993.	195339.	175.
R97	502002.	195357.	175.
R98	502021.	195370.	175.
R99	502060.	195383.	173.
R100	502082.	195385.	176.

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18 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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1

RECEIVER	LEQ(H)	L10
R79	48.3	51.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	44.4	45.6

1

RECEIVER	LEQ(H)	L10
R80	46.2	48.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 41.6 44.0

1

RECEIVER LEQ(H) L10
R81 47.9 50.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 42.8 46.0

1

RECEIVER LEQ(H) L10
R82 48.9 51.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 43.1 47.3

1

RECEIVER LEQ(H) L10
R83 48.1 50.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 42.0 46.6

1

RECEIVER LEQ(H) L10
R84 47.3 49.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 41.3 45.7

1

RECEIVER LEQ(H) L10
R85 45.8 48.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	40.3	44.2

1

RECEIVER	LEQ(H)	L10
R86	46.2	48.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	40.3	44.7

1

RECEIVER	LEQ(H)	L10
R87	50.5	53.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	42.4	49.6

1

RECEIVER	LEQ(H)	L10
R88	54.8	57.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	44.2	54.3

1

RECEIVER	LEQ(H)	L10
R89	55.5	58.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21	2	3
	41.3	55.3

1

RECEIVER	LEQ(H)	L10
----------	--------	-----

R90 62.8 66.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
 62.7

1

RECEIVER LEQ(H) L10
R91 55.2 58.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
 55.1

1

RECEIVER LEQ(H) L10
R92 42.5 45.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
 42.0

1

RECEIVER LEQ(H) L10
R93 37.2 40.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R94 36.2 39.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R95 36.6 39.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R96 36.2 39.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R97	36.0	38.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R98	35.7	38.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R99	35.2	38.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R100	35.0	37.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R101	34.9	37.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R102	38.4	41.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R103	33.9	36.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R104	33.9	36.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R105	33.3	36.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R106	34.1	36.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R107	33.4	36.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R108	33.4	36.2

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R109	31.1	33.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R110	30.7	33.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R111	30.4	33.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R112	27.5	30.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R113	27.0	29.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R114	24.9	27.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
IGNO	-942.6	-940.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R116	25.0	27.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/25/97 23:11:08
 INPUT FILE - 300-PM_1.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN ** RECEIVERS R300- ** ROAD SET #1 CENTRAL
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 Massie Rd.

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	588.	56.
HT	6.	56.
MT	6.	56.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
I1	498983.	190641.	178.	1
I2	498935.	190545.	177.	1

OROADWAY 2 North Grounds Connector A

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	755.	50.
HT	8.	50.
MT	7.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A1	499008.	190362.	175.	1
A2	499010.	190422.	176.	1
A3	499000.	190461.	177.	1
A4	498949.	190524.	178.	1
A5	498839.	190572.	179.	1
A6	498748.	190611.	186.	1
A7	498681.	190667.	189.	1
A8	498639.	190744.	188.	1
A9	498624.	190870.	186.	1

OROADWAY 3 North Grounds Connector B

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	804.	50.
HT	8.	50.
MT	8.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
B1	499004.	190362.	175.	0
B2	499006.	190422.	176.	0
B3	498997.	190460.	177.	0
B4	498945.	190518.	178.	0
B5	498834.	190561.	179.	0
B6	498741.	190600.	186.	0
B7	498671.	190660.	189.	0
B8	498627.	190740.	188.	0
B9	498612.	190870.	186.	0

ROADWAY 4 ROUTE 250 D

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1181.	90.
HT	28.	90.
MT	21.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
D0	499702.	191313.	151.	1
D1	499405.	191234.	161.	1
D2	499296.	191205.	162.	1
D3	499109.	191156.	163.	1

ROADWAY 5 ROUTE 250 E

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2582.	90.
HT	62.	90.
MT	46.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
E0	499699.	191325.	151.	1
E1	499402.	191247.	161.	1
E2	499293.	191219.	162.	1
E3	499106.	191170.	163.	1

ROADWAY 6 US 29 A1

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.

HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498384.	191582.	204.	0
A16	498327.	191713.	203.	1
A17	498302.	191973.	201.	1
A18	498293.	192173.	194.	1
A19	498328.	192371.	186.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

OROADWAY 7 US 29 Aii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.
HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
A25	498959.	193591.	144.	0
A26	499050.	193746.	143.	0
A27	499248.	193915.	150.	0
A28	499391.	193973.	159.	0
A29	499647.	193996.	161.	0
A30	500026.	194064.	161.	0
A31	500144.	194098.	162.	0
A32	500318.	194124.	166.	0
A33	500630.	194201.	172.	0
A34	500770.	194309.	172.	1
A35	500919.	194448.	168.	1
A36	501055.	194544.	161.	1
A37	501271.	194666.	155.	1
A38	501441.	194770.	158.	1

OROADWAY 8 US 29 Aiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.
HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
--	---	---	---	-------

A38	501441.	194770.	158.	0
A39	501584.	194914.	162.	0
A40	501749.	195110.	168.	0
A41	501873.	195195.	170.	0
A42	502086.	195281.	173.	0
A43	502262.	195347.	173.	0
A44	502438.	195437.	171.	1
A45	502645.	195605.	164.	1
A46	502758.	195744.	161.	1
A47	502866.	195961.	151.	1
A48	502976.	196182.	143.	1
A49	503099.	196365.	137.	1
A50	503297.	196697.	135.	1

OROADWAY 9 US 29 Bi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498395.	191589.	204.	1
B16	498339.	191716.	203.	0
B17	498314.	191973.	201.	0
B18	498306.	192173.	194.	0
B19	498340.	192368.	186.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

OROADWAY 10 US 29 Bii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
B25	498982.	193577.	147.	1
B26	499053.	193696.	148.	1
B27	499148.	193798.	153.	1
B28	499311.	193905.	157.	1
B29	499644.	193960.	161.	1

B30	499996.	194035.	162.	1
B31	500129.	194079.	162.	1
B32	500319.	194110.	166.	1
B33	500636.	194189.	172.	1
B34	500780.	194299.	172.	0
B35	500929.	194437.	168.	0
B36	501065.	194527.	162.	0
B37	501266.	194641.	157.	0
B38	501455.	194749.	160.	0

ROADWAY 11 US 29 B111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
B38	501455.	194749.	160.	1
B39	501617.	194867.	165.	1
B40	501794.	195075.	169.	1
B41	501890.	195166.	171.	1
B42	502092.	195262.	173.	1
B43	502269.	195328.	173.	0
B44	502449.	195421.	171.	0
B45	502660.	195593.	164.	0
B46	502773.	195731.	161.	0
B47	502885.	195955.	151.	0
B48	502993.	196171.	143.	0
B49	503115.	196354.	137.	0
B50	503297.	196625.	135.	0
B51	503379.	196720.	135.	0

ROADWAY 12 RAMP 5

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	605.	80.
HT	26.	80.
MT	20.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
J0	499147.	191181.	163.	1
J1	499105.	191176.	164.	1
J2	499006.	191162.	166.	1
J3	498817.	191135.	175.	1
J4	498692.	191117.	183.	1
J5	498613.	191105.	187.	1

ROADWAY 13 RAMP 6

41.1

1

RECEIVER	LEQ(H)	L10
R320	34.2	36.9

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R321	32.1	34.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R322	30.9	33.5

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 02/21/97 13:52:21
 INPUT FILE - cent5051.in
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

Central at 50 and 51

OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 RDWY 1 US29 Ai

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.
HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498384.	191582.	204.	0
A16	498327.	191713.	203.	1
A17	498302.	191973.	201.	1
A18	498293.	192173.	194.	1
A19	498328.	192371.	186.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

OROADWAY 2 RDWY2 US29 Bi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498395.	192.	204.	1
B16	498339.	191716.	203.	0
B17	498314.	191973.	201.	0
B18	498306.	192173.	194.	0
B19	498340.	192368.	186.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

1

ROADWAY SEGMENT

21 1
 44.4

1

RECEIVER LEQ(H) L10
R303 52.2 55.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2
 51.1 44.8

1

RECEIVER LEQ(H) L10
R304 46.3 49.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 42.5 43.1

1

RECEIVER LEQ(H) L10
R305 50.5 53.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 47.4 47.2

1

RECEIVER LEQ(H) L10
R306 57.7 61.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1 2 3
 41.0 56.7 50.4

1

RECEIVER LEQ(H) L10
R307 59.7 63.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 50.7 59.1

1

RECEIVER LEQ(H) L10
R308 62.4 66.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
 62.4

1

RECEIVER LEQ(H) L10
R309 48.8 51.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 2 3
 41.4 47.8

1

RECEIVER LEQ(H) L10
R310 47.3 50.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 3
 46.4

1

RECEIVER LEQ(H) L10
R311 30.0 32.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R312 21.3 24.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10

R313 43.8 46.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
40.1

1

RECEIVER LEQ(H) L10
R314 44.2 47.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
41.9

1

RECEIVER LEQ(H) L10
R315 43.9 47.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
41.4

1*** NO SOLUTION FOR RECEIVER 17 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 17, BARRIER 20 AND ROADWAY 5

1

RECEIVER LEQ(H) L10
R316 .0 3.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R317 46.2 49.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
45.7

1

RECEIVER LEQ(H) L10
R318 45.6 48.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
41.9

1

RECEIVER	LEQ(H)	L10
R47M	41.8	44.1

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1*** NO SOLUTION FOR RECEIVER 21 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 21, BARRIER 20 AND ROADWAY 5

1

RECEIVER	LEQ(H)	L10
R50M	.0	2.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R51M	45.2	48.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
44.1

1

RECEIVER	LEQ(H)	L10
R55M	50.3	53.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

22 1
50.2

1

RECEIVER	LEQ(H)	L10
R319	43.1	46.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

21 1

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	183.	80.
HT	4.	80.
MT	3.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K1	499051.	191136.	165.	1
K2	498895.	191052.	173.	1
K3	498756.	190969.	173.	1
K4	498713.	190950.	167.	1

ROADWAY 14 RAMP 3

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	564.	80.
HT	20.	80.
MT	16.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
G1	498238.	190898.	179.	1
G2	498363.	190970.	180.	1
G3	498497.	191051.	180.	1

ROADWAY 15 RAMP 41

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	39.	80.
HT	1.	80.
MT	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K8	498265.	190835.	182.	1
K10	498202.	190808.	181.	1
K11	498115.	190746.	178.	1

ROADWAY 16 RAMP 4

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	558.	80.
HT	24.	80.
MT	18.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
F2	498048.	190668.	171.	1
F3	498115.	190746.	178.	1

F4	498239.	190845.	181.	1
F5	498385.	190922.	187.	1
F6	498489.	190977.	191.	1
F7	498502.	190986.	195.	1

OROADWAY 17 LAMBS ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	178.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
L1	500009.	193771.	172.	0
L2	500030.	193946.	168.	0
L3	500033.	193990.	168.	0
L4	500038.	194045.	169.	0

OROADWAY 18 ROSLYN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	59.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
M1	500708.	193948.	173.	1
M2	500638.	194048.	175.	1
M3	500586.	194157.	180.	1

OROADWAY 19 HYDRAULIC ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2673.	70.
HT	14.	70.
MT	13.	70.

0 -----COORDINATES-----

	X	Y	Z	GRADE
N0	500882.	194280.	175.	1
N1	500878.	194289.	176.	1
N2	500882.	194387.	178.	1

OROADWAY 20 WOODBURN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	58.	50.

	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
P1	501962.	195048.	183.	0
P2	501999.	195162.	182.	0
P3	502036.	195234.	181.	0

OROADWAY 21 LAMBS ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	178.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
L44	500040.	194074.	169.	0
L5	500043.	194110.	168.	0
L6	500059.	194248.	164.	0

OROADWAY 22 ROSLYN RD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	59.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
M33	500582.	194192.	178.	0
M4	500587.	194234.	177.	0
M5	500601.	194304.	172.	0
M6	500604.	194392.	169.	0
M7	500545.	194537.	159.	0

OROADWAY 23 HYDROLIC ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	2673.	70.	
	HT	14.	70.	
	MT	13.	70.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
N3	500884.	194426.	178.	1
N4	500886.	194634.	173.	1
N5	500877.	194754.	165.	1

OROADWAY 24 WOODBURN ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	58.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
P4	502068.	195284.	180.	0
P44	502191.	195407.	174.	0
P5	502300.	195476.	171.	0
P6	502717.	195738.	165.	0
P7	502763.	195796.	159.	0
P8	502802.	195873.	156.	0
P9	502837.	195987.	155.	0
P10	502842.	196087.	154.	0
P11	502834.	196156.	151.	0

OROADWAY 25 RAMP 3ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	564.	80.
HT	20.	80.
MT	16.	80.

0 -----COORDINATES-----

	X	Y	Z	GRADE
G4	498546.	191113.	182.	1
G5	498579.	191209.	188.	1
G6	498581.	191270.	207.	1
G7	498521.	191418.	187.	1

OROADWAY 26 RAMP 4ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	558.	80.
HT	24.	80.
MT	18.	80.

0 -----COORDINATES-----

	X	Y	Z	GRADE
F8	498606.	191117.	196.	1
F9	498630.	191196.	197.	1
F10	498632.	191265.	197.	1
F11	498590.	191374.	198.	1
F12	498443.	191535.	200.	1

OROADWAY 27 RAMP 6ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
--------------	---------------	-------

CARS	304.	80.
HT	3.	80.
MT	3.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K5	498605.	190922.	185.	1
K6	498536.	190904.	184.	1
K60	498412.	190872.	183.	1

OROADWAY 28 ROUTE 250 D111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	978.	90.
HT	35.	90.
MT	27.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
D7	498541.	191010.	179.	1
D8	498373.	190952.	180.	1
D9	498251.	190881.	179.	1
D10	498161.	190806.	177.	1
D11	498048.	190668.	171.	1

OROADWAY 29 ROUTE 250 E111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
E7	498538.	191021.	179.	1
E8	498368.	190963.	180.	1
E9	498243.	190892.	179.	1

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		

BB3 498551. 191287. 202. 100.
BB4 498546. 191355. 198. 100.

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		
EE4	498376.	191956.	232.	100.		
EE5	498359.	192024.	226.	100.		
EE6	498385.	192028.	229.	100.		
EE7	498320.	192192.	193.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		

GG3 498921. 193352. 162. 100.
1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
PP1	498644.	191089.	189.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ0	498761.	191156.	181.	181.	0.	0
QQ2	498938.	191167.	171.	171.		
QQ3	499036.	191179.	166.	166.		
QQ4	499100.	191210.	166.	166.		
QQ5	499127.	191217.	170.	170.		
QQ6	499219.	191236.	168.	168.		
QQ7	499324.	191249.	162.	162.		
QQ8	499420.	191279.	170.	170.		
QQ9A	499557.	191305.	151.	151.		

1

BARRIER 18 TYPE(R) WALL 18 NAT BARRIER AT WOODBURN ROAD

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 EXTENSION OF NATURAL WALL 17 AT US 250

	.5	.5	.5	.5	.5	.5	.5		
23 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5			
24 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5			
25 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5			
26 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5			
27 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5			
28 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5			
29 *	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5	.5	.5			

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	.0	.0	.0	.0	.0	.0				
2 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	.0	.0	.0	.0	.0	.0				
3 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	.0	.0	.0	.0	.0	.0				
4 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	.0	.0	.0	.0	.0	.0	.0	2.0	2.0	
	2.0	2.0	.0	.0	.0	.0				
5 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	.0	.0	.0	.0	.0	.0	.0	2.0	2.0	
	2.0	2.0	.0	.0	.0	.0				
6 *	1.0	.0	.0	.0	.0	.0	.0	.0	.0	
	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	.0	.0	.0	.0	.0	.0				
7 *	.0	3.0	1.0	.0	.0	.0	3.0	.0	3.0	4.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	3.0	3.0	.0	.0	.0			
8 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	3.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	3.0	3.0	3.0	2.0	1.0			
9 *	1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0				
10 *	.0	3.0	1.0	.0	.0	.0	3.0	.0	3.0	4.0

	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0				
29 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0				

1

RECEIVER	LEQ(H)	L10
R300	61.9	65.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	8	9	10	11	12	
	40.4	46.4	52.3	54.7	47.2	
9	8	9	10	11	12	13
	40.3	46.4	55.2	56.5	48.9	40.8

1

RECEIVER	LEQ(H)	L10
R301	58.8	62.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	4	5	6	7
	43.6	55.1	40.6	41.2
10	4	5	6	7
	44.3	54.1	44.2	42.2

1

RECEIVER	LEQ(H)	L10
R302	59.2	62.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	5	6	7	8
	46.3	47.1	51.4	47.9
10	5	6	7	8
	47.7	47.7	54.0	49.3

1

RECEIVER	LEQ(H)	L10
R304	60.9	63.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	8	9	10	11	12
---	---	---	----	----	----

	46.3	49.8	53.5	49.2	44.1
10	8	9	10	11	12
	47.1	50.4	53.6	48.7	44.5
19	2				
	45.4				
23	1	2			
	51.2	45.6			

1

RECEIVER	LEQ(H)	L10
R305	71.6	74.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	8	9	10	11	12	13
	44.3	49.1	64.6	59.6	48.3	40.3
10	8	9	10	11	12	13
	45.3	50.0	63.2	58.4	48.8	41.9
19	2					
	53.5					
23	1	2				
	68.6	46.9				

1

RECEIVER	LEQ(H)	L10
R306	66.2	69.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	9	10	11	12	
	40.8	54.9	51.3	45.5	
10	9	10	11	12	13
	41.4	57.1	51.8	46.3	40.6
19	1	2			
	59.4	62.8			
23	1	2			
	48.9	40.6			

1

RECEIVER	LEQ(H)	L10
R307	59.7	63.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	10	11	12	13
	47.7	52.3	49.0	40.3
10	10	11	12	13
	49.0	53.6	50.4	42.1

19 2
 46.3
23 1 2
 47.9 41.9

1

RECEIVER LEQ(H) L10
R308 60.2 63.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 11 12 13
 41.9 49.2 52.7
8 1 2
 47.6 43.9
10 11 12 13
 42.1 49.7 55.4
11 1 2
 50.8 45.8

1

RECEIVER LEQ(H) L10
R309 60.8 64.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 10 11 12 13
 42.7 50.7 56.0 45.2
8 1
 42.2
10 10 11 12 13
 43.6 49.8 54.9 46.6
11 1
 42.9
23 1 2
 44.4 44.8

1

RECEIVER LEQ(H) L10
R310 57.2 60.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7 11 12 13
 44.2 50.8 46.0
8 1 2
 44.0 40.3
10 11 12 13

	43.7	50.1	46.9
11	1	2	
	44.5	41.2	
23	1	2	
	40.6	42.2	

1

RECEIVER	LEQ(H)	L10
R311	67.8	70.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	6	7	8	9	10
	43.8	56.3	62.9	53.2	44.2
11	6	7	8	9	10
	44.7	56.4	61.3	53.0	44.1
24	3				
	61.0				

1

RECEIVER	LEQ(H)	L10
R312	60.8	64.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	11	12
	44.0	55.4
11	11	12 13
	44.9	58.5 49.1

1

RECEIVER	LEQ(H)	L10
R313	59.4	62.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	5	6	7	8
	48.6	53.2	46.6	43.4
9	5	6	7	8
	51.1	54.1	46.2	42.5

1

RECEIVER	LEQ(H)	L10
R314	72.6	76.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	4	5	6	7	8	9
	42.9	56.9	67.8	52.0	45.1	40.7
9	4	5	6	7	8	9
	43.8	58.0	70.2	52.0	44.6	40.2

1

RECEIVER	LEQ(H)	L10
R315	72.3	75.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	4	5	6	7	8	9	
	42.6	56.4	69.9	52.4	45.1	40.6	
9	3	4	5	6	7	8	9
	40.6	43.5	57.0	67.6	52.2	44.5	40.1

1

RECEIVER	LEQ(H)	L10
R316	69.5	72.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	4	5	6	7	8	9
	40.3	51.2	64.3	56.9	47.6	42.4
9	4	5	6	7	8	9
	40.2	52.3	66.7	57.4	47.0	41.8

1

RECEIVER	LEQ(H)	L10
R317	80.3	83.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	5	6	7	8	9
	47.1	61.4	73.5	51.5	44.4
9	5	6	7	8	9
	48.1	62.3	79.2	50.9	43.8

1

RECEIVER	LEQ(H)	L10
R318	56.9	59.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	3	4	5	6	7	8
---	---	---	---	---	---	---

	41.4	44.2	44.4	46.2	47.5	43.4
9	3	4	5	6	7	8
	43.4	45.3	44.7	45.6	47.7	42.9

1

RECEIVER	LEQ(H)	L10
R47M	51.7	54.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	7	8	
	43.3	41.5	
9	5	7	8
	40.1	41.3	40.5

1

RECEIVER	LEQ(H)	L10
R50M	75.0	78.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	4	5	6	7	8	9
	40.9	51.7	69.4	57.3	47.3	42.1
9	4	5	6	7	8	9
	41.6	52.7	73.2	57.5	46.8	41.6

1*** NO SOLUTION FOR RECEIVER 21 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 21, BARRIER 20 AND ROADWAY 27

1

RECEIVER	LEQ(H)	L10
R51M	.0	3.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	5	6	7	8	9
	43.0	54.9	60.5	51.3	44.2
9	5	6	7	8	9
	45.6	54.7	59.2	50.4	43.5

1

RECEIVER	LEQ(H)	L10
R55M	58.0	60.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	7	8	9	10	11
	45.3	49.8	50.7	45.2	41.9
9	7	8	9	10	11
	45.4	49.7	50.5	45.7	41.3

1

RECEIVER	LEQ(H)	L10
R303	60.8	64.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	5	6	7	8
	42.3	48.4	54.3	48.5
10	5	6	7	8
	45.3	47.9	57.2	50.0

1

RECEIVER	LEQ(H)	L10
R319	58.6	62.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

7	5	6	7	8	9
	41.1	43.0	50.6	52.3	40.7
10	5	6	7	8	9
	41.0	43.3	51.0	52.5	41.6

1

RECEIVER	LEQ(H)	L10
R320	54.6	57.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	4	5	6	7
	45.5	43.6	45.5	42.2
11	4	5	6	7
	45.0	43.7	45.6	42.8

1

RECEIVER	LEQ(H)	L10
R321	61.7	64.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	5	6	7	8	9
	45.1	53.2	54.4	43.4	40.7

11	4	5	6	7	8	9
	40.3	45.7	53.0	54.0	44.0	40.7
24	3					
	55.3					

1

RECEIVER	LEQ(H)	L10
R322	62.9	66.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

8	5	6	7	8	9	10
	41.2	47.3	57.9	51.4	46.0	40.2
11	5	6	7	8	9	10
	42.0	48.0	57.3	51.5	45.9	40.1
24	3					
	53.7					



1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/25/97 23:14:13
 INPUT FILE - 300-PM_2.INC
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN ** RECEIVERS R1-R39 ** ROAD SET #2 CENTRAL
 PROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 NORTH GROUNDS CONNECTOR A11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED		
	CARS	627.	50.		
HT	7.	50.			
MT	6.	50.			
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
A9	498624.	190870.	186.	1	
A10	498622.	190951.	185.	1	
A11	498618.	191091.	187.	1	

ROADWAY 2 NORTH GROUNDS CONNECTOR B11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED		
	CARS	735.	50.		
HT	8.	50.			
MT	7.	50.			
0	-----COORDINATES-----				
	X	Y	Z	GRADE	
B9	498612.	190870.	186.	1	
B10	498610.	190951.	185.	1	
B11	498606.	191091.	187.	1	

ROADWAY 3 ROUTE 250 D11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	978.	90.
HT	35.	90.

	MT	27.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D3	499109.	191156.	163.	1
D4	498918.	191108.	166.	1
D5	498752.	191065.	172.	1
D6	498701.	191051.	174.	1

OROADWAY 4 ROUTE 250 E11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	1918.	90.	
	HT	69.	90.	
	MT	53.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
E3	499106.	191170.	163.	1
E4	498914.	191120.	166.	1
E5	498749.	191077.	172.	1
E6	498698.	191063.	174.	1

OROADWAY 5 RAMP 511

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	480.	80.	
	HT	17.	80.	
	MT	13.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
J6	498593.	191102.	187.	1
J7	498519.	191087.	190.	1
J8	498418.	191053.	192.	1
J9	498294.	190989.	190.	1
J10	498191.	190911.	185.	1
J11	498115.	190832.	180.	1

OROADWAY 6 RAMP 5111

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	141.	80.	
	HT	5.	80.	
	MT	4.	80.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
J11	498115.	190832.	180.	1
J12	498008.	190664.	170.	1
J13	497973.	190583.	166.	1

OROADWAY 7 RAMP 6iii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	265.	80.
HT	3.	80.
MT	3.	80.

0 -----COORDINATES-----

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K7	498270.	190824.	182.	1
K12	498156.	190747.	180.	1
K13	498075.	190654.	175.	1
K14	497998.	190478.	172.	1

OROADWAY 8 ROUTE 250 Div

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1579.	90.
HT	57.	90.
MT	44.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
D11	498048.	190668.	171.	1
D12	497980.	190541.	165.	1
D13	497941.	190433.	163.	1

OROADWAY 9 ROUTE 250 Eiv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2482.	90.
HT	90.	90.
MT	68.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E9	498243.	190892.	179.	1
E10	498151.	190816.	177.	1
E11	498034.	190676.	171.	1
E12	497965.	190547.	165.	1

OROADWAY 10 ROUTE 250 Ev

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2623.	90.
HT	95.	90.
MT	73.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E12	497965.	190547.	165.	1
E13	497925.	190438.	163.	1

OROADWAY 11 IVY ROAD V

	VEHICLE TYPE	VEHICLES/HOUR	SPEED
	CARS	995.	72.
	HT	54.	72.
	MT	21.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H1	497975.	190297.	170.	1
H3	497919.	190355.	170.	1

OROADWAY 12 IVY ROAD Vii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED
	CARS	995.	72.
	HT	54.	72.
	MT	21.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H33	497893.	190383.	170.	1
H5	497838.	190442.	170.	1

OROADWAY 13 IVY ROAD W

	VEHICLE TYPE	VEHICLES/HOUR	SPEED
	CARS	837.	72.
	HT	45.	72.
	MT	18.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H2	497969.	190288.	170.	1
H4	497915.	190345.	170.	1

OROADWAY 14 IVY ROAD Wii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED
	CARS	837.	72.
	HT	35.	72.
	MT	18.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H44	497879.	190383.	170.	1

H6 497832. 190432. 170. 1

OROADWAY 15 IVY ROAD Wiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1032.	72.
HT	56.	72.
MT	22.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H6	497832.	190432.	170.	1
H7	497793.	190456.	170.	1
H9	497703.	190532.	170.	1

OROADWAY 16 IVY ROAD Viii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1451.	72.
HT	78.	72.
MT	31.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H5	497838.	190442.	170.	1
H8	497803.	190463.	170.	1
H10	497771.	190540.	170.	1

OROADWAY 17 ROUTE 250 Evi

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E13	497925.	190438.	163.	1
E14	497858.	190241.	162.	1

OROADWAY 18 ROUTE 250 Dv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	996.	90.
HT	36.	90.
MT	28.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
D13	497941.	190433.	163.	1

D14 497873. 190236. 162. 1

OROADWAY 19 OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	556.	60.
HT	8.	60.
MT	16.	60.

0 -----COORDINATES-----

	X	Y	Z	GRADE
OI1	498121.	190435.	179.	0
OI2	497955.	190488.	176.	0
OI3	497935.	190494.	166.	0
OI4	497876.	190513.	167.	0
OI5	497775.	190562.	165.	0

OROADWAY 20 RAMP TO OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	340.	60.
HT	7.	60.
MT	13.	60.

0 -----COORDINATES-----

	X	Y	Z	GRADE
OIR1	498074.	190788.	181.	0
OIR2	497906.	190644.	169.	0

OROADWAY 21 RIO ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1450.	70.
HT	20.	70.
MT	60.	70.

0 -----COORDINATES-----

	X	Y	Z	GRADE
RIO0	500455.	193741.	177.	0
RIO1	500712.	193980.	173.	0
RIO2	501033.	194280.	172.	0
RIO3	501629.	194648.	170.	0

OROADWAY 22 BARRACKS ROAD SOUTH

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	950.	80.
HT	20.	80.
MT	30.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
BARR1	498418.	192490.	170.	0
BARR2	498695.	192305.	183.	0

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	100.	0.	0
DD2	498282.	191762.	216.	100.		
DD3	498278.	191846.	214.	100.		
DD4	498300.	191852.	217.	100.		
DD5	498294.	191942.	217.	100.		
DD6	498270.	191951.	213.	100.		
DD7	498259.	192036.	214.	100.		
DD8	498250.	192132.	199.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	100.	0.	0
EE2	498380.	191852.	225.	100.		
EE3	498361.	191856.	225.	100.		

EE4	498376.	191956.	232.	100.
EE5	498359.	192024.	226.	100.
EE6	498385.	192028.	229.	100.

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----
X Y Z Z0 DELZ P
LL1 500599. 194141. 177. 100. 0. 0
LL2 500659. 194168. 183. 100.
LL3 500747. 194228. 183. 100.
LL4 500861. 194339. 178. 100.

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----
X Y Z Z0 DELZ P
MM1 501415. 194702. 164. 100. 0. 0
MM2 501487. 194738. 167. 100.

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----
X Y Z Z0 DELZ P
NN1 501856. 195108. 173. 100. 0. 0
NN2 501937. 195157. 179. 100.
NN3 501966. 195181. 177. 100.

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----
X Y Z Z0 DELZ P
OO1 502037. 195215. 178. 100. 0. 0
OO2 502109. 195243. 179. 100.

1

BARRIER 16 TYPE(R) WALL 16 - NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----
X Y Z Z0 DELZ P
PP1 498644. 191089. 189. 100. 0. 0
PP2 498711. 191108. 182. 100.
PP3 498745. 191110. 180. 100.
PP4 498810. 191123. 166. 100.
PP5 498843. 191126. 173. 100.
PP6 498909. 191136. 166. 100.

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----
X Y Z Z0 DELZ P
QQ0 498761. 191156. 181. 181. 0. 0
QQ2 498938. 191167. 171. 171.
QQ3 499036. 191179. 166. 166.

QQ4	499100.	191210.	166.	166.
QQ5	499127.	191217.	170.	170.
QQ6	499219.	191236.	168.	168.
QQ7	499324.	191249.	162.	162.
QQ8	499420.	191279.	170.	170.
QQ9A	499557.	191305.	151.	151.

1

BARRIER 18 TYPE(R) WALL 18 NAT BARRIER NEAR WOODBURN ROAD

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
RR1	502052.	195277.	182.	100.	0.	0
RR2	502084.	195322.	180.	100.		
RR3	502159.	195391.	178.	100.		
RR4	502241.	195450.	173.	100.		

1

BARRIER 19 TYPE(R) WALL 19 - EXT OF WALL 17 NEAR US 250

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ9B	499559.	191307.	151.	151.	0.	0
QQ10	499575.	191324.	158.	158.		

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
R300	498768.	192878.	171.
R301	499851.	194148.	157.
R302	500216.	193939.	157.
R303	500452.	193989.	170.
R304	500723.	194486.	177.
R305	500866.	194455.	178.
R306	500907.	194289.	172.
R307	501074.	194387.	166.
R308	501463.	194599.	168.
R309	501070.	194662.	161.
R310	501114.	194754.	157.
R311	502641.	195688.	164.
R312	503302.	196494.	108.
R313	498250.	191999.	214.
R314	498324.	192036.	219.
R315	498280.	192041.	214.
R316	498345.	192111.	210.
R317	498313.	192207.	188.
R318	498447.	191978.	243.
R47MOD	498160.	191923.	199.
R50MOD	498319.	192106.	208.
R51MOD	498223.	192242.	176.
R55MOD	498580.	192482.	0.

11 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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12 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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13 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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14 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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16 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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17 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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18 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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19 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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20 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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21 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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22 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
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	.0	.0	.0	.0	.0	.0				

1

RECEIVER	LEQ(H)	L10
R300	41.1	44.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R301	37.9	40.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R302	45.9	48.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

BARRIER 1 TYPE(R) BARRIER 1

-----COORDINATES-----						
	X	Y	Z	Z0	DELZ	P
DD1	498300.	191717.	212.	202.	0.	0
DD2	498282.	191762.	216.	206.		
DD3	498278.	191846.	214.	204.		
DD4	498300.	191852.	217.	207.		
DD5	498294.	191942.	217.	207.		
DD6	498270.	191951.	213.	203.		
DD7	498259.	192036.	214.	204.		
DD8	498250.	192132.	199.	189.		

1

BARRIER 2 TYPE(R) BARRIER 2 WALL 5

-----COORDINATES-----						
	X	Y	Z	Z0	DELZ	P
EE1	498355.	191734.	204.	194.	0.	0
EE2	498380.	191852.	225.	215.		
EE3	498361.	191856.	225.	215.		
EE4	498376.	191956.	232.	222.		
EE5	498359.	192024.	226.	216.		
EE6	498385.	192028.	229.	219.		
EE7	498320.	192192.	193.	183.		

1

BARRIER 3 TYPE(R) NOISE WALL NEAR FALCON CREST

-----COORDINATES-----						
	X	Y	Z	Z0	DELZ	P
CNT1	498285.	192119.	201.	197.	1.	3
CNT2	498287.	192194.	198.	194.		
CNT3	498294.	192264.	195.	191.		
CNT4	498304.	192328.	193.	189.		

1

Receptor

-----COORDINATES-----			
	X	Y	Z
R50MOD	498319.	192106.	208.
R51MOD	498223.	192242.	176.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .5 .5
 2 * .5 .5

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .0 .0
 2 * .0 .0

1

RECEIVER LEQ (H) L10
 R50M 75.0 78.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	4	5	6	7	8	9
	40.9	51.7	69.5	57.4	47.4	42.0
2	4	5	6	7	8	9
	46.2	52.7	73.2	57.5	46.8	41.6

1

RECEIVER	LEQ(H)	L10
R51M	58.3	61.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	5	6	7	8	9
	43.0	50.2	48.8	51.3	44.0
2	5	6	7	8	9
	45.6	48.5	44.7	50.4	43.5

APPENDIX E

STAMINA PRINTOUT FOR 2022 BUILD ALTERNATIVE

EASTERN ALIGNMENT

NOISE LEVELS

(STILLHOUSE MOUNTAIN AREA ONLY)

NOTE:

THE RESULTS FOR EACH RECEPTOR ARE CONTAINED IN TWO STAMINA PRINTOUTS (ONE FOR EACH SET OF ROADS) AND MUST BE COMBINED (REFER SECTION 5.4 IN REPORT).

FOR SITES 50 AND 51 SEE LAST STAMINA OUTPUTS IN THIS APPENDIX. ANY OTHER PROJECTIONS FOR THESE SITES SHOULD BE IGNORED.

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/23/97 11:20:44
 INPUT FILE - STILLP_2.INS
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN ** RECEIVERS R313-318,R46-53 ** ROAD SET #2 STILLHOUSE
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

ROADWAY 1 NORTH GROUNDS CONNECTOR A11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	627.	50.
HT	7.	50.
MT	6.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A9	498624.	190870.	186.	1
A10	498622.	190951.	185.	1
A11	498618.	191091.	187.	1

ROADWAY 2 NORTH GROUNDS CONNECTOR B11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	735.	50.
HT	8.	50.
MT	7.	50.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
B9	498612.	190870.	186.	1
B10	498610.	190951.	185.	1
B11	498606.	191091.	187.	1

ROADWAY 3 ROUTE 250 D11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	978.	90.
HT	35.	90.

	MT	27.	90.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
D3	499109.	191156.	163.	1
D4	498918.	191108.	166.	1
D5	498752.	191065.	172.	1
D6	498701.	191051.	174.	1

OROADWAY 4 ROUTE 250 E11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

0	-----COORDINATES-----			
	X	Y	Z	GRADE
E3	499106.	191170.	163.	1
E4	498914.	191120.	166.	1
E5	498749.	191077.	172.	1
E6	498698.	191063.	174.	1

OROADWAY 5 RAMP 511

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	480.	80.
HT	17.	80.
MT	13.	80.

0	-----COORDINATES-----			
	X	Y	Z	GRADE
J6	498593.	191102.	187.	1
J7	498519.	191087.	190.	1
J8	498418.	191053.	192.	1
J9	498294.	190989.	190.	1
J10	498191.	190911.	185.	1
J11	498115.	190832.	180.	1

OROADWAY 6 RAMP 5111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	141.	80.
HT	5.	80.
MT	4.	80.

0	-----COORDINATES-----			
	X	Y	Z	GRADE
J11	498115.	190832.	180.	1
J12	498008.	190664.	170.	1
J13	497973.	190583.	166.	1

OROADWAY 7 RAMP 6111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	265.	80.
HT	3.	80.
MT	3.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K7	498270.	190824.	182.	1
K12	498156.	190747.	180.	1
K13	498075.	190654.	175.	1
K14	497998.	190478.	172.	1

OROADWAY 8 ROUTE 250 Div

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1579.	90.
HT	57.	90.
MT	44.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
D11	498048.	190668.	171.	1
D12	497980.	190541.	165.	1
D13	497941.	190433.	163.	1

OROADWAY 9 ROUTE 250 Eiv

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2482.	90.
HT	90.	90.
MT	68.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
E9	498243.	190892.	179.	1
E10	498151.	190816.	177.	1
E11	498034.	190676.	171.	1
E12	497965.	190547.	165.	1

OROADWAY 10 ROUTE 250 Ev

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2623.	90.
HT	95.	90.
MT	73.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
E12	497965.	190547.	165.	1
E13	497925.	190438.	163.	1

OROADWAY 11 IVY ROAD V

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	995.	72.	
	HT	54.	72.	
	MT	21.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H1	497975.	190297.	170.	1
H3	497919.	190355.	170.	1

OROADWAY 12 IVY ROAD Vii

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	995.	72.	
	HT	54.	72.	
	MT	21.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H33	497893.	190383.	170.	1
H5	497838.	190442.	170.	1

OROADWAY 13 IVY ROAD W

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	837.	72.	
	HT	45.	72.	
	MT	18.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H2	497969.	190288.	170.	1
H4	497915.	190345.	170.	1

OROADWAY 14 IVY ROAD W11

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	837.	72.	
	HT	35.	72.	
	MT	18.	72.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
H44	497879.	190383.	170.	1

H6 497832. 190432. 170. 1

OROADWAY 15 IVY ROAD W111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1032.	72.
HT	56.	72.
MT	22.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H6	497832.	190432.	170.	1
H7	497793.	190456.	170.	1
H9	497703.	190532.	170.	1

OROADWAY 16 IVY ROAD V111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1451.	72.
HT	78.	72.
MT	31.	72.

0 -----COORDINATES-----

	X	Y	Z	GRADE
H5	497838.	190442.	170.	1
H8	497803.	190463.	170.	1
H10	497711.	190540.	170.	1

OROADWAY 17 ROUTE 250 E11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
E13	497925.	190438.	163.	1
E14	497858.	190241.	162.	1

OROADWAY 18 ROUTE 250 D11

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	996.	90.
HT	36.	90.
MT	28.	90.

0 -----COORDINATES-----

	X	Y	Z	GRADE
D13	497941.	190433.	163.	1

D14 497873. 190236. 162. 1

OROADWAY 19 OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	556.	60.
HT	8.	60.
MT	16.	60.

0

-----COORDINATES-----

	X	Y	Z	GRADE
OI1	498121.	190435.	179.	0
OI2	497955.	190488.	176.	0
OI3	497935.	190494.	166.	0
OI4	497876.	190513.	167.	0
OI5	497775.	190562.	165.	0

OROADWAY 20 RAMP TO OLD IVY ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	340.	60.
HT	7.	60.
MT	13.	60.

0

-----COORDINATES-----

	X	Y	Z	GRADE
OIR1	498074.	190788.	181.	0
OIR2	497906.	190644.	169.	0

OROADWAY 21 RIO ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1450.	70.
HT	20.	70.
MT	60.	70.

0

-----COORDINATES-----

	X	Y	Z	GRADE
RIO1	500712.	193980.	173.	0
RIO2	501033.	194280.	172.	0
RIO3	501629.	194648.	170.	0

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		
BB3	498551.	191287.	202.	100.		
BB4	498546.	191355.	198.	100.		

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) WALL 4

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498318.	191738.	211.	100.	0.	0
DD2	498313.	191747.	214.	100.		
DD3	498310.	191841.	217.	100.		
DD4	498337.	191982.	225.	100.		
DD5	498339.	191992.	225.	100.		
DD6	498344.	192011.	225.	100.		
DD7	498348.	192019.	225.	100.		
DD8	498373.	192115.	210.	100.		

1

BARRIER 5 TYPE(R) WALL 5

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498348.	191762.	210.	100.	0.	0
EE2	498346.	191781.	214.	100.		
EE3	498345.	191820.	220.	100.		
EE4	498362.	191920.	229.	100.		
EE5	498387.	192008.	232.	100.		
EE6	498399.	192071.	222.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	ZO	DELZ	P
--	---	---	---	----	------	---

MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16 NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
PP1	498644.	191089.	190.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ1	498809.	191160.	177.	100.	0.	0
QQ2	498938.	191167.	171.	100.		
QQ3	499036.	191179.	166.	100.		
QQ4	499100.	191210.	166.	100.		
QQ5	499127.	191217.	170.	100.		
QQ6	499219.	191236.	168.	100.		
QQ7	499324.	191249.	162.	100.		
QQ8	499420.	191279.	170.	100.		

1

RECEIVERS

-----COORDINATES-----

	X	Y	Z
R313	498250.	191999.	214.
R314	498324.	192036.	219.

R315	498280.	192041.	214.
R316	498345.	192111.	210.
R317	498313.	192207.	188.
R318	498447.	191978.	243.
R46	498160.	191923.	202.
R47	498447.	191978.	245.
R48	498089.	192007.	198.
R49	498092.	192047.	194.
R50	498318.	192106.	211.
R51	498223.	192242.	178.
R52	498187.	192162.	185.
R53	498168.	192117.	190.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
2 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
3 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
4 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
5 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
6 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
7 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
8 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
9 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
10 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
11 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
12 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
13 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
14 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
15 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
16 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
17 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
18 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
19 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						

20 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
21 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
2 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
3 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
4 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
5 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
6 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
7 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
8 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
9 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
10 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
11 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
12 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
13 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
14 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
15 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
16 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
17 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
18 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
19 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
20 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
21 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						

1

RECEIVER	LEQ(H)	L10
R313	41.1	43.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R314	40.3	42.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R315	40.4	42.7

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1*** NO SOLUTION FOR RECEIVER 4 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 4, BARRIER 18 AND ROADWAY 5

1

RECEIVER	LEQ(H)	L10
R316	.0	2.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R317	39.1	41.4

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R318	43.3	45.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R46	42.3	44.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R47	43.3	45.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER	LEQ(H)	L10
R48	41.3	43.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R49 40.5 42.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1*** NO SOLUTION FOR RECEIVER 11 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 11, BARRIER 18 AND ROADWAY 5

1

RECEIVER LEQ(H) L10
R50 .0 2.3

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R51 38.5 40.8

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R52 39.3 41.6

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

RECEIVER LEQ(H) L10
R53 39.7 42.0

NO ROADWAY SEGMENTS EXCEED 40.0 DBA

1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 02/21/97 15:37:41
 INPUT FILE - stil5051.in
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

Stillhouse at 50 and 51
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 RDWY 1 - Stillhouse

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.
HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498364.	191624.	205.	0
A16	498320.	191820.	207.	1
A17	498358.	192015.	206.	1
A18	498393.	192212.	200.	1
A19	498388.	192413.	193.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

OROADWAY 2 RDWY2 Stillhouse

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----				
	X	Y	Z	GRADE
B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498374.	191628.	205.	1
B16	498333.	191820.	207.	0
B17	498369.	192013.	206.	0
B18	498406.	192212.	200.	0
B19	498403.	192411.	193.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

1

BARRIER 1 TYPE(R) Stillhouse Barrier #1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498318.	191738.	211.	201.	0.	0
DD2	498313.	191747.	213.	203.		
DD3	498310.	191841.	217.	207.		
DD4	498337.	191982.	225.	215.		
DD5	498339.	191992.	225.	225.		
DD6	498344.	192011.	225.	215.		
DD7	498348.	192019.	225.	215.		
DD8	498373.	192115.	210.	200.		

1

BARRIER 2 TYPE(R) Stillhouse Barrier #2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498348.	191762.	210.	200.	0.	0
EE2	498346.	191781.	214.	204.		
EE3	498345.	191820.	220.	210.		
EE4	498362.	191920.	229.	219.		
EE5	498387.	192008.	232.	222.		
EE6.	498399.	192071.	222.	212.		

1

BARRIER 3 TYPE(R) NOISE WALL NEAR FALCON CREST

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CNT1	498285.	192119.	201.	197.	1.	3
CNT2	498287.	192194.	198.	194.		
CNT3	498294.	192264.	195.	191.		
CNT4	498304.	192328.	193.	189.		

1

Receptor

-----COORDINATES-----

	X	Y	Z
R50MOD	498319.	192106.	208.
R51MOD	498223.	192242.	176.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .5 .5
 2 * .5 .5

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 * .0 .0
 2 * .0 .0

1

RECEIVER LEQ(H) L10
 R50M 63.1 66.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	6	7	8	9
	59.3	52.8	45.9	42.0
2	6	7	8	9
	58.2	52.6	44.1	41.6

1

RECEIVER	LEQ(H)	L10
R51M	53.5	56.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

1	7	8	9
	41.4	48.5	44.0
2	7	8	9
	40.3	45.2	43.5



1

STAMINA 2.0/BCR
 FHWA VERSION 3 (MARCH 1983)
 TRAFFIC NOISE PREDICTION MODEL

DATE AND TIME OF THIS RUN 01/23/97 11:17:35
 INPUT FILE - STILLP_1.INS
 (INPUT UNITS- METRIC , OUTPUT UNITS- METRIC)

PM RUN ** RECEIVERS R313-318,R46-53 ** ROAD SET #1 STILLHOUSE
 OPROGRAM INITIALIZATION PARAMETERS

HEIGHT	CODE	DESCRIPTION
.00	1	RECEIVER HEIGHT ADJUSTMENT
1.00	2	A-WEIGHTED SOUND LEVEL ONLY
.00	3	HEIGHT ADJUSTMENT FOR PASSENGER CARS (CARS)
2.44	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.70	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)

OROADWAY 1 MASSIE ROAD

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	588.	56.
HT	6.	56.
MT	6.	56.

0 -----COORDINATES-----

	X	Y	Z	GRADE
I1	498983.	190641.	178.	1
I2	498935.	190545.	177.	1

OROADWAY 2 North Grounds Connector A

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	755.	50.
HT	8.	50.
MT	7.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
A1	499008.	190362.	175.	1
A2	499010.	190422.	176.	1
A3	499000.	190461.	177.	1
A4	498949.	190524.	178.	1
A5	498839.	190572.	179.	1
A6	498748.	190611.	186.	1
A7	498681.	190667.	189.	1
A8	498639.	190744.	188.	1
A9	498624.	190870.	186.	1

OROADWAY 3 North Grounds Connector B

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	804.	50.
HT	8.	50.
MT	8.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
B1	499004.	190362.	175.	0
B2	499006.	190422.	176.	0
B3	498997.	190460.	177.	0
B4	498945.	190518.	178.	0
B5	498834.	190561.	179.	0
B6	498741.	190600.	186.	0
B7	498671.	190660.	189.	0
B8	498627.	190740.	188.	0
B9	498612.	190870.	186.	0

OROADWAY 4 ROUTE 250 D

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1181.	90.
HT	28.	90.
MT	21.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
D0	499702.	191313.	151.	1
D1	499405.	191234.	161.	1
D2	499296.	191205.	162.	1
D3	499109.	191156.	163.	1

OROADWAY 5 ROUTE 250 E

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2582.	90.
HT	62.	90.
MT	46.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
E0	499699.	191325.	151.	1
E1	499402.	191247.	161.	1
E2	499293.	191219.	162.	1
E3	499106.	191170.	163.	1

OROADWAY 6 STILLHOUSE

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.

HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
A12	498604.	191239.	191.	0
A13	498566.	191364.	194.	0
A14	498488.	191461.	198.	0
A15	498364.	191624.	205.	0
A16	498320.	191820.	207.	1
A17	498358.	192015.	206.	1
A18	498393.	192212.	200.	1
A19	498388.	192413.	193.	1
A20	498425.	192538.	176.	1
A21	498545.	192749.	167.	1
A22	498631.	192888.	160.	1
A23	498730.	193091.	152.	1
A24	498846.	193345.	149.	1
A25	498959.	193591.	144.	1

OROADWAY 7 US 29 Aii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.
HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
A25	498959.	193591.	144.	0
A26	499050.	193746.	143.	0
A27	499248.	193915.	150.	0
A28	499391.	193973.	159.	0
A29	499647.	193996.	161.	0
A30	500026.	194064.	161.	0
A31	500144.	194098.	162.	0
A32	500318.	194124.	166.	0
A33	500630.	194201.	172.	0
A34	500770.	194309.	172.	1
A35	500919.	194448.	168.	1
A36	501055.	194544.	161.	1
A37	501271.	194666.	155.	1
A38	501441.	194770.	158.	1

OROADWAY 8 US 29 Aiii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1088.	90.
HT	47.	90.
MT	35.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
--	---	---	---	-------

A38	501441.	194770.	158.	0
A39	501584.	194914.	162.	0
A40	501749.	195110.	168.	0
A41	501873.	195195.	170.	0
A42	502086.	195281.	173.	0
A43	502262.	195347.	173.	0
A44	502438.	195437.	171.	1
A45	502645.	195605.	164.	1
A46	502758.	195744.	161.	1
A47	502866.	195961.	151.	1
A48	502976.	196182.	143.	1
A49	503099.	196365.	137.	1
A50	503297.	196697.	135.	1

ROADWAY 9 STILLHOUSE

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
B12	498611.	191240.	191.	1
B13	498572.	191367.	194.	1
B14	498498.	191470.	198.	1
B15	498374.	191628.	205.	1
B16	498333.	191820.	207.	0
B17	498369.	192013.	206.	0
B18	498406.	192212.	200.	0
B19	498403.	192411.	193.	0
B20	498437.	192551.	176.	0
B21	498561.	192738.	167.	0
B22	498671.	192902.	161.	0
B23	498763.	193072.	157.	0
B24	498874.	193329.	151.	0
B25	498982.	193577.	147.	0

ROADWAY 10 US 29 Bi1

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
B25	498982.	193577.	147.	1
B26	499053.	193696.	148.	1
B27	499148.	193798.	153.	1
B28	499311.	193905.	157.	1
B29	499644.	193960.	161.	1

B30	499996.	194035.	162.	1
B31	500129.	194079.	162.	1
B32	500319.	194110.	166.	1
B33	500636.	194189.	172.	1
B34	500780.	194299.	172.	0
B35	500929.	194437.	168.	0
B36	501065.	194527.	162.	0
B37	501266.	194641.	157.	0
B38	501455.	194749.	160.	0

OROADWAY 11 US 29 Biii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1367.	90.
HT	59.	90.
MT	44.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
B38	501455.	194749.	160.	1
B39	501617.	194867.	165.	1
B40	501794.	195075.	169.	1
B41	501890.	195166.	171.	1
B42	502092.	195262.	173.	1
B43	502269.	195328.	173.	0
B44	502449.	195421.	171.	0
B45	502660.	195593.	164.	0
B46	502773.	195731.	161.	0
B47	502885.	195955.	151.	0
B48	502993.	196171.	143.	0
B49	503115.	196354.	137.	0
B50	503297.	196625.	135.	0
B51	503379.	196720.	135.	0

OROADWAY 12 RAMP 5

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	605.	80.
HT	26.	80.
MT	20.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
J0	499147.	191181.	163.	1
J1	499105.	191176.	164.	1
J2	499006.	191162.	166.	1
J3	498817.	191135.	175.	1
J4	498692.	191117.	183.	1
J5	498613.	191105.	187.	1

OROADWAY 13 RAMP 6

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	183.	80.
HT	4.	80.
MT	3.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K1	499051.	191136.	165.	1
K2	498895.	191052.	173.	1
K3	498756.	190969.	173.	1
K4	498713.	190950.	167.	1

ROADWAY 14 RAMP 3

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	564.	80.
HT	20.	80.
MT	16.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
G1	498238.	190898.	179.	1
G2	498363.	190970.	180.	1
G3	498497.	191051.	180.	1

ROADWAY 15 RAMP 41

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	39.	80.
HT	1.	80.
MT	1.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K60	498412.	190872.	183.	1
K8	498265.	190835.	182.	1
K10	498202.	190808.	181.	1
K11	498115.	190746.	178.	1

ROADWAY 16 RAMP 4

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	558.	80.
HT	24.	80.
MT	18.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
F2	498048.	190668.	171.	1
F3	498115.	190746.	178.	1

F4	498239.	190845.	181.	1
F5	498385.	190922.	187.	1
F6	498489.	190977.	191.	1
F7	498502.	190986.	195.	1

OROADWAY 17 LAMBS ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	178.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
L1	500009.	193771.	172.	0
L2	500030.	193946.	168.	0
L3	500033.	193990.	168.	0
L4	500038.	194045.	169.	0

OROADWAY 18 ROSLYN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	59.	50.
HT	1.	50.
MT	1.	50.

0 -----COORDINATES-----

	X	Y	Z	GRADE
M1	500708.	193948.	173.	1
M2	500638.	194048.	175.	1
M3	500586.	194157.	180.	1

OROADWAY 19 HYDRAULIC ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	2673.	70.
HT	14.	70.
MT	13.	70.

0 -----COORDINATES-----

	X	Y	Z	GRADE
N0	500882.	194280.	175.	1
N1	500878.	194289.	176.	1
N2	500882.	194387.	178.	1

OROADWAY 20 WOODBURN ROAD S

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	119.	50.

	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
P1	501962.	195048.	183.	0
P2	501999.	195162.	182.	0
P3	502036.	195234.	181.	0

OROADWAY 21 LAMBS ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	178.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
L44	500040.	194074.	169.	0
L5	500043.	194110.	168.	0
L6	500059.	194248.	164.	0

OROADWAY 22 ROSLYN RD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	59.	50.	
	HT	1.	50.	
	MT	1.	50.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
M33	500582.	194192.	178.	0
M4	500587.	194234.	177.	0
M5	500601.	194304.	172.	0
M6	500604.	194392.	169.	0
M7	500545.	194537.	159.	0

OROADWAY 23 HYDRAULIC ROAD N

	VEHICLE TYPE	VEHICLES/HOUR	SPEED	
	CARS	2673.	70.	
	HT	14.	70.	
	MT	13.	70.	
0	-----COORDINATES-----			
	X	Y	Z	GRADE
N3	500884.	194426.	178.	1
N4	500886.	194634.	173.	1
N5	500877.	194754.	165.	1

OROADWAY 24 WOODBURN ROAD N

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	119.	50.
HT	1.	50.
MT	1.	50.

0

-----COORDINATES-----

	X	Y	Z	GRADE
P4	502068.	195284.	180.	0
P44	502191.	195407.	174.	0
P5	502300.	195476.	171.	0
P6	502717.	195738.	165.	0
P7	502763.	195796.	159.	0
P8	502802.	195873.	156.	0
P9	502837.	195987.	155.	0
P10	502842.	196087.	154.	0
P11	502834.	196156.	151.	0

OROADWAY 25 RAMP 3ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	564.	80.
HT	20.	80.
MT	16.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
G4	498546.	191113.	182.	1
G5	498579.	191209.	188.	1
G6	498581.	191270.	207.	1
G7	498521.	191418.	187.	1

OROADWAY 26 RAMP 4ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	558.	80.
HT	24.	80.
MT	18.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
F8	498606.	191117.	196.	1
F9	498630.	191196.	197.	1
F10	498632.	191265.	197.	1
F11	498590.	191374.	198.	1
F12	498443.	191535.	200.	1

OROADWAY 27 RAMP 6ii

VEHICLE TYPE	VEHICLES/HOUR	SPEED
--------------	---------------	-------

CARS	304.	80.
HT	3.	80.
MT	3.	80.

0

-----COORDINATES-----

	X	Y	Z	GRADE
K5	498605.	190922.	185.	1
K6	498536.	190904.	184.	1
K60	498412.	190872.	183.	1

OROADWAY 28 ROUTE 250 D111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	978.	90.
HT	35.	90.
MT	27.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
D7	498541.	191010.	179.	1
D8	498373.	190952.	180.	1
D9	498251.	190881.	179.	1
D10	498161.	190806.	177.	1
D11	498048.	190668.	171.	1

OROADWAY 29 ROUTE 250 E111

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	1918.	90.
HT	69.	90.
MT	53.	90.

0

-----COORDINATES-----

	X	Y	Z	GRADE
E7	498538.	191021.	179.	1
E8	498368.	190963.	180.	1
E9	498243.	190892.	179.	1

1

BARRIER 1 TYPE(R) WALL 1

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
AA1	498655.	190672.	197.	100.	0.	0
AA2	498625.	190701.	199.	100.		

1

BARRIER 2 TYPE(R) WALL 2

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
BB1	498505.	191110.	195.	100.	0.	0
BB2	498530.	191155.	208.	100.		

BB3 498551. 191287. 202. 100.
BB4 498546. 191355. 198. 100.

1

BARRIER 3 TYPE(R) WALL 3

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
CC1	498494.	190868.	195.	100.	0.	0
CC2	498432.	190845.	194.	100.		
CC3	498351.	190833.	187.	100.		

1

BARRIER 4 TYPE(R) STILLHOUSE

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
DD1	498318.	191738.	211.	100.	0.	0
DD2	498313.	191747.	213.	100.		
DD3	498310.	191841.	217.	100.		
DD4	498337.	191982.	225.	100.		
DD5	498339.	191992.	225.	100.		
DD6	498344.	192011.	225.	100.		
DD7	498348.	192019.	225.	100.		
DD8	498373.	192115.	210.	100.		

1

BARRIER 5 TYPE(R) STILLHOUSE

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
EE1	498348.	191762.	210.	100.	0.	0
EE2	498346.	191781.	214.	100.		
EE3	498345.	191820.	220.	100.		
EE4	498362.	191920.	229.	100.		
EE5	498387.	192008.	232.	100.		
EE6	498399.	192071.	222.	100.		

1

BARRIER 6 TYPE(R) WALL 6

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
FF1	498726.	192943.	166.	100.	0.	0
FF2	498745.	192979.	166.	100.		

1

BARRIER 7 TYPE(R) WALL 7

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
GG1	498855.	193239.	157.	100.	0.	0
GG2	498905.	193305.	165.	100.		
GG3	498921.	193352.	162.	100.		

1

BARRIER 8 TYPE(R) WALL 8

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
HH1	499359.	193902.	162.	100.	0.	0
HH2	499481.	193928.	165.	100.		

1

BARRIER 9 TYPE(R) WALL 9

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
II1	499982.	194070.	167.	100.	0.	0
II2	500032.	194092.	167.	100.		

1

BARRIER 10 TYPE(R) WALL 10

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
JJ1	500051.	194098.	166.	100.	0.	0
JJ2	500076.	194107.	164.	100.		

1

BARRIER 11 TYPE(R) WALL 11

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
KK1	500045.	194026.	169.	100.	0.	0
KK2	500114.	194056.	164.	100.		

1

BARRIER 12 TYPE(R) WALL 12

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
LL1	500599.	194141.	177.	100.	0.	0
LL2	500659.	194168.	183.	100.		
LL3	500747.	194228.	183.	100.		
LL4	500861.	194339.	178.	100.		

1

BARRIER 13 TYPE(R) WALL 13

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
MM1	501415.	194702.	164.	100.	0.	0
MM2	501487.	194738.	167.	100.		

1

BARRIER 14 TYPE(R) WALL 14

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
NN1	501856.	195108.	173.	100.	0.	0
NN2	501937.	195157.	179.	100.		
NN3	501966.	195181.	177.	100.		

1

BARRIER 15 TYPE(R) WALL 15

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
OO1	502037.	195215.	178.	100.	0.	0
OO2	502109.	195243.	179.	100.		

1

BARRIER 16 TYPE(R) WALL 16 NEAR RAMP 4 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
PP1	498644.	191089.	190.	100.	0.	0
PP2	498711.	191108.	182.	100.		
PP3	498745.	191110.	180.	100.		
PP4	498810.	191123.	166.	100.		
PP5	498843.	191126.	173.	100.		
PP6	498909.	191136.	166.	100.		

1

BARRIER 17 TYPE(R) WALL 17 NEAR US 250 SHT 5(3)

-----COORDINATES-----

	X	Y	Z	Z0	DELZ	P
QQ1	498809.	191160.	177.	100.	0.	0
QQ2	498938.	191167.	171.	100.		
QQ3	499036.	191179.	166.	100.		
QQ4	499100.	191210.	166.	100.		
QQ5	499127.	191217.	170.	100.		
QQ6	499219.	191236.	168.	100.		
QQ7	499324.	191249.	162.	100.		
QQ8	499420.	191279.	170.	100.		

1

RECEIVER

-----COORDINATES-----

	X	Y	Z
R313	498250.	191999.	214.
R314	498324.	192036.	219.
R315	498280.	192041.	214.
R316	498345.	192111.	210.
R317	498313.	192207.	188.
R318	498447.	191978.	243.
R46	498160.	191923.	202.
R47	498447.	191978.	245.

R48	498089.	192007.	198.
R49	498092.	192047.	194.
R50	498318.	192106.	211.
R51	498223.	192242.	178.
R52	498187.	192162.	185.
R53	498168.	192117.	190.

1

ALPHA FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
2 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
3 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
4 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
5 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
6 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
7 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
8 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
9 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
10 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
11 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
12 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
13 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
14 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
15 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
16 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
17 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
18 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
19 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
20 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
21 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
22 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						

23 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
24 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
25 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
26 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
27 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
28 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						
29 *	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
	.5	.5	.5	.5						

1

SHIELDING FACTORS - RECEIVER ACROSS, ROADWAY DOWN

1 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
2 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
3 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
4 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
5 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
6 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
7 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
8 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
9 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
10 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
11 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
12 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
13 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
14 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
15 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
16 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
17 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						
18 *	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0						

19 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0					
20 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0					
21 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0					
22 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0					
23 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0					
24 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0					
25 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0					
26 *	.0	.0	3.0	3.0	3.0	3.0	.0	.0	.0
	.0	.0	.0	.0					
27 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0					
28 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0					
29 *	.0	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0					

1

RECEIVER	LEQ(H)	L10
R313	56.0	58.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	4	5	6	7	8
	40.6	41.5	49.0	46.9	42.6
9	4	5	6	7	8
	41.4	41.8	48.1	46.9	40.8

1

RECEIVER	LEQ(H)	L10
R314	59.0	62.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	5	6	7	8	9
	44.8	54.2	49.4	43.9	40.7
9	5	6	7	8	9
	44.9	52.5	49.4	42.1	40.2

1

RECEIVER	LEQ(H)	L10
R315	57.8	61.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	5	6	7	8	9
	41.6	52.2	48.9	43.8	40.6
9	5	6	7	8	9
	41.9	51.3	48.8	42.0	40.1

1

RECEIVER	LEQ(H)	L10
R316	66.7	70.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	6	7	8	9
	63.9	53.7	46.2	42.4
9	6	7	8	9
	62.0	53.6	44.4	41.8

1

RECEIVER	LEQ(H)	L10
R317	64.6	67.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	6	7	8	9
	58.5	58.6	49.4	44.4
9	6	7	8	9
	57.9	57.7	47.4	43.8

1

RECEIVER	LEQ(H)	L10
R318	58.2	61.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	3	4	5	6	7	8
	43.1	45.9	41.6	50.1	47.1	42.5
9	3	4	5	6	7	8
	44.9	46.8	43.0	51.8	47.4	40.9

1

RECEIVER	LEQ(H)	L10
R46	54.4	56.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	3	4	6	7	8
	42.7	43.3	43.9	43.5	40.3
9	3	4	6	7	
	44.3	43.0	43.3	43.5	

1

RECEIVER	LEQ(H)	L10
R47	58.2	61.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	3	4	5	6	7	8
	43.1	46.0	41.7	50.1	47.1	42.5
9	3	4	5	6	7	8
	44.9	46.8	43.0	51.7	47.4	40.9

1

RECEIVER	LEQ(H)	L10
R48	53.5	55.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	3	6	7	8
	40.1	43.6	44.0	41.1
9	3	6	7	
	41.7	43.5	43.9	

1

RECEIVER	LEQ(H)	L10
R49	53.7	56.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	6	7	8
	44.3	44.8	41.9
9	3	6	7
	41.0	44.2	44.7

1

RECEIVER	LEQ(H)	L10
R50	63.0	66.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6	6	7	8	9
---	---	---	---	---

59.2 52.7 45.9 42.1
9 6 7 8 9
58.1 52.6 44.0 41.6

1*** NO SOLUTION FOR RECEIVER 12 -MINOR CORRECTION MAY BE NECESSARY.

EXAMINE THE COORDINATES OF RECEIVER 12, BARRIER 18 AND ROADWAY 27

1

RECEIVER LEQ(H) L10
R51 .0 3.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6 6 7 8 9
50.3 53.2 48.8 44.2
9 6 7 8 9
50.4 52.7 46.7 43.5

1

RECEIVER LEQ(H) L10
R52 57.0 60.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6 6 7 8 9
49.3 50.0 45.8 42.1
9 6 7 8 9
49.3 49.6 43.8 41.5

1

RECEIVER LEQ(H) L10
R53 55.7 58.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 40.0 DBA

ROADWAY SEGMENT

6 6 7 8 9
48.2 48.3 44.4 41.1
9 6 7 8 9
48.0 48.0 42.5 40.5

APPENDIX F

OPTIMA PRINTOUT FOR 2022 BUILD ALTERNATIVE

NOISE LEVELS

**NOTE: COST ESTIMATES INCLUDED IN THE OPTIMA MODEL ARE OUT OF DATE. REFER TO
TEXT FOR COST ESTIMATES.**

FH-CONC 82100.
FH-STEEL 0.

BARRIER COST = \$ 82100.

END OF ALL CASES

PROGRAM OPTIMA

BARRIER OPTIMIZATION PROGRAM USING
PARTIAL SOUND ENERGIES COMPUTED BY THE
STAMINA/BCR PROGRAM
FHWA VERSION 3 -- MARCH 1983

PROBLEM TITLE

PM RUN ** RECEIVERS R1-R39 ** ROAD SET #1 CENTRAL

SUMMARY OF BARRIER AND RECEIVER DATA

BARR ELE	ID	TYPE
1	AA1	FH-CONC
2	BB1	FH-CONC
3	BB2	FH-CONC
4	BB3	FH-CONC
5	CC1	FH-CONC
6	CC2	FH-CONC
7	DD1	FH-CONC
8	DD2	FH-CONC
9	DD3	FH-CONC
10	DD4	FH-CONC
11	DD5	FH-CONC
12	DD6	FH-CONC
13	DD7	FH-CONC
14	EE1	FH-CONC
15	EE2	FH-CONC
16	EE3	FH-CONC
17	EE4	FH-CONC
18	EE5	FH-CONC
19	EE6	FH-CONC
20	FF1	FH-CONC
21	GG1	FH-CONC
22	GG2	FH-CONC
23	HH1	FH-CONC
24	II1	FH-CONC
25	JJ1	FH-CONC
26	KK1	FH-CONC
27	LL1	FH-CONC
28	LL2	FH-CONC
29	LL3	FH-CONC
30	MM1	FH-CONC
31	NN1	FH-CONC
32	NN2	FH-CONC

33	OO1	FH-CONC
34	PP1	FH-CONC
35	PP2	FH-CONC
36	PP3	FH-CONC
37	PP4	FH-CONC
38	PP5	FH-CONC
39	QQ0	FH-CONC
40	QQ2	FH-CONC
41	QQ3	FH-CONC
42	QQ4	FH-CONC
43	QQ5	FH-CONC
44	QQ6	FH-CONC
45	QQ7	FH-CONC
46	QQ8	FH-CONC
47	RR1	FH-CONC
48	RR2	FH-CONC
49	RR3	FH-CONC
50	QQ9B	FH-CONC

REC NO.	REC ID	PEOPLE	DNL
1	R1	1.	66.
2	R2	1.	66.
3	R3	1.	66.
4	R4	1.	66.
5	R5	1.	66.
6	R6	1.	66.
7	R7	1.	66.
8	R8	1.	66.
9	R9	1.	66.
10	R10	1.	66.
11	R11	1.	66.
12	R12	1.	66.
13	R13	1.	66.
14	R14	1.	66.
15	R15	1.	66.
16	R16	1.	66.
17	R17	1.	66.
18	R18	1.	66.
19	R19	1.	66.
20	R20	1.	66.
21	R21	1.	66.
22	R22	1.	66.
23	R23	1.	66.
24	R24	1.	66.
25	R25	1.	66.
26	R26	1.	66.
27	R27	1.	66.
28	R28	1.	66.
29	R29	1.	66.
30	R30	1.	66.
31	R31	1.	66.
32	R32	1.	66.
33	R33	1.	66.
34	R34	1.	66.

24	III	*	0.																	0.***
25	JJ1	*	0.																	0.***
26	KK1	*	0.																	0.***
27	LL1	*	0.																	0.***
28	LL2	*	0.																	0.***
29	LL3	*	0.																	0.***
30	MM1	*	0.																	0.***
31	NN1	*	0.																	0.***
32	NN2	*	0.																	0.***
33	OO1	*	0.																	0.***
34	PP1	*	0.																	0.***
35	PP2	*	0.																	0.***
36	PP3	*	0.																	0.***
37	PP4	*	0.																	0.***
38	PP5	*	0.																	0.***
39	QQ0	*	20.	20.	19.	19.	19.	18.	18.	0.	8.	10.	11.	13.	15.	16.	18.			
40	QQ2	*	13.	12.	11.	11.	11.	11.	11.	0.	8.	10.	11.	13.	15.	16.	18.			
41	QQ3	*	15.	14.	14.	13.	14.	14.	14.	0.	8.	10.	11.	13.	15.	16.	18.			
42	QQ4	*	24.	24.	22.	22.	21.	20.	19.	0.	8.	10.	11.	13.	15.	16.	18.			
43	QQ5	*	25.	24.	23.	22.	22.	21.	20.	0.	8.	10.	11.	13.	15.	16.	18.			
44	QQ6	*	22.	22.	21.	21.	21.	21.	21.	0.	8.	10.	11.	13.	15.	16.	18.			
45	QQ7	*	22.	20.	19.	18.	17.	17.	17.	0.	8.	10.	11.	13.	15.	16.	18.			
46	QQ8	*	10.	8.	7.	7.	8.	8.	8.	0.	8.	10.	11.	13.	15.	16.	18.			
47	RR1	*	0.																	0.***
48	RR2	*	0.																	0.***
49	RR3	*	0.																	0.***
50	QQ9B	*	5.	6.	6.	6.	7.	7.	7.	0.	8.	10.	11.	13.	15.	16.	18.			
HEIGHT INDEX			1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8		

PM RUN ** RECEIVERS R1-R39 ** ROAD SET #1 CENTRAL

MAX HEIGHT

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1
1 1 1 1 1 1 1 1 1 1 1 1 1 8 8 8 8 8 8 8 8 1 1 1 8

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

0.
0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.18.18.18.18.18.18.18.18. 0. 0. 0.18.

R E S U L T S

| REC | REC ID | LEQ | LEQ(Z(0)) | IL |
|-----|--------|------|-----------|-----|
| 1 | R1 | 63.0 | 63.0 | .0 |
| 2 | R2 | 61.1 | 61.1 | .0 |
| 3 | R3 | 61.3 | 61.3 | .0 |
| 4 | R4 | 59.3 | 59.3 | .0 |
| 5 | R5 | 56.4 | 56.4 | .0 |
| 6 | R6 | 58.9 | 58.9 | .0 |
| 7 | R7 | 55.8 | 55.8 | .0 |
| 8 | R8 | 58.5 | 58.5 | .0 |
| 9 | R9 | 61.8 | 61.8 | .0 |
| 10 | R10 | 57.1 | 57.1 | .0 |
| 11 | R11 | 58.9 | 58.9 | .0 |
| 12 | R12 | 56.6 | 56.6 | .0 |
| 13 | R13 | 62.9 | 62.9 | .0 |
| 14 | R14 | 62.6 | 62.6 | .0 |
| 15 | R15 | 61.1 | 61.1 | .0 |
| 16 | R16 | 57.6 | 57.6 | .0 |
| 17 | R17 | 59.1 | 59.1 | .0 |
| 18 | R18 | 68.2 | 68.3 | .1 |
| 19 | R19 | 66.3 | 66.4 | .1 |
| 20 | R20 | 65.8 | 65.9 | .1 |
| 21 | R21 | 67.3 | 67.6 | .3 |
| 22 | R22 | 64.6 | 64.8 | .2 |
| 23 | R23 | 67.4 | 67.8 | .4 |
| 24 | R24 | 62.9 | 63.8 | 1.0 |
| 25 | R25 | 57.8 | 65.3 | 7.5 |
| 26 | R26 | 56.0 | 65.5 | 9.5 |
| 27 | R27 | 58.3 | 65.6 | 7.2 |
| 28 | R28 | 61.0 | 66.9 | 5.9 |
| 29 | R29 | 58.9 | 65.3 | 6.4 |
| 30 | R30 | 57.9 | 65.8 | 7.9 |
| 31 | R31 | 58.1 | 65.7 | 7.5 |
| 32 | R32 | 54.9 | 61.9 | 7.0 |
| 33 | R33 | 57.2 | 62.3 | 5.2 |
| 34 | R34 | 59.2 | 63.8 | 4.6 |
| 35 | R35 | 59.8 | 64.0 | 4.1 |

| | | | | |
|----|-----|------|------|-----|
| 36 | R36 | 59.3 | 64.5 | 5.2 |
| 37 | R37 | 56.8 | 61.5 | 4.7 |
| 38 | R38 | 57.0 | 57.0 | .0 |
| 39 | R39 | 55.6 | 55.6 | .0 |

| BARRIER TYPE | COST |
|--------------|---------|
| FH-BERM | 0. |
| FH-MASON | 0. |
| FH-WOOD | 0. |
| FH-CONC | 458800. |
| FH-STEEL | 0. |

BARRIER COST = \$ 458800.

PROGRAM OPTIMA

BARRIER OPTIMIZATION PROGRAM USING
PARTIAL SOUND ENERGIES COMPUTED BY THE
STAMINA/BCR PROGRAM
FHWA VERSION 3 -- MARCH 1983

PROBLEM TITLE

PM RUN ** NOISE WALL TESTS ** ROAD SET #1 CENTRAL

SUMMARY OF BARRIER AND RECEIVER DATA

| BARR ELE | ID | TYPE |
|----------|-------|---------|
| 1 | MV1 | FH-CONC |
| 2 | MV2 | FH-CONC |
| 3 | MV3 | FH-CONC |
| 4 | MV4 | FH-CONC |
| 5 | MV5 | FH-CONC |
| 6 | MV6 | FH-CONC |
| 7 | MV7 | FH-CONC |
| 8 | HYD1 | FH-CONC |
| 9 | HYD2 | FH-CONC |
| 10 | HYD3 | FH-CONC |
| 11 | HYD4 | FH-CONC |
| 12 | WOOD1 | FH-CONC |
| 13 | WOOD2 | FH-CONC |
| 14 | WOOD3 | FH-CONC |
| 15 | WB1 | FH-CONC |
| 16 | WB2 | FH-CONC |
| 17 | WB3 | FH-CONC |
| 18 | WB4 | FH-CONC |
| 19 | WB5 | FH-CONC |
| 20 | WB6 | FH-CONC |
| 21 | WB7 | FH-CONC |
| 22 | WB8 | FH-CONC |

| REC NO. | REC ID | PEOPLE | DNL |
|---------|----------|--------|-----|
| 1 | R56 - MV | 1. | 60. |
| 2 | R57 - MV | 1. | 60. |
| 3 | R58 - MV | 1. | 60. |
| 4 | R59 - MV | 1. | 60. |
| 5 | R60 - MV | 1. | 60. |
| 6 | R61 - MV | 1. | 60. |
| 7 | R62 - MV | 1. | 60. |
| 8 | R63 - MV | 1. | 60. |

| | | | |
|----|----------|----|-----|
| 9 | R300 - M | 1. | 60. |
| 10 | R73 - HY | 1. | 60. |
| 11 | R76 - HY | 1. | 60. |
| 12 | R79 - HY | 1. | 60. |
| 13 | R80 - HY | 1. | 60. |
| 14 | R81 - HY | 1. | 60. |
| 15 | R82 - HY | 1. | 60. |
| 16 | R83 - HY | 1. | 60. |
| 17 | R84 - HY | 1. | 60. |
| 18 | R85 - HY | 1. | 60. |
| 19 | R86 - HY | 1. | 60. |
| 20 | R87 - HY | 1. | 60. |
| 21 | R309 - H | 1. | 60. |
| 22 | R310 - H | 1. | 60. |
| 23 | R94 - WB | 1. | 60. |
| 24 | R95 - WB | 1. | 60. |
| 25 | R96 - WB | 1. | 60. |
| 26 | R97 - WB | 1. | 60. |
| 27 | R98 - WB | 1. | 60. |
| 28 | R99 - WB | 1. | 60. |
| 29 | R100 - W | 1. | 60. |
| 30 | R101 - W | 1. | 60. |
| 31 | R103 - W | 1. | 60. |
| 32 | R104 - W | 1. | 60. |
| 33 | R105 - W | 1. | 60. |
| 34 | R106 - W | 1. | 60. |
| 35 | R107 - W | 1. | 60. |
| 36 | R108 - W | 1. | 60. |
| 37 | R109 - W | 1. | 60. |
| 38 | R110 - W | 1. | 60. |
| 39 | R311 - W | 1. | 60. |

EFFECTIVENESS/COST RATIO AND BARRIER HEIGHT MATRICES

| BARRIER SECTION
NO IDENT | EFFECTIVENESS/COST
RATIO | | | | | | | | CORRESPONDING
BARRIER HEIGHTS (IN FT) | | | | | | | |
|-----------------------------|-----------------------------|-----|-----|-----|-----|-----|------|-----|--|----|----|-----|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 MV1 | * | 0. | 0. | 0. | 0. | 0. | -14. | -8. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 2 MV2 | * | 29. | 32. | 32. | 32. | 31. | 30. | 31. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 3 MV3 | * | 36. | 38. | 36. | 35. | 34. | 32. | 31. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 4 MV4 | * | 0. | 0. | 13. | 16. | 17. | 19. | 20. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 5 MV5 | * | 31. | 31. | 29. | 27. | 26. | 25. | 25. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 6 MV6 | * | 29. | 29. | 28. | 27. | 26. | 26. | 26. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 7 MV7 | * | 15. | 18. | 19. | 18. | 18. | 18. | 19. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 8 HYD1 | * | 27. | 26. | 25. | 23. | 22. | 21. | 21. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 9 HYD2 | * | 19. | 21. | 21. | 20. | 20. | 20. | 20. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 10 HYD3 | * | 2. | 7. | 8. | 8. | 10. | 11. | 12. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |

| | | | | | | | | | | | | | | | | | |
|----|-------|---|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|
| 11 | HYD4 | * | 27. | 24. | 22. | 20. | 19. | 19. | 19. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 12 | WOOD1 | * | 25. | 26. | 26. | 24. | 23. | 22. | 22. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 13 | WOOD2 | * | 27. | 26. | 24. | 22. | 20. | 19. | 19. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 14 | WOOD3 | * | 23. | 21. | 19. | 17. | 17. | 16. | 16. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 15 | WB1 | * | 22. | 21. | 19. | 17. | 16. | 16. | 16. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 16 | WB2 | * | 24. | 25. | 25. | 24. | 23. | 22. | 22. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 17 | WB3 | * | 31. | 31. | 31. | 29. | 28. | 27. | 27. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 18 | WB4 | * | 30. | 30. | 29. | 27. | 26. | 25. | 24. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 19 | WB5 | * | 20. | 21. | 21. | 21. | 21. | 20. | 20. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 20 | WB6 | * | 36. | 35. | 33. | 31. | 29. | 27. | 26. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 21 | WB7 | * | 31. | 30. | 28. | 26. | 24. | 23. | 22. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 22 | WB8 | * | 26. | 26. | 26. | 24. | 23. | 22. | 22. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |

HEIGHT INDEX 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8

PM RUN ** NOISE WALL TESTS ** ROAD SET #1 CENTRAL

MONTVUE W/ MAX WALL BUT NOT 1ST SECTION

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 8 8 8 8 8 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

0.16.16.16.16.16.16. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

R E S U L T S

| REC | REC ID | LEQ | LEQ(Z(0)) | IL |
|-----|----------|------|-----------|-----|
| 1 | R56 - MV | 55.3 | 55.9 | .6 |
| 2 | R57 - MV | 69.1 | 71.4 | 2.3 |
| 3 | R58 - MV | 63.6 | 72.3 | 8.6 |
| 4 | R59 - MV | 59.0 | 60.8 | 1.8 |
| 5 | R60 - MV | 65.7 | 67.2 | 1.5 |
| 6 | R61 - MV | 60.8 | 67.0 | 6.2 |
| 7 | R62 - MV | 62.3 | 68.6 | 6.3 |
| 8 | R63 - MV | 61.9 | 66.8 | 4.9 |
| 9 | R300 - M | 57.1 | 58.5 | 1.4 |
| 10 | R73 - HY | 68.4 | 68.4 | .0 |
| 11 | R76 - HY | 64.5 | 64.5 | .0 |
| 12 | R79 - HY | 66.7 | 66.7 | .0 |
| 13 | R80 - HY | 61.8 | 61.8 | .0 |
| 14 | R81 - HY | 63.9 | 63.9 | .0 |
| 15 | R82 - HY | 61.1 | 61.1 | .0 |

| | | | | |
|----|----------|------|------|----|
| 16 | R83 - HY | 59.8 | 59.8 | .0 |
| 17 | R84 - HY | 59.5 | 59.5 | .0 |
| 18 | R85 - HY | 64.5 | 64.5 | .0 |
| 19 | R86 - HY | 58.9 | 58.9 | .0 |
| 20 | R87 - HY | 67.5 | 67.5 | .0 |
| 21 | R309 - H | 60.4 | 60.4 | .0 |
| 22 | R310 - H | 56.9 | 56.9 | .0 |
| 23 | R94 - WB | 64.3 | 64.3 | .0 |
| 24 | R95 - WB | 60.1 | 60.1 | .0 |
| 25 | R96 - WB | 60.4 | 60.4 | .0 |
| 26 | R97 - WB | 59.4 | 59.4 | .0 |
| 27 | R98 - WB | 58.7 | 58.7 | .0 |
| 28 | R99 - WB | 58.4 | 58.4 | .0 |
| 29 | R100 - W | 59.5 | 59.5 | .0 |
| 30 | R101 - W | 59.1 | 59.1 | .0 |
| 31 | R103 - W | 70.2 | 70.2 | .0 |
| 32 | R104 - W | 61.6 | 61.6 | .0 |
| 33 | R105 - W | 61.0 | 61.0 | .0 |
| 34 | R106 - W | 65.3 | 65.3 | .0 |
| 35 | R107 - W | 70.4 | 70.4 | .0 |
| 36 | R108 - W | 66.1 | 66.1 | .0 |
| 37 | R109 - W | 72.9 | 72.9 | .0 |
| 38 | R110 - W | 70.6 | 70.6 | .0 |
| 39 | R311 - W | 67.4 | 67.4 | .0 |

| BARRIER TYPE | COST |
|--------------|---------|
| FH-BERM | 0. |
| FH-MASON | 0. |
| FH-WOOD | 0. |
| FH-CONC | 212400. |
| FH-STEEL | 0. |

BARRIER COST = \$ 212400.

PROGRAM OPTIMA

BARRIER OPTIMIZATION PROGRAM USING
PARTIAL SOUND ENERGIES COMPUTED BY THE
STAMINA/BCR PROGRAM
FHWA VERSION 3 -- MARCH 1983

PROBLEM TITLE

PM RUN ** NOISE WALL TESTS ** ROAD SET #1 CENTRAL

SUMMARY OF BARRIER AND RECEIVER DATA

| BARR ELE | ID | TYPE |
|----------|-------|---------|
| 1 | MV1 | FH-CONC |
| 2 | MV2 | FH-CONC |
| 3 | MV3 | FH-CONC |
| 4 | MV4 | FH-CONC |
| 5 | MV5 | FH-CONC |
| 6 | MV6 | FH-CONC |
| 7 | MV7 | FH-CONC |
| 8 | HYD1 | FH-CONC |
| 9 | HYD2 | FH-CONC |
| 10 | HYD3 | FH-CONC |
| 11 | HYD4 | FH-CONC |
| 12 | WOOD1 | FH-CONC |
| 13 | WOOD2 | FH-CONC |
| 14 | WOOD3 | FH-CONC |
| 15 | WB1 | FH-CONC |
| 16 | WB2 | FH-CONC |
| 17 | WB3 | FH-CONC |
| 18 | WB4 | FH-CONC |
| 19 | WB5 | FH-CONC |
| 20 | WB6 | FH-CONC |
| 21 | WB7 | FH-CONC |
| 22 | WB8 | FH-CONC |

| REC NO. | REC ID | PEOPLE | DNL |
|---------|----------|--------|-----|
| 1 | R56 - MV | 1. | 60. |
| 2 | R57 - MV | 1. | 60. |
| 3 | R58 - MV | 1. | 60. |
| 4 | R59 - MV | 1. | 60. |
| 5 | R60 - MV | 1. | 60. |
| 6 | R61 - MV | 1. | 60. |
| 7 | R62 - MV | 11. | 60. |
| 8 | R63 - MV | 1. | 60. |
| 9 | R300 - M | 1. | 60. |
| 10 | R73 - HY | 1. | 60. |
| 11 | R76 - HY | 1. | 60. |
| 12 | R79 - HY | 1. | 60. |
| 13 | R80 - HY | 1. | 60. |
| 14 | R81 - HY | 1. | 60. |
| 15 | R82 - HY | 1. | 60. |
| 16 | R83 - HY | 1. | 60. |
| 17 | R84 - HY | 1. | 60. |
| 18 | R85 - HY | 1. | 60. |
| 19 | R86 - HY | 1. | 60. |
| 20 | R87 - HY | 1. | 60. |
| 21 | R309 - H | 1. | 60. |

| | | | |
|----|----------|-----|-----|
| 22 | R310 - H | 1. | 60. |
| 23 | R94 - WB | 1. | 60. |
| 24 | R95 - WB | 1. | 60. |
| 25 | R96 - WB | 1. | 60. |
| 26 | R97 - WB | 1. | 60. |
| 27 | R98 - WB | 1. | 60. |
| 28 | R99 - WB | 1. | 60. |
| 29 | R100 - W | 11. | 60. |
| 30 | R101 - W | 1. | 60. |
| 31 | R103 - W | 1. | 60. |
| 32 | R104 - W | 1. | 60. |
| 33 | R105 - W | 1. | 60. |
| 34 | R106 - W | 1. | 60. |
| 35 | R107 - W | 1. | 60. |
| 36 | R108 - W | 1. | 60. |
| 37 | R109 - W | 1. | 60. |
| 38 | R110 - W | 1. | 60. |
| 39 | R311 - W | 1. | 60. |

EFFECTIVENESS/COST RATIO AND BARRIER HEIGHT MATRICES

| BARRIER SECTION
NO IDENT | EFFECTIVENESS/COST
RATIO | | | | | | | | CORRESPONDING
BARRIER HEIGHTS (IN FT) | | | | | | | |
|-----------------------------|-----------------------------|-----|-----|-----|-----|-----|------|-----|--|----|----|-----|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| HEIGHT INDEX | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 MV1 | * | 0. | 0. | 0. | 0. | 0. | -14. | -8. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 2 MV2 | * | 29. | 32. | 32. | 32. | 31. | 30. | 31. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 3 MV3 | * | 36. | 38. | 36. | 35. | 34. | 32. | 31. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 4 MV4 | * | 0. | 0. | 13. | 16. | 17. | 19. | 20. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 5 MV5 | * | 40. | 40. | 38. | 36. | 35. | 34. | 33. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 6 MV6 | * | 32. | 32. | 30. | 29. | 28. | 28. | 28. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 7 MV7 | * | 15. | 18. | 19. | 18. | 18. | 18. | 19. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 8 HYD1 | * | 27. | 26. | 25. | 23. | 22. | 21. | 21. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 9 HYD2 | * | 19. | 21. | 21. | 20. | 20. | 20. | 20. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 10 HYD3 | * | 2. | 7. | 8. | 8. | 10. | 11. | 12. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 11 HYD4 | * | 27. | 24. | 22. | 20. | 19. | 19. | 19. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 12 WOOD1 | * | 26. | 27. | 27. | 26. | 25. | 25. | 25. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 13 WOOD2 | * | 29. | 27. | 26. | 24. | 22. | 22. | 21. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 14 WOOD3 | * | 25. | 23. | 22. | 20. | 19. | 18. | 18. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 15 WB1 | * | 25. | 23. | 22. | 20. | 19. | 18. | 18. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 16 WB2 | * | 26. | 27. | 26. | 25. | 24. | 23. | 23. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 17 WB3 | * | 32. | 32. | 31. | 30. | 29. | 28. | 27. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 18 WB4 | * | 30. | 30. | 29. | 28. | 26. | 25. | 25. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 19 WB5 | * | 20. | 21. | 21. | 21. | 21. | 21. | 21. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 20 WB6 | * | 36. | 35. | 33. | 31. | 29. | 27. | 26. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 21 WB7 | * | 31. | 30. | 28. | 26. | 24. | 23. | 23. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 22 WB8 | * | 26. | 26. | 26. | 24. | 23. | 22. | 22. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| HEIGHT INDEX | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

PM RUN ** NOISE WALL TESTS ** ROAD SET #1 CENTRAL

HYDRAULIC EFFICIENT DESIGN

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 2 3 8 2 1 1 1 1 1 1 1 1 1 1 1 1

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

0. 0. 0. 0. 0. 0. 0. 7. 8.16. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

R E S U L T S

| REC | REC ID | LEQ | LEQ(Z(0)) | IL |
|-----|----------|------|-----------|-----|
| 1 | R56 - MV | 55.9 | 55.9 | .0 |
| 2 | R57 - MV | 71.4 | 71.4 | .0 |
| 3 | R58 - MV | 72.3 | 72.3 | .0 |
| 4 | R59 - MV | 60.8 | 60.8 | .0 |
| 5 | R60 - MV | 67.2 | 67.2 | .0 |
| 6 | R61 - MV | 67.0 | 67.0 | .0 |
| 7 | R62 - MV | 68.6 | 68.6 | .0 |
| 8 | R63 - MV | 66.8 | 66.8 | .0 |
| 9 | R300 - M | 58.5 | 58.5 | .0 |
| 10 | R73 - HY | 67.1 | 68.4 | 1.3 |
| 11 | R76 - HY | 63.0 | 64.5 | 1.5 |
| 12 | R79 - HY | 66.6 | 66.7 | .0 |
| 13 | R80 - HY | 61.7 | 61.8 | .0 |
| 14 | R81 - HY | 63.7 | 63.9 | .2 |
| 15 | R82 - HY | 60.4 | 61.1 | .8 |
| 16 | R83 - HY | 59.4 | 59.8 | .4 |
| 17 | R84 - HY | 59.2 | 59.5 | .3 |
| 18 | R85 - HY | 64.5 | 64.5 | .0 |
| 19 | R86 - HY | 58.7 | 58.9 | .1 |
| 20 | R87 - HY | 62.5 | 67.5 | 5.0 |
| 21 | R309 - H | 59.9 | 60.4 | .5 |
| 22 | R310 - H | 56.7 | 56.9 | .2 |
| 23 | R94 - WB | 64.3 | 64.3 | .0 |
| 24 | R95 - WB | 60.1 | 60.1 | .0 |
| 25 | R96 - WB | 60.4 | 60.4 | .0 |
| 26 | R97 - WB | 59.4 | 59.4 | .0 |
| 27 | R98 - WB | 58.7 | 58.7 | .0 |
| 28 | R99 - WB | 58.4 | 58.4 | .0 |
| 29 | R100 - W | 59.5 | 59.5 | .0 |
| 30 | R101 - W | 59.1 | 59.1 | .0 |
| 31 | R103 - W | 70.2 | 70.2 | .0 |
| 32 | R104 - W | 61.6 | 61.6 | .0 |
| 33 | R105 - W | 61.0 | 61.0 | .0 |
| 34 | R106 - W | 65.3 | 65.3 | .0 |
| 35 | R107 - W | 70.4 | 70.4 | .0 |
| 36 | R108 - W | 66.1 | 66.1 | .0 |
| 37 | R109 - W | 72.9 | 72.9 | .0 |
| 38 | R110 - W | 70.6 | 70.6 | .0 |
| 39 | R311 - W | 67.4 | 67.4 | .0 |

| BARRIER TYPE | COST |
|--------------|--------|
| FH-BERM | 0. |
| FH-MASON | 0. |
| FH-WOOD | 0. |
| FH-CONC | 81200. |
| FH-STEEL | 0. |

BARRIER COST = \$ 81200.

PROGRAM OPTIMA

BARRIER OPTIMIZATION PROGRAM USING
 PARTIAL SOUND ENERGIES COMPUTED BY THE
 STAMINA/BCR PROGRAM

FHWA VERSION 3 -- MARCH 1983

PROBLEM TITLE

PM RUN ** NOISE WALL TESTS ** ROAD SET #1 CENTRAL

EFFECTIVENESS/COST RATIO AND BARRIER HEIGHT MATRICES

| BARRIER SECTION
NO IDENT | EFFECTIVENESS/COST
RATIO | | | | | | | | CORRESPONDING
BARRIER HEIGHTS (IN FT) | | | | | | | | |
|-----------------------------|-----------------------------|-----|-----|-----|-----|-----|------|-----|--|----|----|-----|-----|-----|-----|-----|---|
| | HEIGHT INDEX | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 MV1 | * | 0. | 0. | 0. | 0. | 0. | -14. | -8. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 2 MV2 | * | 29. | 32. | 32. | 32. | 31. | 30. | 31. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 3 MV3 | * | 36. | 38. | 36. | 35. | 34. | 32. | 31. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 4 MV4 | * | 0. | 0. | 13. | 16. | 17. | 19. | 20. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 5 MV5 | * | 31. | 31. | 29. | 27. | 26. | 25. | 25. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 6 MV6 | * | 29. | 29. | 28. | 27. | 26. | 26. | 26. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 7 MV7 | * | 15. | 18. | 19. | 18. | 18. | 18. | 19. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 8 HYD1 | * | 27. | 26. | 25. | 23. | 22. | 21. | 21. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 9 HYD2 | * | 19. | 21. | 21. | 20. | 20. | 20. | 20. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 10 HYD3 | * | 2. | 7. | 8. | 8. | 10. | 11. | 12. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 11 HYD4 | * | 27. | 24. | 22. | 20. | 19. | 19. | 19. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 12 WOOD1 | * | 25. | 26. | 26. | 24. | 23. | 22. | 22. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 13 WOOD2 | * | 27. | 26. | 24. | 22. | 20. | 19. | 19. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 14 WOOD3 | * | 23. | 21. | 19. | 17. | 17. | 16. | 16. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 15 WB1 | * | 22. | 21. | 19. | 17. | 16. | 16. | 16. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 16 WB2 | * | 24. | 25. | 25. | 24. | 23. | 22. | 22. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 17 WB3 | * | 31. | 31. | 31. | 29. | 28. | 27. | 27. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 18 WB4 | * | 30. | 30. | 29. | 27. | 26. | 25. | 24. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 19 WB5 | * | 20. | 21. | 21. | 21. | 21. | 20. | 20. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 20 WB6 | * | 36. | 35. | 33. | 31. | 29. | 27. | 26. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 21 WB7 | * | 31. | 30. | 28. | 26. | 24. | 23. | 22. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |
| 22 WB8 | * | 26. | 26. | 26. | 24. | 23. | 22. | 22. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. | |

HEIGHT INDEX 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8

PM RUN ** NOISE WALL TESTS ** ROAD SET #1 CENTRAL

S WALL ONLY AT MAX

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 8 8 8 1 1 1 1 1 1 1
CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 16.16.16. 0. 0. 0. 0. 0. 0. 0. 0.

R E S U L T S

| REC | REC ID | LEQ | LEQ(Z(0)) | IL |
|-----|----------|------|-----------|-----|
| 1 | R56 - MV | 55.9 | 55.9 | .0 |
| 2 | R57 - MV | 71.4 | 71.4 | .0 |
| 3 | R58 - MV | 72.3 | 72.3 | .0 |
| 4 | R59 - MV | 60.8 | 60.8 | .0 |
| 5 | R60 - MV | 67.2 | 67.2 | .0 |
| 6 | R61 - MV | 67.0 | 67.0 | .0 |
| 7 | R62 - MV | 68.6 | 68.6 | .0 |
| 8 | R63 - MV | 66.8 | 66.8 | .0 |
| 9 | R300 - M | 58.5 | 58.5 | .0 |
| 10 | R73 - HY | 68.4 | 68.4 | .0 |
| 11 | R76 - HY | 64.5 | 64.5 | .0 |
| 12 | R79 - HY | 66.7 | 66.7 | .0 |
| 13 | R80 - HY | 61.8 | 61.8 | .0 |
| 14 | R81 - HY | 63.9 | 63.9 | .0 |
| 15 | R82 - HY | 61.1 | 61.1 | .0 |
| 16 | R83 - HY | 59.8 | 59.8 | .0 |
| 17 | R84 - HY | 59.5 | 59.5 | .0 |
| 18 | R85 - HY | 64.5 | 64.5 | .0 |
| 19 | R86 - HY | 58.9 | 58.9 | .0 |
| 20 | R87 - HY | 67.5 | 67.5 | .0 |
| 21 | R309 - H | 60.4 | 60.4 | .0 |
| 22 | R310 - H | 56.9 | 56.9 | .0 |
| 23 | R94 - WB | 57.8 | 64.3 | 6.5 |
| 24 | R95 - WB | 57.1 | 60.1 | 3.0 |
| 25 | R96 - WB | 56.7 | 60.4 | 3.7 |
| 26 | R97 - WB | 56.3 | 59.4 | 3.1 |
| 27 | R98 - WB | 56.1 | 58.7 | 2.7 |
| 28 | R99 - WB | 56.9 | 58.4 | 1.4 |
| 29 | R100 - W | 58.5 | 59.5 | 1.0 |
| 30 | R101 - W | 58.4 | 59.1 | .7 |
| 31 | R103 - W | 70.2 | 70.2 | .0 |

| | | | | |
|----|----------|------|------|----|
| 32 | R104 - W | 61.5 | 61.6 | .1 |
| 33 | R105 - W | 61.0 | 61.0 | .1 |
| 34 | R106 - W | 65.3 | 65.3 | .0 |
| 35 | R107 - W | 70.4 | 70.4 | .0 |
| 36 | R108 - W | 66.1 | 66.1 | .0 |
| 37 | R109 - W | 72.9 | 72.9 | .0 |
| 38 | R110 - W | 70.6 | 70.6 | .0 |
| 39 | R311 - W | 67.4 | 67.4 | .0 |

| BARRIER TYPE | COST |
|--------------|--------|
| FH-BERM | 0. |
| FH-MASON | 0. |
| FH-WOOD | 0. |
| FH-CONC | 85300. |
| FH-STEEL | 0. |

BARRIER COST = \$ 85300.

PROGRAM OPTIMA

BARRIER OPTIMIZATION PROGRAM USING
PARTIAL SOUND ENERGIES COMPUTED BY THE
STAMINA/BCR PROGRAM
FHWA VERSION 3 -- MARCH 1983

PROBLEM TITLE

PM RUN ** NOISE WALL TESTS REPLACE MONTVUE RECEPTORS W/ US 250

EFFECTIVENESS/COST RATIO AND BARRIER HEIGHT MATRICES

| BARRIER SECTION
NO IDENT | EFFECTIVENESS/COST RATIO | | | | | | | | CORRESPONDING BARRIER HEIGHTS (IN FT) | | | | | | | |
|-----------------------------|--------------------------|-----|-----|-----|------|------|------|------|---------------------------------------|----|-----|-----|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| HEIGHT INDEX | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 MV1 | * | 0. | 0. | 0. | 0. | -24. | -23. | -23. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 2 MV2 | * | -5. | -1. | -0. | 0. | 1. | 2. | 2. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 3 MV3 | * | 4. | 10. | 12. | 12. | 13. | 14. | 15. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 4 MV4 | * | 0. | 0. | 0. | -30. | -17. | -13. | -12. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 5 MV5 | * | 31. | 31. | 29. | 27. | 26. | 25. | 25. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 6 MV6 | * | 29. | 29. | 28. | 27. | 26. | 26. | 26. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 7 MV7 | * | 15. | 18. | 19. | 18. | 18. | 18. | 19. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 8 HYD1 | * | 27. | 26. | 25. | 23. | 22. | 21. | 21. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 9 HYD2 | * | 19. | 21. | 21. | 20. | 20. | 20. | 20. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 10 HYD3 | * | 2. | 7. | 8. | 8. | 10. | 11. | 12. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 11 HYD4 | * | 27. | 24. | 22. | 20. | 19. | 19. | 19. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 12 WOOD1 | * | 25. | 26. | 26. | 24. | 23. | 22. | 22. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 13 WOOD2 | * | 27. | 26. | 24. | 22. | 20. | 19. | 19. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 14 WOOD3 | * | 23. | 21. | 19. | 17. | 17. | 16. | 16. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 15 WB1 | * | 22. | 21. | 19. | 17. | 16. | 16. | 16. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 16 WB2 | * | 24. | 25. | 25. | 24. | 23. | 22. | 22. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 17 WB3 | * | 31. | 31. | 31. | 29. | 28. | 27. | 27. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 18 WB4 | * | 30. | 30. | 29. | 27. | 26. | 25. | 24. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 19 WB5 | * | 20. | 21. | 21. | 21. | 21. | 20. | 20. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 20 WB6 | * | 36. | 35. | 33. | 31. | 29. | 27. | 26. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 21 WB7 | * | 31. | 30. | 28. | 26. | 24. | 23. | 22. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 22 WB8 | * | 26. | 26. | 26. | 24. | 23. | 22. | 22. | 0. | 7. | 8. | 10. | 11. | 13. | 15. | 16. |
| 23 US1 | * | 25. | 24. | 21. | 19. | 18. | 17. | 17. | 0. | 8. | 10. | 11. | 13. | 15. | 16. | 18. |
| 24 US2 | * | 21. | 20. | 18. | 17. | 16. | 15. | 15. | 0. | 8. | 10. | 11. | 13. | 15. | 16. | 18. |
| HEIGHT INDEX | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

PM RUN ** NOISE WALL TESTS REPLACE MONTVUE RECEPTORS W/ US 250

PM RUN ** NOISE WALL TESTS REPLACE MONTVUE RECEPTORS W/ US 250

SHORT WALL 3

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 4 4 4 1 1 1
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 10.10.10. 0. 0. 0.

R E S U L T S

| REC | REC ID | LEQ | LEQ(Z(0)) | IL |
|-----|----------|------|-----------|-----|
| 1 | R33 - US | 61.3 | 61.3 | .0 |
| 2 | R34 - US | 62.1 | 62.1 | .0 |
| 3 | R35 - US | 62.3 | 62.3 | .0 |
| 4 | R36 - US | 62.7 | 62.7 | .0 |
| 5 | R60 - MV | 67.2 | 67.2 | .0 |
| 6 | R61 - MV | 67.0 | 67.0 | .0 |
| 7 | R62 - MV | 68.6 | 68.6 | .0 |
| 8 | R63 - MV | 66.8 | 66.8 | .0 |
| 9 | R300 - M | 58.5 | 58.5 | .0 |
| 10 | R73 - HY | 68.4 | 68.4 | .0 |
| 11 | R76 - HY | 64.5 | 64.5 | .0 |
| 12 | R79 - HY | 66.7 | 66.7 | .0 |
| 13 | R80 - HY | 61.8 | 61.8 | .0 |
| 14 | R81 - HY | 63.9 | 63.9 | .0 |
| 15 | R82 - HY | 61.1 | 61.1 | .0 |
| 16 | R83 - HY | 59.8 | 59.8 | .0 |
| 17 | R84 - HY | 59.5 | 59.5 | .0 |
| 18 | R85 - HY | 64.5 | 64.5 | .0 |
| 19 | R86 - HY | 58.9 | 58.9 | .0 |
| 20 | R87 - HY | 67.5 | 67.5 | .0 |
| 21 | R309 - H | 60.4 | 60.4 | .0 |
| 22 | R310 - H | 56.9 | 56.9 | .0 |
| 23 | R94 - WB | 64.3 | 64.3 | .0 |
| 24 | R95 - WB | 60.1 | 60.1 | .0 |
| 25 | R96 - WB | 60.4 | 60.4 | .0 |
| 26 | R97 - WB | 59.3 | 59.4 | .0 |
| 27 | R98 - WB | 58.7 | 58.8 | .0 |
| 28 | R99 - WB | 58.3 | 58.4 | .0 |
| 29 | R100 - W | 59.5 | 59.5 | .0 |
| 30 | R101 - W | 59.1 | 59.1 | .0 |
| 31 | R103 - W | 70.2 | 70.2 | .0 |
| 32 | R104 - W | 61.6 | 61.6 | .1 |
| 33 | R105 - W | 60.9 | 61.0 | .1 |
| 34 | R106 - W | 65.3 | 65.3 | .0 |
| 35 | R107 - W | 70.4 | 70.4 | .0 |
| 36 | R108 - W | 66.0 | 66.1 | .1 |
| 37 | R109 - W | 67.2 | 72.9 | 5.6 |
| 38 | R110 - W | 63.7 | 70.6 | 6.8 |
| 39 | R311 - W | 66.4 | 67.4 | 1.1 |

| BARRIER TYPE | COST |
|--------------|------|
| FH-BERM | 0. |
| FH-MASON | 0. |
| FH-WOOD | 0. |