APPENDIX C-1

ACOUSTICAL IMPACT ANALYSIS OTAY RANCH VILLAGE 7

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Environmental Consultants

ACOUSTICAL IMPACT ANALYSIS

OTAY RANCH VILLAGE 7

CHULA VISTA, CALIFORNIA

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NOISE SETTING

Measures of Sound Level and Exposure

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally defined as unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound wave. In particular, sound pressure levels have become the most common descriptor used to characterize the loudness of ambient sound. The unit of sound pressure level ratioed to the faintest sound detectable by the human ear is called a decibel (dB).

Because sound or noise can vary in intensity by over one million times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all sound frequencies within the entire audible spectrum, noise levels at maximum human sensitivity are factored more heavily into sound description in a process called "A-weighting," written as dBA. Any further reference to decibels written as "dB" should be understood to be A-weighted.

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called Leq), or, alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL).

Impact Criteria

CNEL is a land use planning standard that is applied to sources that are pre-empted from direct local control. Such sources include on-road vehicles, aircraft, trains, etc. Because the City of Chula Vista is unable to regulate the noise level of such sources, it controls the land use affected by ambient noise. Schools are considered noise-sensitive uses for any "quiet" exterior assembly areas and within classroom interiors.

Residences, schools and other sensitive receptors are "normally acceptable" in exterior noise environments up to 65 dB CNEL (dBA). The exterior standard applies at any usable exterior space such as yards, recreation areas or other points of public outdoor.

In addition to exterior noise standards, interior quiet is required within habitable rooms in residences or within classroom learning environments. The City of Chula Vista requires that bedrooms and other quiet space be able to achieve 45 dBA CNEL through adequate acoustical protection. For standard wood frame and stucco construction, the exterior-to-interior noise reduction is typically 20 dB if single-paned windows are tightly closed. Siting a noise-sensitive use such as a residence or school in an acoustic environment of 65 dBA CNEL or less provides for an acceptable interior exposure with minimal need for special acoustical features. With upgraded acoustical features such as fixed sash windows and air-conditioned rooms, exterior

noise levels of up to 75 dBA CNEL could be accommodated while still meeting interior standards.

Existing Noise Sources

Because of the undeveloped nature of Village 7, existing noise levels are completely rural in character. Occasional distant aircraft noise is the only manmade noise intrusion. Measured daytime noise levels are in the low-40 dB range. Any development-related noise concerns would thus derive from build-out traffic scenarios, and not from existing conditions.

NOISE IMPACTS

Noise exposure depends upon the level of noise generated, the source and receiver separation, and the line-of-sight relationship (unobstructed versus blocked or shielded) between the noise generator and the receiving use. The project site is vacant and undeveloped, while the surrounding area consists of planned residences, arterial roadways and the SR-125 freeway. Interior traffic noise levels are relatively low within residential communities. Future siting concerns would derive mainly from traffic sources along the Village 7 perimeter.

The relationship between traffic volumes and noise levels is logarithmic. It takes a very substantial increase in volumes to cause any perceptible change in noise levels. The level of noise difference perception under quiet laboratory conditions is ±1.5 dB. Under ambient environments, the perception threshold is around ±3 dB. It requires a traffic change of 40 percent of average daily traffic (ADT) to create a 1.5 dB change, and a doubling of traffic to create a clearly noticeable increase of +3.0 dB. No single development creates traffic level changes of such magnitude under area build-out conditions. Traffic noise impacts are therefore mainly cumulative in nature.

Noise impacts will also derive from facilities construction. Such noise is usually regulated by the municipal code. Construction noise is temporary and occurs when many people are away from their homes. If nearby neighbors are present during construction involving heavy equipment, they could possibly be temporarily disturbed. From a noise mitigation perspective, it is generally preferable to perform all major village grading prior to construction and occupancy of any new homes within the village. Home construction is generally quieter than initial earthmoving with dozers, scrapers, graders, etc.

Thresholds of Significance

Project development would create a significant noise impact if it were to cause noise and land use standards to be exceeded where they are currently met, or to be substantially worsened if they are already excessive. "Substantial" is not defined in any applicable CEQA guidelines. This term is generally taken to be the threshold level where people with reasonable noise sensitivity perceive that noise levels are now louder than before. This threshold is conventionally 3 dB. Land use standards generally apply to traffic noise or other similar chronic sources. These standards are normally based on the CNEL metric.

Traffic noise impacts have previously been analyzed as part of the Otay Ranch Program EIR (1993). The planned roadway system and Otay Ranch development plan have undergone numerous changes since then. This study focuses on site-specific noise impacts based upon the most current circulation and development planning for Otay Ranch.

Construction Noise

Noise impacts would be significant if they caused a violation of any adopted standards. There are no specific numerical performance standards in the City of Chula Vista municipal code that apply to construction. Construction noise impacts are minimized by time restrictions placed on grading permits.

Time limits on construction involving the operation of powered equipment are established by the City of Chula Vista if occupied homes are present near the project site. Whenever a construction site is within close proximity of an occupied residence(s), no construction activities are to be undertaken between the hours of 7:00 p.m. and 7:00 a.m. during the week, or at any time on Sunday or major holidays.

Compliance with these limits is predicted to create a less-than-significant temporary noise impact during construction activities.

Exterior Traffic Noise Impacts

Build-out traffic volumes were obtained from the project traffic study in order to determine the future Village 7 perimeter traffic noise exposure. The average build-out daily traffic on project perimeter roadways are as follows:

Birch Road north of site	27,100 ADT
SR-125 east of site	146,000 ADT
Rock Mountain Road south of site	50,600 ADT
La Media Road west of site	22,700 ADT

Traffic noise levels adjacent to these roadways were calculated using the federal highway traffic noise prediction model (FHWA-RD-77-108). Traffic input parameters are shown in Table 1.

The resulting calculations are summarized in Table 2. The 65 dBA CNEL contour could extend more than 1,000 feet from SR-125 under at-grade conditions and a direct line-of-sight relationship. The roadway will have perimeter barriers and grade differences with adjoining residences. The noise "envelope" (65 dBA) contour for SR-125 was calculated to be 350 feet from the centerline when all propagation obstructions were taken into account. Similarly, any grade separations, or any perimeter barriers around various Village 7 development, will shield interior uses. The area of possible traffic noise constraint is therefore smaller than shown above.

No site plans have yet been developed that show lot lines and final grades for site uses. Assuming that the setback from the centerline to the rear yard of any perimeter homes is perhaps 80 feet, and that there is limited grade separation to enhance any noise barrier benefits, the following wall heights will be needed to meet City standards:

SR-125	>12 feet
Rock Mtn. Road	10 feet
Birch Road	7 feet
La Media Road	6 feet

An acoustical study confirming wall geometrics will be required to be prepared when site and grading plans are finalized.

Table 1

Noise Analysis Traffic Input Parameters

	ADT	Speed	Percent Autos	Percent Medium Truck	Percent Heavy Truck
SR-125	146,000	65	95	3	2
Rock Mtn. Road	50,600	45	95	3	2
Birch Road	27,100	45	97	2	1
La Media	22,700	45	97	2	1

Table 2

Reference noise level at 50 feet to centerline

SR-125	84.6 dBA CNEL
Rock Mtn. Road	76.2 dBA CNEL
Birch Road	72.8 dBA CNEL
La Media	72.1 dBA CNEL

Distance to 65 dBA contour (line-of-sight)

Roadway	**"Hard" Site (feet)**	**"Soft" Site (feet)**
SR-125	>1,000	1,000
Rock Mtn. Road	660	280
Birch Road	300	170
La Media	260	150

Residential Interior Noise Impacts

Building façade noise loading may range from 75 dBA CNEL near SR-125 to 70 dBA CNEL along arterial roadways. Structural noise reduction of 25 to 30 dBA will be needed to meet interior standards of 45 dBA CNEL. The hierarchy of structural noise mitigation is typically as follows for standard wood frame and stucco construction:

Needed Reduction (dB)	Measures Implemented
0-10	None
10-20	Close sliding single-paned windows, provide a/c.
20-25	Safety glass single-paned fixed sash windows and a/c.
25-30	Dual-paned fixed sash windows and a/c.

The maximum needed reduction of 25-30 dB is seen to not engender any major structural upgrade requirements for the maximally exposed homes or other noise sensitive land uses.

Roadway Network Alternatives

Village 7 traffic distributions were analyzed for both the preferred circulation alternative, as well as for build-out under a worst-case roadway network. Table 3 shows that traffic noise will not vary substantially (a "delta" of more than 3 dBA CNEL) except in a few isolated locations as a function of the selected circulation alternative. The noise level along Palomar Street between I-805 and Brandywine is significantly reduced under the worst-case roadway alternative. A segment of Otay Lakes Road west of SR-125 would experience a significant noise increase. All other roadways would experience less-than-significant traffic noise changes as a function of the circulation alternative selection.

Table 3

CNEL @ 100 feet to centerline ("soft" site) dBA

	Cumulative Village 7 Build-out	Worst-case Roadway	"DELTA"
Telegraph Canyon Road			
I-805 Oleander	71.0	71.5	+0.5
Oleander - Brandywine	70.9	71.5	+0.6
Brandywine - Heritage	70.8	71.2	+0.4
Heritage - La Media	69.3	69.3	±0.0
Palomar Street			
I-805 - Oleander	66.7	62.7	-4.0
Oleander - Brandywine	65.3	59.6	-5.7
Brandywine - Heritage	66.9	66.0	-0.9
Heritage - La Media	64.2	64.3	+0.1
La Media - Olympic	68.4	68.5	+0.1
Olympic Parkway			
Oleander - Brandywine	69.7	68.0	+0.1
Brandywine - Heritage	69.2	69.6	+0.4
Heritage - La Media	70.0	69.1	-0.9
La Media – Palomar	68.2	69.4	+1.2
Palomar – SR-125	70.9	71.0	+0.1
Eastlake – Hunte	69.1	69.2	+0.1
La Media Road			
Otay Lakes – Palomar	65.1	64.5	-0.6
Palomar – Olympic	68.2	67.8	-0.4
Olympic – Birch	70.1	69.4	-0.7
Birch – Rock Mountain	67.6	64.9	-2.7
Rock Mountain - Main	68.0	65.9	-2.1
Eastlake Parkway			
N of Olympic	69.7	69.4	-0.3
Olympic – Birch	67.9	68.3	+0.4
Birch - Hunte	67.9	68.2	+0.3

Table 3
(continued)

	Cumulative Village 7 Build-out	Worst-case Roadway	"DELTA"
Hunte Parkway			
Otay Lakes - Clubhouse	64.0	64.0	±0.0
Clubhouse – Olympic	67.4	67.3	-0.1
Olympic - Eastlake	67.2	67.5	+0.3
Otay Lakes Road			
N of Telegraph Canyon	68.2	68.0	-0.2
La Media – SR-125	70.3	73.4	+3.1
Eastlake – Hunte	72.1	73.2	+1.1
Main Street			
I-805 - Oleander	70.7	71.0	+0.3
Oleander - Brandywine	70.5	70.8	+0.3
Brandywine - Heritage	69.7	70.1	+0.4
Oleander Avenue			
Telegraph Canyon - Palomar	63.9	64.6	+0.7
Palomar – Olympic	61.4	63.2	+1.8
Olympic – Main	63.4	61.6	-1.8
Brandywine Avenue			
Telegraph Canyon – Palomar	64.3	65.6	+1.3
Palomar – Olympic	63.3	63.1	-0.2
Olympic - Main	62.3	62.2	-0.1
Heritage/Ranchero			
N of Telegraph Canyon	67.1	67.4	+0.3
Telegraph Canyon – Palomar	68.4	68.4	±0.0
Palomar - Olympic	70.7	70.6	-0.1
S of Olympic	69.3	69.9	+0.6
N of Main	68.8	69.0	+0.2

Source: FHWA-RD-77-108 (all run for 45 mph, 97/2/1 vehicle mix).

APPENDIX C-2

REVISED NOISE TECHNICAL REPORT FOR OTAY RANCH VILLAGE 7

REVISED
NOISE TECHNICAL REPORT
FOR
OTAY RANCH VILLAGE SEVEN
CITY OF CHULA VISTA, CALIFORNIA

Prepared for

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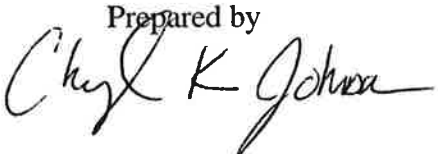

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Summary of Findings

This report provides an analysis of potential traffic noise impacts to planned development areas within the McMillin-owned portion of Otay Ranch Village Seven in the city of Chula Vista due to traffic on State Route 125 (SR-125).

The subject property would be affected by traffic noise on future SR-125, Birch Road, La Media Road, and Rock Mountain Road. The current analysis only considers noise effects due to traffic on SR-125 and its southbound off ramp to Rock Mountain Road. The purpose of this preliminary analysis is to determine the maximum noise barrier heights required along SR-125. Noise impacts due to traffic on Birch Road, La Media Road, and Rock Mountain Road shall be assessed at such time as final site and grading plans are complete. The City of Chula Vista's noise standards are 65 A-weighted decibels [dB(A)] community noise equivalent level (CNEL) for exterior residential use, and school and park play areas and 45 CNEL for residential noise-sensitive interior rooms.

The traffic on SR-125 could generate noise levels greater than the City's standard of 65 CNEL at ground-level sensitive receptors adjacent to the highway. Noise levels would be reduced to at or below City standards with the construction of noise barriers varying from 3 to 14 feet in height. Barrier heights are relative to final pad elevations or the current roadway slope grading, whichever is the more effective location as described below. Required barrier heights may be achieved through the construction of walls, berms, or wall/berm combinations.

The City of Chula Vista typically limits the height of walls constructed for noise attenuation purposes to eight and a half feet. In circumstances where noise barrier heights in excess of eight and a half feet are required, a combination of noise wall and berm may be required. In these cases, the wall portion of the wall/berm combination would not exceed eight and a half feet in height.

Examples of acceptable barrier materials include, but are not limited to, masonry block, wood frame with stucco, 0.5-inch-thick Plexiglas, or 0.25-inch-thick plate glass. If transparent barrier materials are used, no gaps should occur between the panels.

There is the potential that second- and third-floor exterior receptors on the multi-family lots adjacent to SR-125 could be exposed to noise levels in excess of the City's standard.

For multi-family development areas, it is recommended that no balconies be constructed facing SR-125. Any balconies proposed in the multi-family areas must comply with the residential exterior noise standard as discussed below. Consequently, at the time that building plans are available for these areas, the site plans will be reviewed to ensure that they comply with the appropriate standards. Additionally, the State Building Code

requires detailed acoustical studies demonstrating that interior noise levels will be at or below 45 CNEL for multi-family residential structures that are exposed to exterior noise levels in excess of 60 CNEL. Thus, at the time that building plans are available, and prior to the issuance of building permits, a detailed acoustical analysis shall be required for the buildings adjacent to SR-125 which demonstrates that second- and third-floor interior noise levels due to exterior sources will be below the 45 CNEL standard. This study should demonstrate a minimum 29-decibel reduction with the windows closed.

For the single-family development area, second-floor exterior noise levels are projected to be as high as 71 CNEL for lots adjacent to and near SR-125 (in the northwestern portion of the single-family site lots 127 through 136; in the eastern portion of the single-family site lots 46 through 59, 73 through 83, and 115 through 119). Therefore, interior noise levels cannot be assumed to be within the 45 CNEL standard. Thus, at the time that building plans are available, and prior to the issuance of building permits, a detailed acoustical analysis shall be required which demonstrates that second-floor interior noise levels due to exterior sources will be below the 45 CNEL standard. This study should demonstrate a minimum 26-decibel reduction with the windows closed.

For those areas where second- and third-floor exterior noise levels are projected to exceed 60 CNEL (multi-family buildings adjacent to SR-125; multi-family/single-family cluster lot 12, single-family lots 104 through 136 in the northwestern portion of the single-family site; in the eastern portion of the single-family site lots 46 through 59, 73 through 83, 115 through 119, 150, and 151), it will be necessary for the windows to remain closed to ensure that interior noise levels meet the interior standard of 45 CNEL. Where it is necessary to keep windows closed, the design for these affected units shall include a ventilation or air conditioning system to provide a habitable interior environment when windows are closed.

MULTI-FAMILY BUILDING SHIELDING DESIGN

If ground-floor exterior use areas are located on the sides of the buildings opposite the freeway, the proposed barrier heights could be lowered along the multi-family site.

In order to aid in the design process of the multi-family sites, an alternate model was run with all multi-family usable exterior areas shielded from SR-125 by three-story multi-family buildings. It should be noted that the locations and dimensions of these buildings were inferred based on other developments in the Otay Ranch community, and would need to be reanalyzed at such time as a site plan is developed.

The analysis determined that barriers along the multi-family site were not necessary to reduce noise levels to City standards at multi-family ground-floor exterior use receiver locations. However, barriers were found to be necessary along the multi-family site to

ensure that exterior noise levels at single-family and high school exterior use locations meet City standards.

With this building-shielding configuration, ground-floor noise levels at exterior usable areas would be reduced to at or below City standards with the construction of noise barriers varying from 3 to 14 feet in height.

Reducing barrier heights adjacent to the multi-family area will increase exterior noise levels at the building faces adjacent to SR-125. The future interior study discussed above would therefore need to demonstrate a minimum 31-decibel reduction with the windows closed.

Introduction

This report provides an analysis of potential traffic noise impacts to planned development areas within the McMillin-owned portion of Otay Ranch Village Seven in the city of Chula Vista due to traffic on SR-125. The current analysis only considers noise effects due to traffic on SR-125 and its southbound off ramp to Rock Mountain Road. The purpose of this preliminary analysis is to determine the maximum noise barrier heights required along SR-125. Noise impacts due to traffic on Birch Road, La Media Road, and Rock Mountain Road shall be assessed at such time as final site and grading plans are complete.

Otay Ranch Village Seven is bounded by Birch Road on the north, Rock Mountain Road on the south, future SR-125 on the east, and La Media Road on the west. Figure 1 shows the regional location of the project. Figure 2 shows an aerial photograph of the project vicinity. Figure 3 shows the proposed grading for the McMillin-owned portion of the project site. As shown on Figure 3, the McMillin-owned portion of Village Seven includes single- and multi-family housing, a high school, an elementary school, and a park.

Analysis Methodology

A. Applicable Standards and Definitions of Terms

Impacts to future sensitive receivers were evaluated in relation to the noise level standards promulgated in the City of Chula Vista General Plan (1989) and Title 19 of the Chula Vista Municipal Zoning Code.

The City of Chula Vista has not adopted any specific numerical noise/land use compatibility levels to establish significance criteria. As a matter of practice, the City

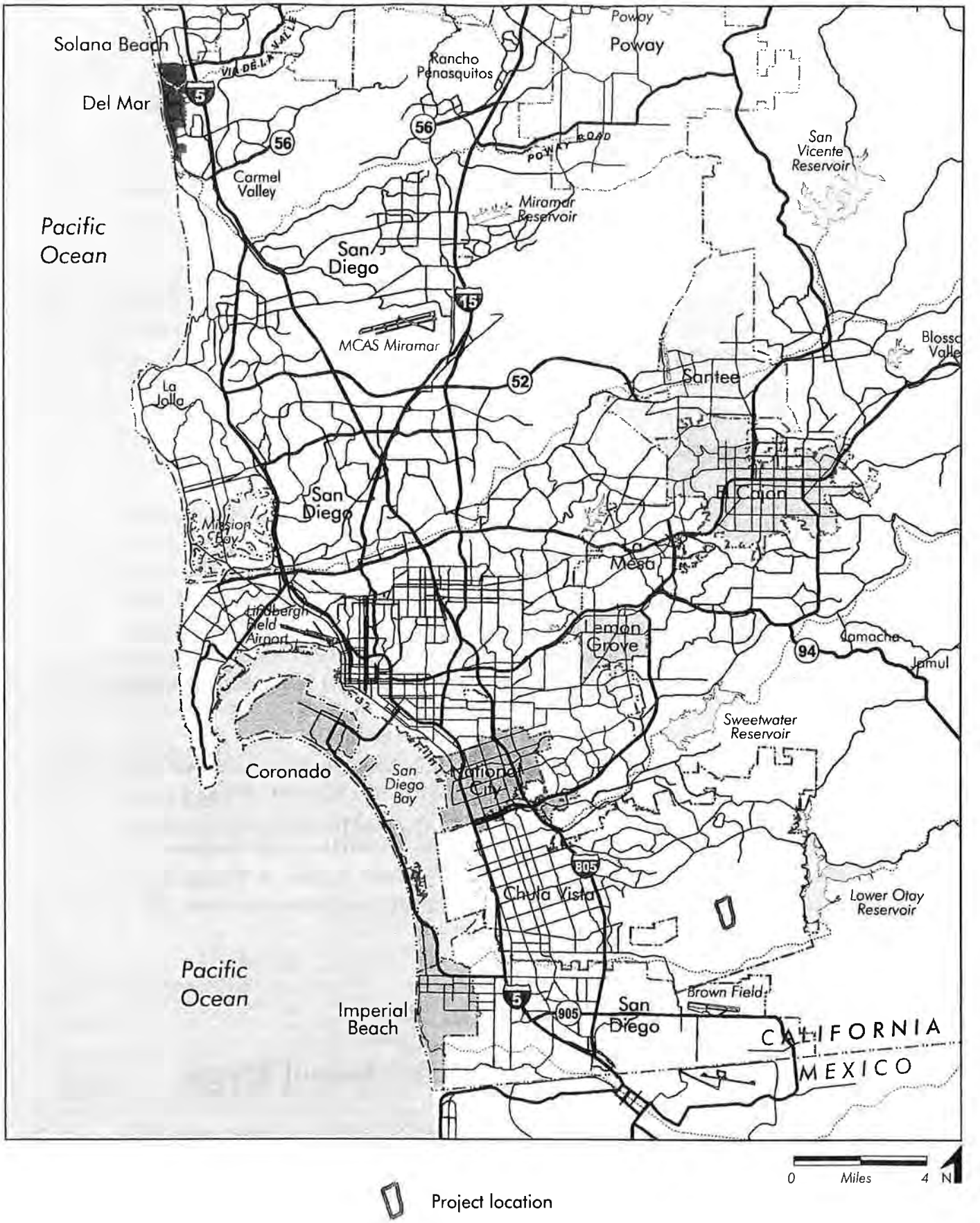

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FIGURE 1
Regional Location of the Project

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fig2 (aerial) 01/21/04

FIGURE 2
Aerial Photograph of the Project Vicinity

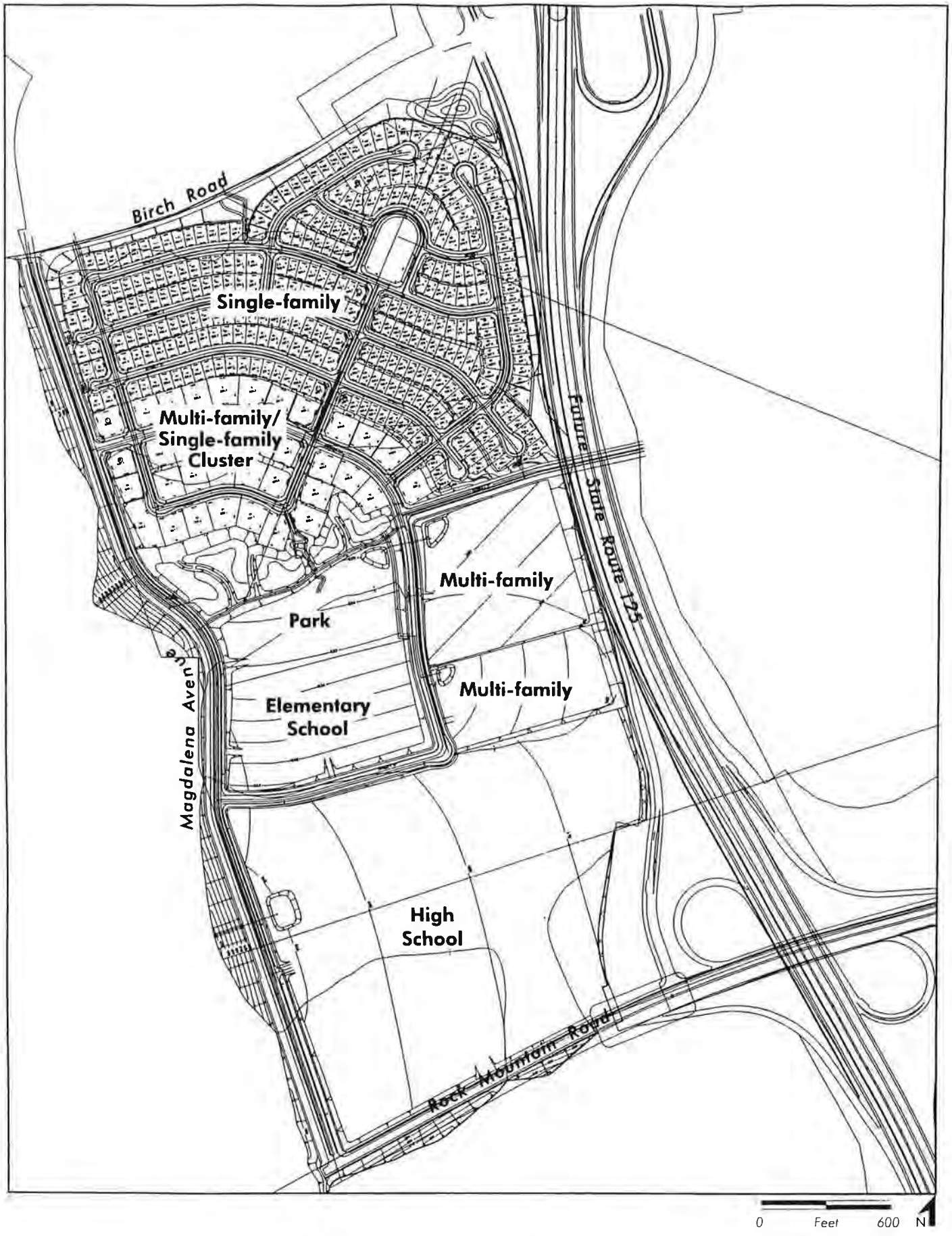

FIGURE 3
Proposed McMillin Village Seven Grading

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employs the noise guidelines set forth in the Noise Element of the City of San Diego Progress Guide and General Plan.

The CNEL is a 24-hour, A-weighted decibel average sound level from midnight-to-midnight, obtained after the addition of 5 dB to sound levels occurring between 7:00 P.M. and 10:00 P.M. and the addition of 10 dB to the sound levels occurring between 10:00 P.M. and 7:00 A.M. A-weighting is a frequency correction that often correlates well with the subjective response of humans to noise. Adding 5 dB and 10 dB to the evening and nighttime hours, respectively, accounts for the added sensitivity of humans to noise during these time periods.

The exterior noise level standard for noise-sensitive areas, which include residences, school play areas, and parks, is 65 dB(A) CNEL. Balconies on multi-family housing projects are also considered exterior use areas subject to the residential exterior noise standards. Balconies on single-family residences are not subject to the exterior noise standard.

The City also specifies that residential structures shall be designed to prevent the intrusion of exterior noises such that interior noise levels attributable to exterior sources do not exceed 45 CNEL in noise-sensitive interior rooms.

Standard construction techniques can be assumed to provide a 20-decibel reduction of exterior noise levels to an interior receiver when the windows and doors are closed. With these criteria, standard construction could be assumed to result in interior noise levels of 45 CNEL or less when exterior noise levels are 65 CNEL or less. When exterior noise levels are greater than 65 CNEL, consideration of construction specifics is required to ensure that interior noise levels will not exceed the 45 CNEL standard.

The transmission of exterior to interior noise in multi-family projects is also governed by Title 24 of the State Building Code that states:

> Residential structures to be located within an annual CNEL contour of 60 require an acoustical analysis showing that the structure has been designed to limit intruding noise to the prescribed allowable levels.

and that:

> Interior community noise equivalent levels (CNEL) with the windows closed, attributable to exterior sources shall not exceed an annual CNEL of 45 dB in any habitable room.

B. Traffic Noise Analysis

1. Traffic Parameters

Table 1 presents the traffic parameters used in this analysis. Future buildout traffic volumes for SR-125 were obtained from Linscott, Law, and Greenspan (Prasad, pers. com. 2004). A distribution of 77 percent of the traffic during daytime hours, 10 percent during evening hours, and 13 percent during the nighttime was assumed. With this distribution, CNEL is approximately two decibels greater than a noise level for an average daytime hour.

The southbound on ramp from eastbound Birch Road was not modeled due to its low projected traffic volume.

TABLE 1
BUILDOUT TRAFFIC PARAMETERS

Roadway	ADT	Speed (mph)	Percent Autos	Percent Medium Trucks	Percent Heavy Trucks
SR-125	139,000	65	95	3	2
Southbound off ramp to Rock Mountain Road	9,200	45	95	3	2
Southbound on ramp from westbound Rock Mountain Road	11,000	45	95	3	2
Southbound on ramp from eastbound Birch Road	300	45	95	3	2

2. Analysis of Traffic Noise

Noise generated by future traffic was projected using the STAMINA 2.0/OPTIMA computer models from Vanderbilt University (1991). These models are computerized versions of the Federal Highway Administration Noise Prediction Model (1979), which use California vehicle noise emission (Calveno) levels (California Department of Transportation 1983).

Exterior traffic noise levels to first-, second-, and third-floor receivers were calculated. First-floor receivers were placed at five feet above ground level, second-floor receivers were placed at 15 feet above ground level, and third-floor receivers were placed at 25 feet

above ground level. Calculations were completed for a daytime hour and the resulting hourly average noise levels (L_{eq}) were weighted and combined into CNEL values. Projected CNEL values based on the traffic distributions used here are approximately two decibels higher than the daytime hourly L_{eq} calculated by STAMINA as indicated above.

The STAMINA model calculates noise levels at selected receiver locations using input parameter estimates such as projected hourly average traffic rates; vehicle mix, distribution, and speed; roadway lengths and gradients; distances between sources, barriers, and receivers; and shielding provided by intervening terrain, barriers, and structures. The OPTIMA model calculates noise levels at selected receivers for varying noise barrier heights using the STAMINA output.

Receivers, roadways, and barriers are input into the STAMINA model using three-dimensional coordinates.

Locations and elevations of pads and slopes were obtained from CAD drawing files received from the project engineer (Kane 2003). The alignment and elevations of SR-125 were also obtained from these files. The Y-axis pointed north and the X-axis pointed east.

As an option, STAMINA calculates ground absorption rates as reflective or absorptive. Future conditions were evaluated using reflective (hard) site assumptions. Hard sites have an attenuation of 3 dB for every doubling of distance from a line source.

Future Acoustical Environment and Impacts

A. Traffic Noise

The methods used in the analysis of future conditions are described in the Analysis Methodology section of this report. The traffic parameters used are shown in Table 1. The City standards are 65 CNEL for exterior residential areas, school outdoor use areas, and parks.

Noise levels were modeled for a series of receivers located throughout the project area to determine the future noise contours over the project site due to traffic on SR-125. STAMINA input and output are provided in Attachment 1. The resulting noise contours at five feet above the ground are shown in Figure 4. These noise contours include the effects of future grading on the property but do not take into account any noise mitigation measures or shielding provided by the proposed buildings.

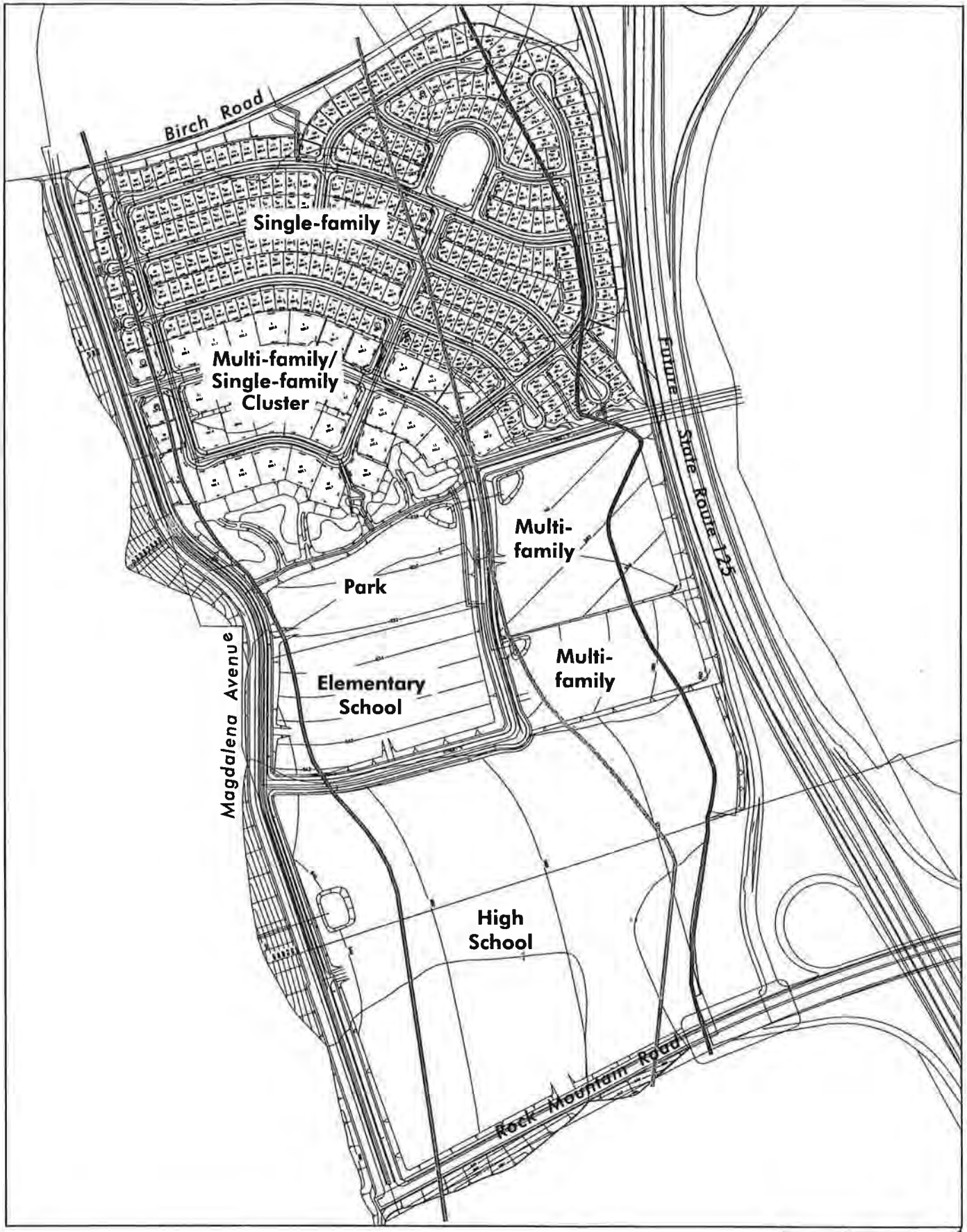

FIGURE 4

Future Projected Noise Contours Without Mitigation

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fig4 (contours) 02/23/04

The preliminary design for the high school site places ball fields and a stadium adjacent to SR-125. Therefore, the portion of the high school site adjacent to SR-125 was assumed to be exterior usable space. A design for the multi-family sites is currently not available. Consequently, this analysis considers the entire multi-family sites as usable exterior areas.

As shown in Figure 4, ground-level receivers on lots adjacent to SR-125 could experience future traffic noise levels in excess of 65 CNEL, which is the City's exterior noise standard for the proposed uses.

Noise levels were also modeled for a series of ground-floor receivers located adjacent to SR-125. Figure 5 shows the locations of the modeled receivers. Second- and third-floor noise levels were also projected for these receivers. STAMINA input and output are provided in Attachment 2.

Table 2 summarizes the resulting noise levels at the modeled receivers. From Table 2 and Figure 5 it can be seen that future predicted noise levels are projected to exceed the City's 65 CNEL exterior standard on the single- and multi-family residential lots, and the high school lot adjacent to SR-125. Noise levels are not projected to exceed applicable standards at the elementary school or park. For the high school, outdoor use areas are planned immediately adjacent to SR-125.

B. Noise Produced by School Uses

The schools may possess bells for use as signaling devices. The City of Chula Vista classifies these as stationary non-emergency signaling devices and prohibits the sounding of these devices for more than 120 seconds continually in an hourly period, or intermittent sounding over a five-minute period in any hour.

Mitigation

Mitigation of potential first-floor exterior noise impacts can be achieved through the construction of barriers as illustrated in Figure 6. For the residential lots and the high school along SR-125, construction of a barrier varying in height from 3 to 14 feet along the top of the pad slopes, or near the edge of the highway, as shown in Figure 6, would reduce noise levels to 65 CNEL or below. Table 2 shows the projected noise levels at the modeled receivers after construction of the proposed noise barriers.

The barriers should be either walls or berms—or a combination thereof—constructed of solid material with a density of at least four pounds per square foot and should not have any cracks or gaps. Examples of acceptable barrier materials include, but are not limited

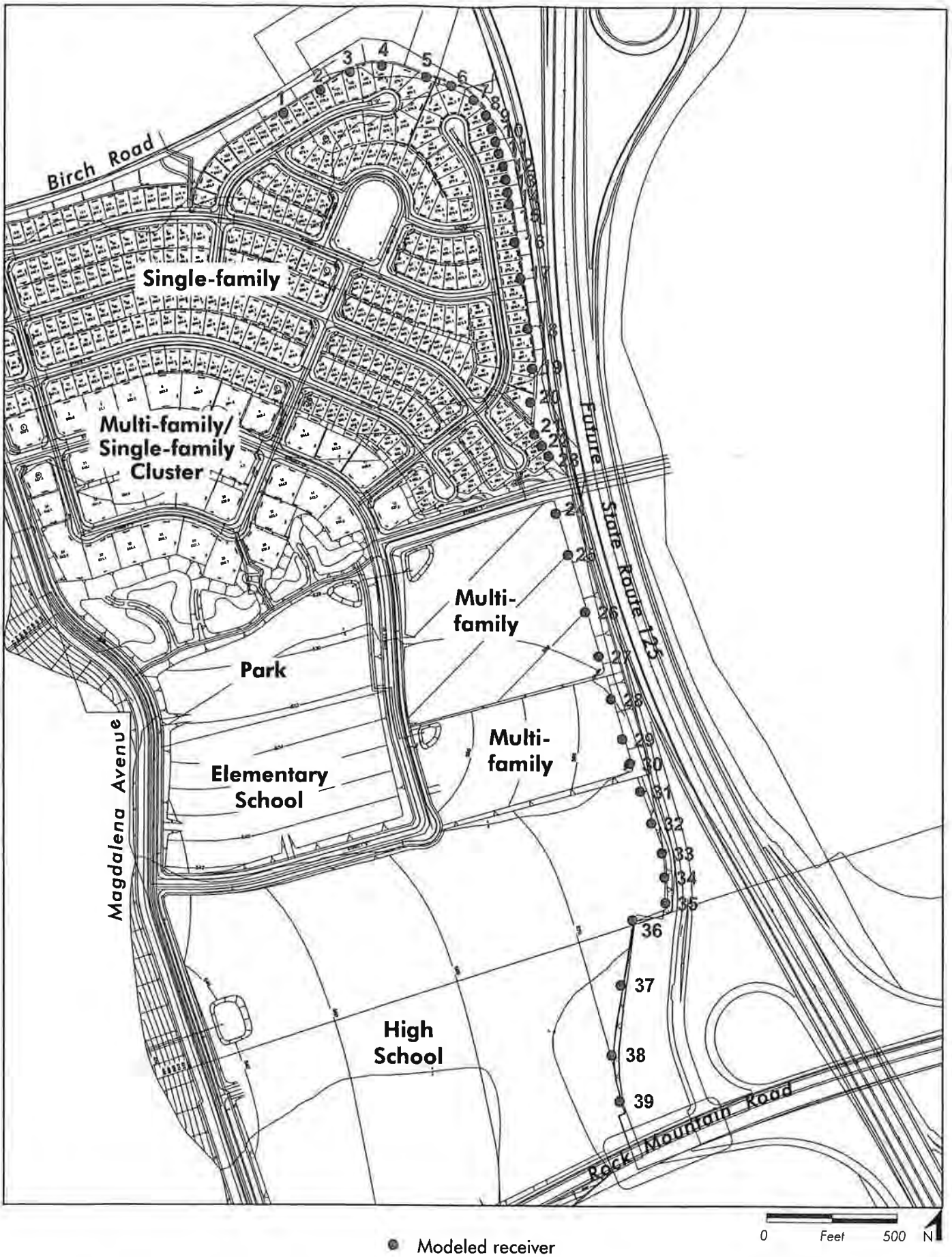

FIGURE 5
Modeled Receiver Locations

RECON

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fig5 (receivers) 02/23/04

TABLE 2
BUILDOUT NOISE LEVELS

Receiver Number	First-Floor Receivers		Second-Floor Receivers		Third-Floor Receivers	
	CNEL without Mitigation	CNEL with Mitigation	CNEL without Mitigation	CNEL with Mitigation	CNEL without Mitigation	CNEL with Mitigation
1	65	63	67	64	N/A	N/A
2	66	64	68	65	N/A	N/A
3	67	65	69	67	N/A	N/A
4	70	65	70	69	N/A	N/A
5	72	65	72	71	N/A	N/A
6	73	65	73	73	N/A	N/A
7	74	65	75	74	N/A	N/A
8	75	65	76	71	N/A	N/A
9	73	65	76	70	N/A	N/A
10	73	65	76	70	N/A	N/A
11	73	65	76	70	N/A	N/A
12	73	65	77	69	N/A	N/A
13	73	65	76	69	N/A	N/A
14	72	65	76	68	N/A	N/A
15	72	65	75	68	N/A	N/A
16	70	64	73	67	N/A	N/A
17	70	65	73	68	N/A	N/A
18	71	65	75	69	N/A	N/A
19	71	65	74	68	N/A	N/A
20	71	65	74	68	N/A	N/A
21	71	65	74	68	N/A	N/A
22	72	65	74	68	N/A	N/A
23	72	65	75	69	N/A	N/A
24	69	63	72	66	74	68
25	70	64	73	66	75	69
26	72	65	74	67	76	71
27	72	65	74	68	77	71
28	73	65	75	68	78	72
29	72	65	75	68	78	72
30	72	65	75	69	78	74
31	77	65	N/A*	N/A*	N/A*	N/A*
32	77	64	N/A*	N/A*	N/A*	N/A*
33	77	65	N/A*	N/A*	N/A*	N/A*
34	76	65	N/A*	N/A*	N/A*	N/A*
35	76	65	N/A*	N/A*	N/A*	N/A*
36	71	65	N/A*	N/A*	N/A*	N/A*
37	66	62	N/A*	N/A*	N/A*	N/A*
38	63	60	N/A*	N/A*	N/A*	N/A*
39	70	65	N/A*	N/A*	N/A*	N/A*

N/A: Single-family homes. Not anticipated to be three stories.

N/A*: High school site. No second- or third-floor uses currently proposed along SR-125.

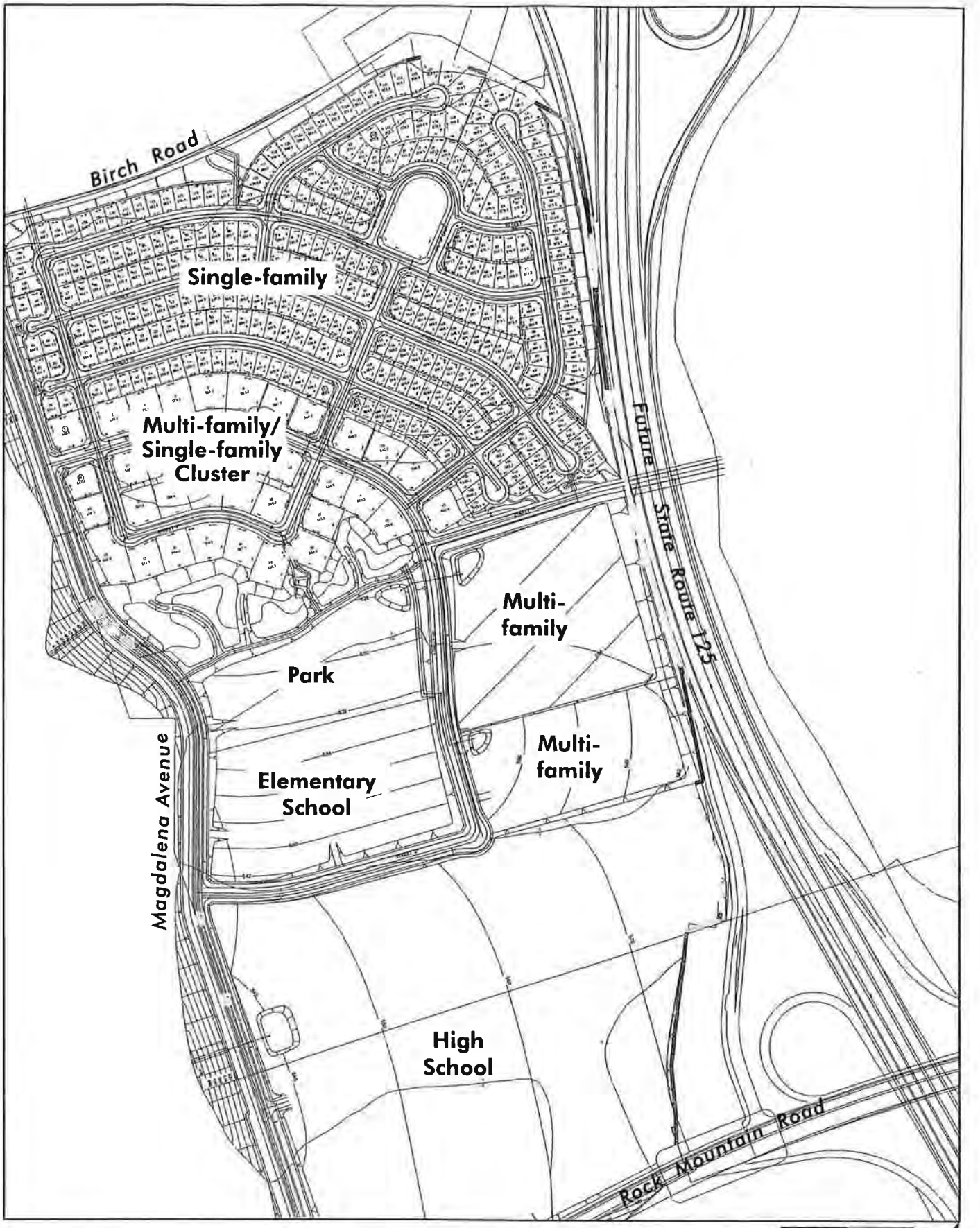

FIGURE 6
Proposed Noise Barriers

RECON

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fig6 (barriers) 02/23/04

to, masonry block, wood frame with stucco, 0.5-inch-thick Plexiglas, or 0.25-inch-thick plate glass. If transparent barrier materials are used, no gaps should occur between the panels. Barrier heights are relative to final pad elevations. Required barrier heights may be achieved through the construction of walls, berms, or wall/berm combinations.

Barrier heights are relative to final pad elevations or the current roadway slope grading, whichever is the more effective location. Required barrier heights may be achieved through the construction of walls, berms, or wall/berm combinations.

The City of Chula Vista typically limits the height of walls constructed for noise attenuation purposes to eight and a half feet. In circumstances where noise barrier heights in excess of eight and a half feet are required, a combination of noise wall and berm may be required. In these cases, the wall portion of the wall/berm combination would not exceed eight and a half feet in height.

For multi-family development areas, it is recommended that no balconies be constructed facing SR-125. Any balconies proposed in the multi-family areas must comply with the residential exterior noise standard of 65 CNEL. Consequently, at the time that building plans are available for these areas, the site plans will be reviewed to ensure that they comply with the appropriate standards. If multi-family balconies are constructed facing SR-125, mitigation measures such as parapet walls or full enclosures will need to be analyzed. Additionally, the State Building Code requires detailed acoustical studies demonstrating that interior noise levels will be at or below 45 CNEL for multi-family residential structures that are exposed to exterior noise levels in excess of 60 CNEL. Thus, at the time that building plans are available, and prior to the issuance of building permits, a detailed acoustical analysis shall be required for the buildings adjacent to SR-125 which demonstrates that second- and third-floor interior noise levels due to exterior sources will be below the 45 CNEL standard. This study should demonstrate a minimum 29-decibel reduction with the windows closed.

For the single-family development area, exterior noise levels are projected to be as high as 71 CNEL for the lots adjacent to and near SR-125 (in the northwestern portion of the single-family site lots 127 through 136; in the eastern portion of the single-family site lots 46 through 59, 73 through 83, and 115 through 119). Therefore, interior noise levels cannot be assumed to be within the 45 CNEL standard. Thus, at the time that building plans are available, and prior to the issuance of building permits, a detailed acoustical analysis shall be required which demonstrates that second-floor interior noise levels due to exterior sources will be below the 45 CNEL standard. This study should demonstrate a minimum 26-decibel reduction with the windows closed.

For those areas where second- and third-floor exterior noise levels are projected to exceed 60 CNEL (multi-family buildings adjacent to SR-125; multi-family/single-family cluster lot 12; single-family lots 104 through 136 in the northwestern portion of the single-family

site; in the eastern portion of the single-family site lots 46 through 59, 73 through 83, 115 through 119, 150, and 151), it will be necessary for the windows to remain closed to ensure that interior noise levels meet the interior standard of 45 CNEL. Where it is necessary to keep windows closed, the design for these affected units shall include a ventilation or air conditioning system to provide a habitable interior environment when windows are closed.

MULTI-FAMILY BUILDING SHIELDING DESIGN

If ground-floor exterior use areas are located on the sides of the buildings opposite the freeway, the proposed barrier heights could be lowered along the multi-family site.

In order to aid in the design process of the multi-family sites, an alternate model was run with ground-floor usable exterior areas shielded from SR-125 by three-story multi-family buildings. The buildings were modeled at 30 feet high. It should be noted that the locations and dimensions of these buildings were inferred based on other developments in the Otay Ranch community, and would need to be reanalyzed at such time as a site plan is developed.

Figure 7 shows the locations of the modeled multi-family receivers for this design. Receivers 1 through 18 are modeled exterior use receivers. Receivers 19 through 23 are building receivers modeled for the purpose of assessing interior noise. Figure 7 also shows the modeled multi-family building locations.

In discussions with the client it was determined that a minimum six-foot-high barrier would be built along SR-125. The analysis determined that barriers along the multi-family site were not necessary to reduce noise levels to 65 CNEL at multi-family ground-floor exterior use receiver locations. However, barrier heights higher than six feet were found to be necessary along the multi-family site to ensure that exterior noise levels at single-family and high school exterior use locations remain at 65 CNEL or less. Figure 8 shows barrier heights ranging from 3 to 14 feet necessary to reduce all project ground-floor exterior use receivers to 65 CNEL or less. The barrier heights shown in Figure 8, where buildings shield multi-family exterior use areas, are lower than those shown in Figure 6. Table 3 shows the projected noise levels at the new multi-family receivers shown in Figure 7, and at the single-family and high school receivers shown in Figure 5. STAMINA input and output are provided in Attachment 2. As seen in Table 3, ground-floor multi-family exterior usable areas are projected to be below 65 CNEL if multi-family buildings intervene between SR-125 and the receivers.

It should be noted that these barrier heights are not based on actual building or receiver locations, and should only be used as a design aid. Should a similar design be implemented, it would need to be reanalyzed at such time as a site plan is developed.

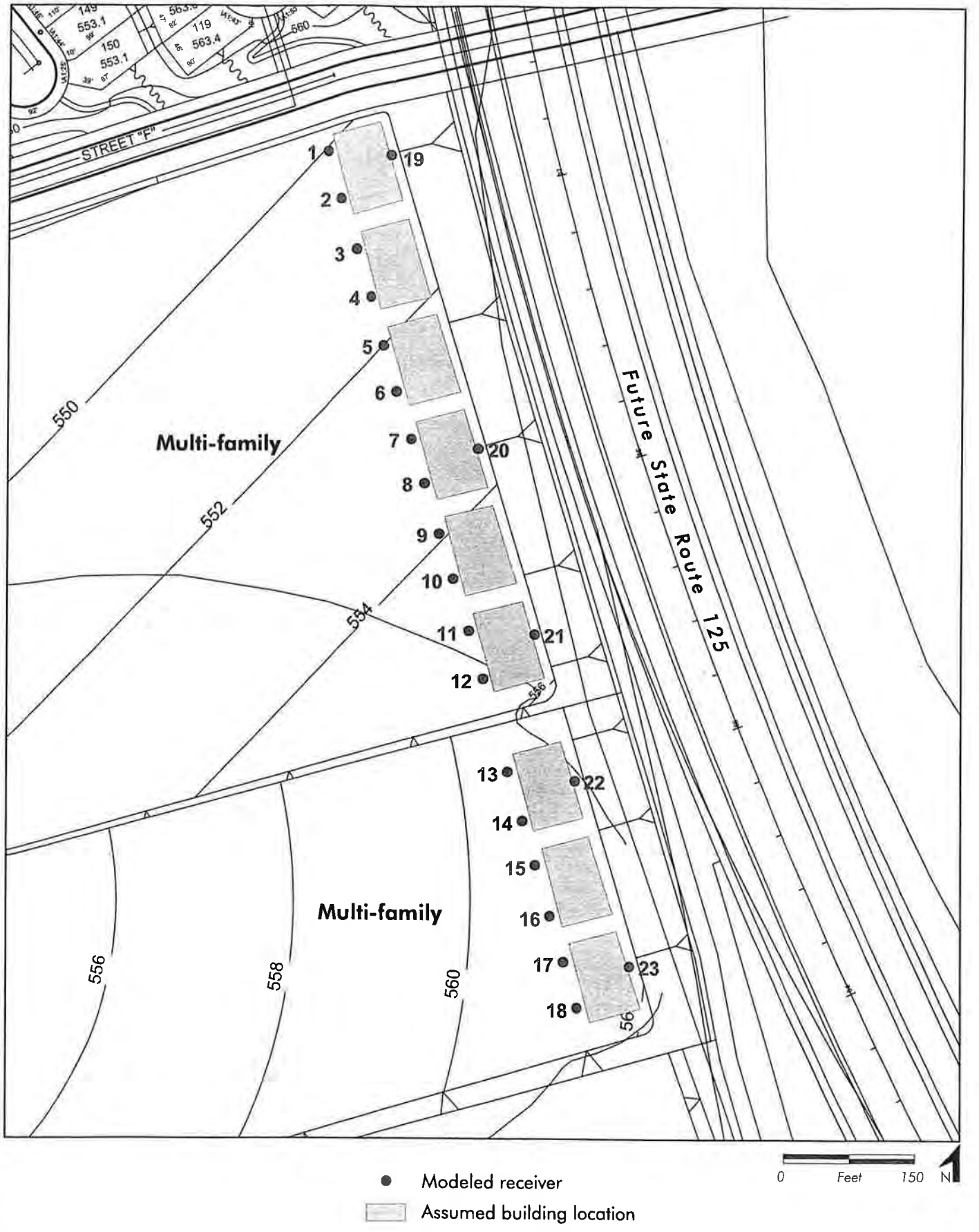

FIGURE 7
Modeled Building-Shielding
Multi-Family Receivers

RECON

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fig7 (shielded_receivers) 02/20/04

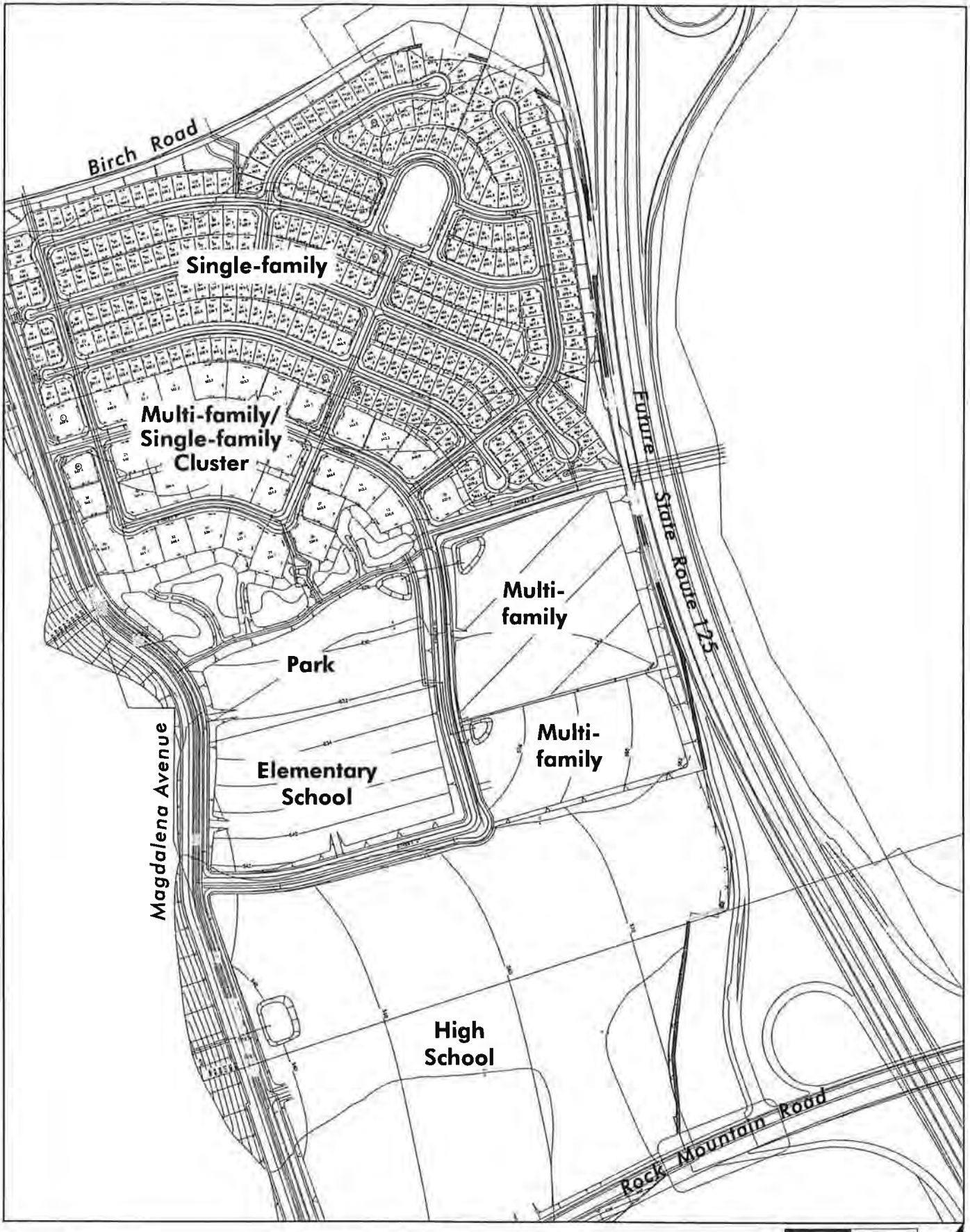

FIGURE 8
Noise Barrier Heights with
Multi-Family Building Shielding

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fig8 (shielded_barriers) 02/23/04

TABLE 3
BUILDOUT NOISE LEVELS
WITH MULTI-FAMILY BUILDING SHIELDING DESIGN

	CNEL with Multi-family Buildings and Proposed Barriers		
Receiver Number	First-Floor Receivers	Second-Floor Receivers	Third-Floor Receivers
Multi-Family Receivers*			
1	59	N/A*	N/A*
2	57	N/A*	N/A*
3	57	N/A*	N/A*
4	57	N/A*	N/A*
5	57	N/A*	N/A*
6	57	N/A*	N/A*
7	57	N/A*	N/A*
8	57	N/A*	N/A*
9	57	N/A*	N/A*
10	57	N/A*	N/A*
11	57	N/A*	N/A*
12	57	N/A*	N/A*
13	58	N/A*	N/A*
14	57	N/A*	N/A*
15	57	N/A*	N/A*
16	57	N/A*	N/A*
17	57	N/A*	N/A*
18	57	N/A*	N/A*
19**	64	66	69
20**	66	69	72
21**	67	70	73
22**	69	72	75
23**	69	72	76
Single-Family Receivers*			
1	63	64	N/A
2	64	65	N/A
3	65	67	N/A
4	65	69	N/A
5	65	71	N/A
6	65	73	N/A
7	65	74	N/A
8	65	71	N/A
9	65	70	N/A
10	65	70	N/A
11	65	70	N/A
12	65	69	N/A
13	65	69	N/A
14	65	68	N/A
15	65	68	N/A
16	64	67	N/A
17	65	68	N/A

TABLE 2
BUILDOUT NOISE LEVELS
WITH MULTI-FAMILY BUILDING SHIELDING DESIGN
(continued)

	CNEL with Multi-family Buildings and Proposed Barriers		
Receiver Number	First-Floor Receivers	Second-Floor Receivers	Third-Floor Receivers
18	65	69	N/A
19	65	68	N/A
20	65	68	N/A
21	65	68	N/A
22	65	68	N/A
23	65	69	N/A
High School Receivers*			
31	65	N/A*	N/A*
32	64	N/A*	N/A*
33	65	N/A*	N/A*
34	65	N/A*	N/A*
35	65	N/A*	N/A*
36	65	N/A*	N/A*
37	62	N/A*	N/A*
38	60	N/A*	N/A*
39	65	N/A*	N/A*

*See Figure 7 for multi-family receiver locations. See Figure 5 for single-family and high school receiver locations.

**Building receiver. Modeled for assessing interior noise.

N/A: Single-family homes. Not anticipated to be three stories.

N/A*: No second- or third-floor uses currently proposed at these locations.

Furthermore, reducing barrier heights adjacent to the multi-family area will increase exterior noise levels at the building faces adjacent to SR-125. The future interior study discussed above would therefore need to demonstrate a minimum 31-decibel reduction with the windows closed.

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Vanderbilt University

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ATTACHMENTS

ATTACHMENT 1

KEY TO FILE CODES

ATTACHMENT 1

*.STA	-	STAMINA output files
CONTOUR	-	Village 7 contour receivers 1 through 40.
CONTOUR2	-	Village 7 contour receivers 41 through 80.
CONTOUR3	-	Village 7 contour receivers 81 through 95.

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Otay Ranch - Village 7: 02/2004

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM 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)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Southbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6339513.3	1806920.6	600.4	0
2	6339510.5	1806467.0	598.8	0

0ROADWAY 2 Southbound SR-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
2	6339510.5	1806467.0	598.8	0
3	6339509.1	1806114.7	593.8	0
4	6339508.2	1805921.3	592.2	0
5	6339506.6	1805567.2	590.6	0
6	6339518.4	1805084.1	587.3	0
7	6339558.1	1804696.4	584.0	0
8	6339626.5	1804317.1	580.7	0
9	6339721.1	1803940.3	577.4	0
10	6339779.5	1803754.4	575.8	0
11	6339915.4	1803392.1	572.5	0
12	6340052.2	1803092.3	569.2	0
13	6340182.4	1802843.8	564.3	0
14	6340344.6	1802558.3	554.5	0
15	6340485.7	1802306.5	544.6	0
16	6340646.7	1802025.4	531.5	0

0ROADWAY 3 Southbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
16	6340646.7	1802025.4	531.5	0
17	6340806.7	1801741.3	516.7	0
18	6340985.8	1801426.3	500.3	0
19	6341154.7	1801109.5	483.9	0

0ROADWAY 4 Northbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6341260.4	1801145.7	485.6	1
2	6341061.5	1801517.5	503.6	1
3	6340903.6	1801796.7	516.7	1
4	6340743.5	1802078.7	531.5	1

0ROADWAY 5 Northbound SR-125, Birch to RM

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
4	6340743.5	1802078.7	531.5	1
5	6340583.6	1802361.5	544.6	1
6	6340405.7	1802676.0	556.1	1
7	6340228.9	1802992.4	564.3	1
8	6340066.7	1803323.5	569.2	1
9	6339993.2	1803497.7	570.9	1
10	6339809.9	1804036.4	575.8	1
11	6339761.7	1804219.9	577.4	1
12	6339684.8	1804591.6	580.7	1
13	6339638.4	1804969.2	584.0	1
14	6339618.1	1805346.8	587.3	1
15	6339618.1	1805728.7	590.6	1
16	6339621.4	1806111.3	593.8	1
17	6339622.2	1806484.0	598.8	1

0ROADWAY 6 Northbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
17	6339622.2	1806484.0	598.8	1
18	6339626.5	1806918.9	600.4	1

0ROADWAY 7 Southbound Ramp to Rock Mountain

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	561.	45.0
VEH5	18.	45.0
VEH6	12.	45.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6339864.2	1803405.4	565.9	1
2	6339924.1	1803175.4	566.5	1
3	6339984.3	1802962.1	567.1	1
4	6340015.7	1802831.9	567.5	1
5	6340026.5	1802684.8	567.9	1
6	6340003.6	1802446.2	568.5	1
7	6339995.2	1802224.4	569.1	1
8	6340032.5	1802046.0	569.6	1
9	6340089.2	1801885.6	570.0	1

0ROADWAY 8 Ramp from wb Rock Mountain to sb-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	671.	45.0
VEH5	21.	45.0
VEH6	14.	45.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6340294.9	1801957.4	570.0	0
2	6340188.4	1802001.2	565.7	0
3	6340138.6	1802064.9	562.8	0
4	6340116.7	1802131.7	560.3	0
5	6340125.6	1802215.3	557.2	0
6	6340173.4	1802290.0	554.0	0
7	6340242.1	1802330.8	551.1	0
8	6340334.8	1802336.8	547.7	0
9	6340430.4	1802292.0	543.8	0
10	6340498.1	1802198.4	539.7	0
11	6340589.7	1802044.0	533.1	0

1

BARRIER 1 TYPE(A) R-O-W barrier 1acont'd

	COORDINATES				DELZ	P
	X	Y	Z	Z0		
sf-16	6339241.5	1805697.6	580.7	580.7	.0	0
6a	6339296.6	1805665.7	582.0	582.0		
6b	6339342.5	1805640.0	583.1	583.1		
6c	6339383.5	1805617.1	584.0	584.0		
7	6339406.4	1805509.8	584.0	584.0		
8	6339434.3	1805343.0	588.9	588.9		

1

BARRIER 2 TYPE(A) R-O-W barrier 1bcont'd

	COORDINATES				DELZ	P
	X	Y	Z	Z0		
8	6339434.3	1805343.0	588.9	588.9	.0	0
9	6339453.5	1805206.6	589.6	589.6		
10	6339469.4	1805092.9	589.9	589.9		

1

BARRIER 3 TYPE(A) R-O-W barrier 2cont'd

	COORDINATES				DELZ	P
	X	Y	Z	Z0		
10	6339469.4	1805092.9	589.9	589.9	.0	0
11	6339469.8	1805006.9	588.9	588.9		
12	6339469.6	1804987.8	587.3	587.3		
13	6339479.8	1804897.0	585.1	585.1		
14	6339495.0	1804777.7	584.0	584.0		
15	6339517.8	1804626.1	582.3	582.3		
16	6339550.1	1804460.9	580.8	580.8		
17	6339589.1	1804285.5	579.1	579.1		

```
18        6339634.0 1804109.2      577.4      577.4
19        6339663.6 1803997.1      576.0      576.0
1

BARRIER   4   TYPE(A)     R-O-W barrier trf to top of slope barrier

          ---------COORDINATES----------
               X         Y         Z         Z0       DELZ        P
19        6339663.6 1803997.1      576.0      576.0       .0        0
20        6339705.0 1803857.9      574.7      574.7
21        6339735.2 1803763.2      573.9      573.9
22        6339758.3 1803694.7      573.5      573.5
23        6339774.3 1803649.9      573.0      573.0
24        6339798.4 1803582.7      572.6      572.6
2-rev     6339886.3 1803152.2      571.0      571.0
3-rev     6339854.5 1803141.6      571.0      571.0
1

BARRIER   5   TYPE(A)     S-F Pad Edges

          ---------COORDINATES----------
               X         Y         Z         Z0       DELZ        P
1         6338450.5 1805660.4      570.7      570.7       .0        0
2         6338496.9 1805688.8      570.7      570.7
3         6338586.8 1805745.8      572.3      572.3
4         6338643.8 1805781.6      572.3      572.3
5         6338703.0 1805818.1      574.7      574.7
6         6338761.4 1805846.6      574.7      574.7
7         6338765.1 1805848.1      576.8      576.8
8         6338814.8 1805859.8      576.8      576.8
9         6338819.2 1805860.5      578.2      578.2
1

BARRIER   6   TYPE(A)     S-F Pad Edges cont'd.1

          ---------COORDINATES----------
               X         Y         Z         Z0       DELZ        P
9         6338819.2 1805860.5      578.2      578.2       .0        0
10        6338898.8 1805853.9      578.2      578.2
11        6338994.5 1805823.2      578.2      578.2
12        6338998.2 1805822.5      578.5      578.5
1

BARRIER   7   TYPE(A)     S-F Pad Edges cont'd.2

          ---------COORDINATES----------
               X         Y         Z         Z0       DELZ        P
12        6338998.2 1805822.5      578.5      578.5       .0        0
13        6339061.0 1805801.3      578.5      578.5
14        6339065.4 1805799.9      580.7      580.7
15        6339173.6 1805762.6      580.7      580.7
16        6339241.5 1805697.6      580.7      580.7
1

BARRIER   8   TYPE(A)     Elem School Pad Edges

          ---------COORDINATES----------
               X         Y         Z         Z0       DELZ        P
40        6339064.2 1804045.1      548.0      548.0       .0        0
41        6339477.3 1804188.3      550.0      550.0
42        6339517.0 1804198.4      550.2      550.2
43        6339575.6 1804002.5      552.0      552.0
44        6339641.2 1803781.3      554.0      554.0
45        6339706.8 1803560.2      556.0      556.0
46        6339706.8 1803544.3      556.1      556.1
1

BARRIER   9   TYPE(A)     Elem to Park Pads

          ---------COORDINATES----------
               X         Y         Z         Z0       DELZ        P
46        6339706.8 1803544.3      556.1      556.1       .0        0
48        6339717.2 1803526.8      561.3      561.3
1

BARRIER   10   TYPE(A)     Park Pad Edges

          ---------COORDINATES----------
               X         Y         Z         Z0       DELZ        P
47        6339591.3 1803493.6      560.0      560.0       .0        0
48        6339717.2 1803526.8      561.3      561.3
49        6339762.7 1803371.2      561.5      561.5
50        6339808.2 1803214.7      562.0      562.0
51        6339819.6 1803172.7      562.1      562.1
1

BARRIER   11   TYPE(A)     Park to High Pads

          ---------COORDINATES----------
               X         Y         Z         Z0       DELZ        P
51        6339819.6 1803172.7      562.1      562.1       .0        0
53        6339837.0 1803137.7      579.5      579.5
52        6339709.4 1803101.9      576.9      576.9
1

BARRIER   12   TYPE(A)     High School Pad Edges

          ---------COORDINATES----------
               X         Y         Z         Z0       DELZ        P
3-rev     6339854.5 1803141.6      571.0      571.0       .0        0
53        6339837.0 1803137.7      579.5      579.5
54        6339875.5 1803030.2      578.6      578.6
55        6339921.0 1802903.4      578.5      578.5
56        6339942.8 1802838.7      578.4      578.4
57        6339950.7 1802716.3      578.0      578.0
58        6339953.3 1802656.0      577.5      577.5
59        6339944.6 1802632.3      577.3      577.3
60a       6339822.2 1802585.1      574.6      574.6
1

BARRIER   13   TYPE(A)     High School Pad Edges cont'd.

          ---------COORDINATES----------
               X         Y         Z         Z0       DELZ        P
60a       6339822.2 1802585.1      574.6      574.6       .0        0
60b       6339807.2 1802441.6      578.7      578.7
60c       6339785.7 1802288.4      579.1      579.1
61        6339775.0 1802195.2      580.8      580.8
62        6339763.6 1802083.2      579.7      579.7
63        6339781.1 1801897.9      570.4      570.4
64        6339783.7 1801794.7      570.4      570.4
1

Contour Receivers 1-40 (at 5 feet)

                    ----------COORDINATES----------
                         X         Y         Z
1                   6338479.4 1805665.4      575.7
2                   6338619.2 1805753.4      577.3
3                   6338733.3 1805822.9      579.7
4                   6338855.3 1805846.9      583.2
5                   6339024.6 1805803.3      583.5
6                   6339203.7 1805718.6      585.7
7                   6339273.2 1805611.7      584.7
8                   6339316.9 1805468.2      582.6
9                   6339341.9 1805324.7      581.2
10                  6339363.2 1805182.2      578.4
11                  6339389.1 1805009.5      575.8
12                  6339414.0 1804855.2      573.8
13                  6339431.0 1804701.9      570.3
14                  6339425.1 1804573.3      568.7
15                  6339440.9 1804451.3      568.0
16                  6339468.2 1804409.0      568.4
17                  6339493.4 1804369.0      568.4
18                  6339521.3 1804149.7      555.6
19                  6339685.1 1803601.7      560.6
20                  6339732.4 1803437.3      566.3
21                  6339845.6 1803083.2      583.8
22                  6339806.0 1803190.2      567.0
23                  6339938.9 1802755.1      582.9
24                  6339942.7 1802657.4      582.3
25                  6339815.4 1802591.7      579.5
26                  6339770.7 1802344.7      577.2
27                  6339735.0 1802080.3      575.0
28                  6339766.6 1801907.1      574.9
29                  6339301.3 1805516.7      583.9
30                  6339327.2 1805419.0      582.6
31                  6339335.0 1805369.9      581.2
32                  6338504.7 1804996.9      568.4
33                  6338620.5 1804136.3      547.3
34                  6338816.5 1805519.5      581.4
35                  6339114.0 1805510.1      583.7
36                  6339038.0 1805286.5      582.0
37                  6338920.3 1804931.3      576.7
38                  6339222.5 1805025.9      576.3
39                  6337283.0 1805123.9      550.3
40                  6337640.9 1803926.4      547.5
1

ALPHA 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
     .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  .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  .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  .0  .0
7 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
     .0  .0  .0  .0  .0  .0  .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  .0  .0  .0  .0  .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

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
     .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  .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  .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  .0  .0
7 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
     .0  .0  .0  .0  .0  .0  .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  .0  .0  .0  .0  .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
1             63.5    64.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           54.3
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           51.4 50.1 53.9 54.1 50.2 48.8 47.0 42.7 44.3 41.7

           39.6 39.0 36.6 35.1
   3        1    2    3
           33.5 32.0 30.2
   4        1    2    3
           32.2 32.7 34.4
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           35.8 38.0 39.5 41.0 39.1 45.3 42.1 46.3 47.4 49.2
```

```
          52.1 51.9 50.3
  6        1
          52.5
  7        1    2    3    4    5    6    7    8
          26.3 26.0 23.7 22.2 23.0 23.3 22.7 22.0
  8        1    2    3    4    5    6    7    8    9    10

          20.4 18.5 17.3 17.2 16.4 15.9 18.2 19.2 19.1 20.4
1
RECEIVER      LEQ(H)     L10
2              64.3      65.5
ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA
ROADWAY   SEGMENT
  1        1
          55.4
  2        1    2    3    4    5    6    7    8    9    10
 11        12   13   14
          52.7 51.2 54.9 55.0 50.3 49.0 47.1 42.7 43.9 41.4

          39.6 39.0 36.8 35.5
  3        1    2    3
          34.0 32.7 31.0
  4        1    2    3
          33.0 33.2 35.1
  5        1    2    3    4    5    6    7    8    9    10
 11        12   13
          36.3 38.3 39.6 41.0 39.1 45.3 42.1 46.4 47.6 50.0

          53.0 52.9 51.7
  6        1
          53.4
  7        1    2    3    4    5    6    7    8
          26.5 26.1 23.7 23.1 23.1 23.2 22.6 22.1
  8        1    2    3    4    5    6    7    8    9    10

          20.3 18.4 17.2 17.1 16.6 17.1 19.1 19.5 19.6 20.8
1
RECEIVER      LEQ(H)     L10
3              65.3      66.5
ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA
ROADWAY   SEGMENT
  1        1
          56.3
  2        1    2    3    4    5    6    7    8    9    10
 11        12   13   14
          54.8 52.6 55.9 55.8 50.4 49.0 46.9 42.2 43.7 41.4

          39.5 39.0 36.9 36.0
  3        1    2    3
          34.8 33.3 31.9
  4        1    2    3
          33.4 33.5 35.3
  5        1    2    3    4    5    6    7    8    9    10
 11        12   13
          36.4 38.3 39.6 41.0 39.0 45.4 42.2 46.5 47.8 50.7

          53.7 54.2 53.8
  6        1
          55.0
  7        1    2    3    4    5    6    7    8
          26.7 26.2 23.6 23.7 23.3 23.2 22.5 22.0
  8        1    2    3    4    5    6    7    8    9    10

          20.3 18.3 17.1 17.1 16.9 18.2 19.4 19.7 19.8 21.3
1
RECEIVER      LEQ(H)     L10
4              68.0      69.1
ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA
ROADWAY   SEGMENT
  1        1
          57.3
  2        1    2    3    4    5    6    7    8    9    10
 11        12   13   14
          58.8 57.6 59.5 56.9 50.8 49.0 46.6 42.0 43.6 41.5

          39.5 39.0 37.2 36.4
  3        1    2    3
          35.1 34.2 32.7
  4        1    2    3
          34.1 34.2 35.8
  5        1    2    3    4    5    6    7    8    9    10
 11        12   13
          36.7 38.5 39.8 41.1 39.2 45.6 42.4 46.8 48.4 51.8

          55.7 59.3 58.0
  6        1
          56.4
  7        1    2    3    4    5    6    7    8
          26.8 26.3 23.8 23.7 23.8 23.2 22.6 22.0
  8        1    2    3    4    5    6    7    8    9    10

          20.3 18.5 17.2 17.4 18.2 19.1 19.9 20.3 20.3 21.7
1
RECEIVER      LEQ(H)     L10
5              69.6      70.8
ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA
ROADWAY   SEGMENT
  1        1
          57.8
  2        1    2    3    4    5    6    7    8    9    10
 11        12   13   14
          60.2 59.8 62.0 58.9 51.5 49.3 46.9 42.2 44.0 41.6

          39.8 39.3 37.4 36.6
  3        1    2    3
          35.7 34.7 33.3
  4        1    2    3
          34.6 34.6 36.2
  5        1    2    3    4    5    6    7    8    9    10
 11        12   13
          36.8 38.7 40.0 41.4 39.5 46.1 42.9 47.4 49.3 53.6

          57.7 61.2 59.3
  6        1
          57.0
  7        1    2    3    4    5    6    7    8
          27.5 26.8 24.1 24.2 24.5 23.5 22.8 22.2
  8        1    2    3    4    5    6    7    8    9    10

          21.1 18.4 17.6 17.5 19.9 19.8 20.4 20.7 20.7 22.1
1
RECEIVER      LEQ(H)     L10
6              72.4      73.7
ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA
ROADWAY   SEGMENT
  1        1
          57.8
  2        1    2    3    4    5    6    7    8    9    10
 11        12   13   14
          60.9 61.8 66.9 62.5 52.9 50.0 47.5 42.8 44.4 42.1

          40.2 39.7 37.5 36.7
  3        1    2    3
          35.8 34.9 33.5
  4        1    2    3
          34.9 34.8 36.1
  5        1    2    3    4    5    6    7    8    9    10
 11        12   13
          37.0 38.7 40.0 41.6 39.9 46.5 43.3 47.9 51.1 56.0

          63.2 63.9 60.2
  6        1
          57.2
  7        1    2    3    4    5    6    7    8
          28.3 27.2 24.4 24.3 25.3 23.9 23.1 22.5
  8        1    2    3    4    5    6    7    8    9    10

          21.3 20.2 18.4 20.2 20.6 20.4 21.0 21.3 21.0 22.2
1
RECEIVER      LEQ(H)     L10
7              71.5      73.3
ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA
ROADWAY   SEGMENT
  1        1
          54.8
  2        1    2    3    4    5    6    7    8    9    10
 11        12   13   14
          57.7 59.0 66.2 64.9 54.2 50.8 48.1 43.3 44.9 42.5

          40.2 39.5 37.5 36.6
  3        1    2    3
          35.9 35.1 33.9
  4        1    2    3
          35.3 35.2 36.5
  5        1    2    3    4    5    6    7    8    9    10
 11        12   13
          37.2 38.8 40.0 41.7 39.9 46.6 43.7 48.6 52.2 57.8

          62.2 60.8 56.8
  6        1
          54.0
  7        1    2    3    4    5    6    7    8
          28.6 27.5 24.7 24.7 25.6 24.3 23.4 22.8
  8        1    2    3    4    5    6    7    8    9    10

          21.8 20.3 20.2 20.8 21.1 20.7 21.1 20.9 20.8 22.2
1
RECEIVER      LEQ(H)     L10
8              71.0      73.2
ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA
ROADWAY   SEGMENT
  1        1
          51.2
  2        1    2    3    4    5    6    7    8    9    10
 11        12   13   14
          53.8 54.6 64.0 66.8 55.9 51.9 49.0 44.0 45.4 42.9

          40.5 39.5 37.5 36.7
  3        1    2    3
          35.8 34.7 33.6
  4        1    2    3
          34.9 34.8 36.2
  5        1    2    3    4    5    6    7    8    9    10
 11        12   13
          36.9 38.7 40.1 41.8 40.0 46.9 44.2 49.2 53.0 59.0

          62.2 58.1 53.4
  6        1
          50.7
  7        1    2    3    4    5    6    7    8
          29.1 27.9 25.1 25.0 26.0 24.7 23.9 23.2
  8        1    2    3    4    5    6    7    8    9    10

          22.1 20.7 20.4 21.1 21.3 20.8 21.3 20.9 20.8 22.1
1
RECEIVER      LEQ(H)     L10
9              69.6      71.2
ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA
ROADWAY   SEGMENT
  1        1
          50.1
  2        1    2    3    4    5    6    7    8    9    10
```

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  11        12   13   14
           52.2 52.5 59.7 65.8 58.0 53.4 49.9 44.8 46.1 43.5

           41.2 40.5 38.3 37.4
   3        1    2    3
           35.9 35.0 33.7
   4        1    2    3
           34.9 34.8 36.3
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
           37.1 38.8 40.9 42.6 41.1 48.1 45.4 50.1 53.9 59.1

           59.6 55.8 52.0
   6        1
           49.6
   7        1    2    3    4    5    6    7    8
           29.7 28.5 25.6 25.6 26.5 25.2 24.3 23.7
   8        1    2    3    4    5    6    7    8    9   10

           22.5 21.2 20.9 21.5 21.7 21.2 21.8 22.0 21.6 22.8

1

 RECEIVER    LEQ(H)   L10
 10           68.5   70.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           49.0
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           50.7 50.4 56.1 64.3 60.3 55.0 51.0 45.6 46.7 43.8

           41.5 40.7 38.5 37.6
   3        1    2    3
           36.6 35.7 34.3
   4        1    2    3
           35.3 35.3 36.8
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
           37.7 39.7 41.1 43.1 41.5 48.7 46.3 51.1 54.3 58.0

           56.0 52.5 49.8
   6        1
           48.4
   7        1    2    3    4    5    6    7    8
           30.1 28.9 26.0 25.9 27.0 25.6 24.7 24.1
   8        1    2    3    4    5    6    7    8    9   10

           22.8 21.5 21.1 22.0 21.8 21.3 21.8 22.0 21.8 23.1

1

 RECEIVER    LEQ(H)   L10
 11           68.2   70.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           47.5
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           48.2 47.6 53.0 61.0 63.8 57.3 52.5 46.7 47.7 44.4

           42.0 41.0 38.7 37.7
   3        1    2    3
           36.7 35.7 34.3
   4        1    2    3
           35.4 35.4 36.9
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
           37.7 39.8 41.5 43.4 42.0 49.3 47.2 52.8 56.7 56.4

           52.8 49.5 47.0
   6        1
           45.8
   7        1    2    3    4    5    6    7    8
           30.8 29.6 26.7 26.5 27.9 26.1 25.3 24.5
   8        1    2    3    4    5    6    7    8    9   10

           23.2 22.4 20.2 22.4 22.4 21.7 22.2 22.3 22.0 23.2

1

 RECEIVER    LEQ(H)   L10
 12           69.0   71.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           45.7
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           46.6 45.7 50.8 57.7 65.8 60.0 54.1 47.9 48.7 45.2

           42.6 41.5 39.1 38.0
   3        1    2    3
           36.9 35.7 34.5
   4        1    2    3
           35.5 35.6 37.1
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
           38.1 40.1 41.8 43.9 42.6 50.1 48.2 54.2 58.3 56.1

           50.6 47.5 45.3
   6        1
           44.2
   7        1    2    3    4    5    6    7    8
           31.7 30.5 27.5 27.6 28.5 26.7 25.8 25.0
   8        1    2    3    4    5    6    7    8    9   10

           24.0 22.6 20.6 22.6 23.3 22.2 22.6 22.6 22.3 23.5

1

 RECEIVER    LEQ(H)   L10
 13           68.8   71.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           44.2
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           45.0 44.0 48.9 55.8 64.1 63.4 55.8 49.2 49.7 45.9

           43.1 41.9 39.2 38.0
   3        1    2    3
           36.8 35.7 34.2
   4        1    2    3
           35.3 35.4 37.0
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
           37.9 40.1 42.0 44.3 43.0 50.7 49.0 55.3 57.6 53.7

           49.9 46.6 43.8
   6        1
           42.6
   7        1    2    3    4    5    6    7    8
           32.8 31.7 28.7 28.5 28.9 27.1 26.2 25.4
   8        1    2    3    4    5    6    7    8    9   10

           24.9 22.6 20.9 22.4 23.8 23.0 23.2 22.9 22.4 23.5

1

 RECEIVER    LEQ(H)   L10
 14           69.1   71.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           44.0
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           44.6 43.5 48.3 54.6 61.4 65.2 58.2 50.8 51.1 47.4

           44.5 42.9 40.3 39.0
   3        1    2    3
           37.7 36.5 34.9
   4        1    2    3
           36.0 36.2 37.9
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
           39.0 41.2 43.3 45.6 44.4 52.2 50.9 57.2 57.5 53.0

           49.4 46.6 44.1
   6        1
           42.4
   7        1    2    3    4    5    6    7    8
           33.5 32.3 29.3 29.1 29.2 27.5 26.6 25.7
   8        1    2    3    4    5    6    7    8    9   10

           25.1 22.3 21.2 21.6 23.9 23.6 23.8 23.8 23.3 24.5

1

 RECEIVER    LEQ(H)   L10
 15           69.4   71.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           43.4
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           43.9 42.7 47.6 53.6 59.1 65.8 60.8 52.5 52.4 48.5

           45.4 44.0 41.2 39.6
   3        1    2    3
           38.4 37.1 35.5
   4        1    2    3
           36.6 36.8 38.6
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
           39.8 42.1 44.2 46.6 45.5 53.5 52.6 58.5 56.7 52.1

           48.8 46.2 44.0
   6        1
           42.9
   7        1    2    3    4    5    6    7    8
           34.2 32.9 29.9 29.7 29.6 28.1 27.1 26.2
   8        1    2    3    4    5    6    7    8    9   10

           25.3 22.2 21.6 21.6 24.2 24.0 24.5 24.4 24.2 25.3

1

 RECEIVER    LEQ(H)   L10
 16           69.7   71.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           43.4
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           44.1 43.0 47.8 53.2 58.3 66.1 61.9 53.1 52.8 48.7

           45.6 44.2 41.3 40.0
   3        1    2    3
           38.6 37.3 35.7
   4        1    2    3
           36.8 37.0 38.7
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
           39.9 42.2 44.3 46.8 45.7 54.0 53.2 58.9 56.2 51.7

           48.4 45.8 43.6
   6        1
           42.5
   7        1    2    3    4    5    6    7    8
           34.6 33.3 30.2 30.0 30.0 28.2 27.3 26.4
   8        1    2    3    4    5    6    7    8    9   10
```

```
          25.7 22.9 21.8 22.2 24.5 24.3 24.7 24.7 24.4 25.4

1

 RECEIVER     LEQ(H)    L10
 17            69.8    72.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            42.9
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            43.6 42.5 47.2 52.7 57.4 66.2 63.0 53.6 53.1 49.0

            45.7 44.0 41.3 40.0
    3         1    2    3
            38.6 37.4 35.8
    4         1    2    3
            36.8 37.0 38.7
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            39.9 42.0 44.3 46.7 45.9 54.2 53.6 58.8 55.4 51.0

            47.9 45.3 43.1
    6         1
            42.1
    7         1    2    3    4    5    6    7    8
            35.0 33.6 30.5 30.2 30.3 28.5 27.4 26.5
    8         1    2    3    4    5    6    7    8    9   10

            26.0 23.0 22.1 22.4 25.0 24.6 24.8 25.0 24.3 25.5

1

 RECEIVER     LEQ(H)    L10
 18            67.3    69.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            39.5
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            40.1 38.9 43.7 48.8 52.8 59.1 63.9 56.0 54.6 49.6

            45.9 43.3 39.9 38.2
    3         1    2    3
            36.8 35.4 33.6
    4         1    2    3
            34.6 34.8 36.7
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            38.0 40.5 42.9 45.5 44.8 53.1 51.8 53.7 49.7 46.3

            43.6 41.3 39.3
    6         1
            38.3
    7         1    2    3    4    5    6    7    8
            36.0 34.3 31.1 30.9 30.4 28.3 26.8 25.7
    8         1    2    3    4    5    6    7    8    9   10

            25.3 22.0 21.4 21.7 23.9 23.6 24.1 23.7 23.2 23.9

1

 RECEIVER     LEQ(H)    L10
 19            70.5    73.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            39.9
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            40.3 38.8 43.0 46.8 49.2 52.7 58.3 61.9 67.5 57.3

            51.1 48.0 44.1 42.1
    3         1    2    3
            40.3 38.7 36.9
    4         1    2    3
            38.1 38.5 40.6
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            42.2 45.1 48.3 52.5 53.5 60.3 51.9 52.0 48.8 46.1

            43.9 41.9 40.2
    6         1
            39.4
    7         1    2    3    4    5    6    7    8
            43.8 40.3 36.2 35.3 33.6 30.7 28.8 27.5
    8         1    2    3    4    5    6    7    8    9   10

            26.8 24.1 23.7 24.4 26.5 27.0 27.6 27.2 26.6 27.5

1

 RECEIVER     LEQ(H)    L10
 20            71.0    73.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            41.0
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            41.3 39.7 43.5 46.9 48.6 51.6 56.3 58.4 67.3 62.1

            54.5 51.1 47.1 45.0
    3         1    2    3
            43.1 41.5 39.6
    4         1    2    3
            40.9 41.4 43.6
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            45.3 48.4 51.9 56.8 58.1 61.8 51.9 52.1 49.1 46.7

            44.7 43.0 41.5
    6         1
            40.8
    7         1    2    3    4    5    6    7    8
            48.8 43.8 38.9 37.6 35.2 32.5 30.4 29.0
    8         1    2    3    4    5    6    7    8    9   10

            27.6 25.8 25.5 26.2 27.6 29.5 30.1 30.0 29.5 30.3

1

 RECEIVER     LEQ(H)    L10
 21            75.5    76.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            45.2
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            44.6 42.6 46.0 48.2 49.2 51.2 53.4 54.3 64.1 69.9

            67.0 61.9 57.3 55.0
    3         1    2    3
            52.3 49.8 47.5
    4         1    2    3
            50.3 51.4 53.4
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            55.2 58.5 62.8 66.9 62.8 62.8 53.0 52.9 50.4 48.8

            47.6 47.0 45.6
    6         1
            45.1
    7         1    2    3    4    5    6    7    8
            56.0 61.0 52.9 46.7 42.8 39.3 36.8 35.0
    8         1    2    3    4    5    6    7    8    9   10

            33.6 32.6 32.4 33.7 34.6 35.6 36.5 37.8 38.7 39.3

1

 RECEIVER     LEQ(H)    L10
 22            69.8    71.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            40.5
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            40.6 38.9 42.6 45.9 47.2 49.7 53.2 54.0 61.3 64.7

            58.6 52.9 46.3 43.1
    3         1    2    3
            40.5 38.7 36.5
    4         1    2    3
            38.7 39.9 42.7
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            45.7 50.2 54.7 60.0 57.8 58.6 49.5 50.2 47.7 45.6

            43.9 42.3 40.9
    6         1
            40.3
    7         1    2    3    4    5    6    7    8
            52.6 50.4 38.0 33.1 32.5 29.8 27.1 25.4
    8         1    2    3    4    5    6    7    8    9   10

            23.9 22.8 22.7 23.9 24.5 24.2 25.0 26.4 26.7 27.5

1

 RECEIVER     LEQ(H)    L10
 23            74.3    75.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            41.0
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            40.8 38.9 42.4 45.1 45.8 47.5 49.7 48.8 54.9 62.5

            67.0 66.5 61.0 57.8
    3         1    2    3
            55.3 53.4 51.3
    4         1    2    3
            52.4 53.2 55.6
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            57.8 61.8 65.1 64.1 57.8 55.5 47.0 48.3 46.4 44.9

            43.6 42.5 41.3
    6         1
            41.0
    7         1    2    3    4    5    6    7    8
            43.5 49.7 56.9 61.5 57.5 46.4 41.8 39.7
    8         1    2    3    4    5    6    7    8    9   10

            41.7 40.1 39.4 41.6 44.4 44.3 44.5 43.9 42.9 43.2

1

 RECEIVER     LEQ(H)    L10
 24            73.7    75.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            39.9
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            39.8 37.9 41.4 44.1 44.8 46.5 48.6 47.5 53.2 58.9

            65.0 66.3 61.8 58.6
    3         1    2    3
            56.0 53.9 51.8
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 4        1    2    3
         52.8 53.7 56.1
 5          1    2    3    4    5    6    7    8    9   10

 11       12   13
         58.4 62.2 64.5 62.6 53.8 53.6 45.6 47.1 45.3 43.8

         42.5 41.3 40.1
 6          1
         39.8
 7          1    2    3    4    5    6    7    8
         41.5 45.9 50.9 59.1 62.0 52.7 47.2 44.3
 8          1    2    3    4    5    6    7    8    9   10

         42.8 42.3 42.7 44.7 46.0 45.9 45.8 45.0 43.8 44.0

1

 RECEIVER     LEQ(H)   L10
 25            69.5    70.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           39.2
   2          1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           39.1 37.2 40.8 43.6 44.4 46.0 48.1 46.9 52.1 54.4

           56.3 59.2 60.2 57.8
   3          1    2    3
           55.5 53.6 51.6
   4          1    2    3
           52.6 53.3 55.6
   5          1    2    3    4    5    6    7    8    9   10

   11       12   13
           57.5 60.5 56.5 55.1 50.1 52.2 44.9 46.4 44.6 43.1

           41.7 40.6 39.5
   6          1
           39.0
   7          1    2    3    4    5    6    7    8
           38.7 41.0 41.8 45.0 55.9 52.7 47.8 44.7
   8          1    2    3    4    5    6    7    8    9   10

           42.7 42.3 42.8 44.6 45.5 45.0 44.7 43.9 42.9 43.3

1

 RECEIVER     LEQ(H)   L10
 26            64.3    65.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           38.5
   2          1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           38.3 36.5 40.0 43.2 44.1 45.6 46.7 45.2 49.7 51.1

           52.5 54.0 52.7 50.9
   3          1    2    3
           48.8 47.0 44.9
   4          1    2    3
           45.9 46.6 48.9
   5          1    2    3    4    5    6    7    8    9   10

   11       12   13
           50.6 52.9 52.9 51.9 47.4 50.1 43.4 45.1 43.5 42.2

           40.9 39.7 38.6
   6          1
           38.3
   7          1    2    3    4    5    6    7    8
           35.4 36.9 37.1 40.5 46.0 48.1 45.0 41.5
   8          1    2    3    4    5    6    7    8    9   10

           38.3 38.0 38.3 39.7 39.9 38.3 37.5 36.7 35.9 36.5

1

 RECEIVER     LEQ(H)   L10
 27            61.0    61.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           38.2
   2          1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           37.9 36.0 39.5 42.2 43.1 45.0 46.3 43.6 47.8 48.4

           47.8 48.6 47.9 47.1
   3          1    2    3
           46.0 44.8 43.3
   4          1    2    3
           44.0 44.2 45.7
   5          1    2    3    4    5    6    7    8    9   10

   11       12   13
           46.7 48.0 48.0 47.7 45.0 48.3 42.0 43.9 42.8 41.7

           40.6 39.5 38.4
   6          1
           37.6
   7          1    2    3    4    5    6    7    8
           32.8 33.9 34.0 35.2 39.2 41.8 42.4 41.5
   8          1    2    3    4    5    6    7    8    9   10

           36.7 36.0 35.6 36.3 35.4 33.6 33.0 32.4 31.9 32.9

1

 RECEIVER     LEQ(H)   L10
 28            68.2    69.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           38.0
   2          1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           37.6 35.6 39.0 42.7 42.5 44.3 45.0 42.6 46.4 47.6

           51.7 56.9 57.4 57.8
   3          1    2    3
           57.1 55.7 53.7
   4          1    2    3
           54.5 55.0 56.7
   5          1    2    3    4    5    6    7    8    9   10

   11       12   13
           57.1 57.3 56.1 51.0 44.2 47.3 40.4 42.7 41.8 40.6

           39.5 38.4 37.4
   6          1
           37.1
   7          1    2    3    4    5    6    7    8
           31.7 32.9 33.8 37.9 43.2 48.8 51.1 51.7
   8          1    2    3    4    5    6    7    8    9   10

           46.7 46.4 45.9 46.0 44.9 43.1 42.7 42.4 42.3 43.9

1

 RECEIVER     LEQ(H)   L10
 29            71.3    73.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           52.2
   2          1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           54.8 55.8 65.2 66.7 55.4 51.6 48.7 43.8 45.3 42.9

           40.5 39.6 37.7 36.9
   3          1    2    3
           35.9 35.1 33.9
   4          1    2    3
           35.3 35.2 36.5
   5          1    2    3    4    5    6    7    8    9   10

   11       12   13
           37.2 38.8 40.3 41.9 40.1 47.0 44.2 49.1 52.9 58.7

           62.5 59.0 54.2
   6          1
           51.5
   7          1    2    3    4    5    6    7    8
           29.0 27.9 25.1 25.0 25.9 24.6 23.7 23.1
   8          1    2    3    4    5    6    7    8    9   10

           22.1 20.6 20.4 21.1 21.4 20.9 21.4 21.1 21.0 22.3

1

 RECEIVER     LEQ(H)   L10
 30            70.7    72.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           50.9
   2          1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           53.3 53.9 62.9 66.7 56.7 52.4 49.4 44.3 45.7 43.1

           40.9 39.8 37.7 36.9
   3          1    2    3
           36.0 35.1 33.8
   4          1    2    3
           35.0 34.9 36.3
   5          1    2    3    4    5    6    7    8    9   10

   11       12   13
           37.1 38.9 40.3 42.0 40.3 47.2 44.5 49.6 53.5 59.2

           61.6 57.5 52.9
   6          1
           50.4
   7          1    2    3    4    5    6    7    8
           29.3 28.2 25.3 25.2 26.2 24.9 24.0 23.4
   8          1    2    3    4    5    6    7    8    9   10

           22.1 20.8 20.6 21.2 21.5 21.1 21.7 21.3 21.0 22.3

1

 RECEIVER     LEQ(H)   L10
 31            69.8    71.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           50.4
   2          1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           52.6 53.0 60.8 65.8 57.2 52.9 49.6 44.5 45.9 43.1

           41.0 40.0 37.7 36.6
   3          1    2    3
           35.7 34.8 33.5
   4          1    2    3
           34.7 34.6 36.1
   5          1    2    3    4    5    6    7    8    9   10

   11       12   13
           36.9 38.7 40.2 42.1 40.7 47.6 44.6 49.6 53.4 58.7

           60.5 56.6 52.4
   6          1
           49.9
   7          1    2    3    4    5    6    7    8
           29.4 28.2 25.4 25.3 26.3 25.0 24.2 23.5
   8          1    2    3    4    5    6    7    8    9   10

           22.3 20.9 20.7 21.3 21.5 21.0 21.6 21.5 21.3 22.1

1

 RECEIVER     LEQ(H)   L10
 32            62.5    63.8
```

```
ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
          47.3
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          48.1 47.5 51.9 53.1 52.5 51.6 49.8 45.5 47.0 44.1

          41.5 40.4 37.5 35.8
   3        1    2    3
          32.7 30.9 29.2
   4        1    2    3
          32.3 32.9 34.9
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          36.6 39.1 41.2 43.0 41.2 47.7 44.5 48.7 49.7 49.0

          49.7 49.3 47.5
   6        1
          46.4
   7        1    2    3    4    5    6    7    8
          28.2 28.1 23.9 23.2 24.7 25.3 24.3 23.2
   8        1    2    3    4    5    6    7    8    9   10

          22.1 20.2 19 1 19.0 17.9 16.8 17.4 18.1 18.2 19.3

1

 RECEIVER     LEQ(H)   L10
 33            61.9    63.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           43.3
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           43.8 42.5 47.0 48.7 51.5 52.8 52.7 49.0 50.5 47.3

           43.3 38.8 35.5 33.8
    3        1    2    3
           32.2 30.7 29.3
    4        1    2    3
           30.5 31.0 32.8
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           34.4 37.2 42.3 45.2 43.7 50.2 46.5 49.6 48.9 46.9

           45.3 45.1 43.6
    6        1
           42.9
    7        1    2    3    4    5    6    7    8
           31.0 29.6 24.9 24.7 27.0 27.7 25.4 24.5
    8        1    2    3    4    5    6    7    8    9   10

           23.3 21.0 20.1 20.9 19.9 18.5 18.2 18.4 18.1 19.2

1

 RECEIVER     LEQ(H)   L10
 34            65.9    67.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           52.9
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           54.0 53.2 57.8 58.0 53.1 51.1 48.8 44.1 45.2 42.6

           40.6 40.0 38.0 37.0
    3        1    2    3
           35.9 34.6 32.9
    4        1    2    3
           34.6 34.7 36.5
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           37.6 39.5 40.8 42.2 40.3 46.9 43.8 48.4 50.1 52.5

           55.4 55.1 52.8
    6        1
           52.2
    7        1    2    3    4    5    6    7    8
           27.7 27.3 24.7 24.5 24.3 24.2 23.5 22.9
    8        1    2    3    4    5    6    7    8    9   10

           21.2 19.3 18.1 18.1 17.8 19.2 20.3 20.9 20.9 22.2

1

 RECEIVER     LEQ(H)   L10
 35            68.9    70.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           53.5
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           56.0 56.0 61.9 62.5 54.7 51.7 48.7 43.9 45.4 42.9

           41.0 40.4 38.6 37.8
    3        1    2    3
           36.9 35.8 34.5
    4        1    2    3
           35.8 35.8 37.4
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           38.2 39.9 41.2 42.7 40.9 47.6 44.7 49.6 51.8 55.9

           59.5 57.9 54.9
    6        1
           52.6
    7        1    2    3    4    5    6    7    8
           28.8 28.0 25.3 25.2 25.5 24.4 23.7 23.1
    8        1    2    3    4    5    6    7    8    9   10

           22.0 19.4 18.5 18.6 20.8 21.0 21.4 21 8 21.8 23.2

1

 RECEIVER     LEQ(H)   L10
 36            67.2    68.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           51.5
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           53.2 52.6 58.5 60.4 56.7 53.8 50.6 45.3 46.6 43.9

           41.7 41.2 39.2 38.3
    3        1    2    3
           37.2 36.1 34.4
    4        1    2    3
           36.0 36.1 37.7
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           38.7 40.5 41.9 43.4 41.7 48.5 45.8 50.8 53.2 55.5

           56.1 54.8 52.0
    6        1
           50.6
    7        1    2    3    4    5    6    7    8
           29.2 28.6 25.9 25.8 25.7 25.0 24.3 23.7
    8        1    2    3    4    5    6    7    8    9   10

           22.0 20.2 19.0 19.2 19.8 20.9 21.8 22.1 22.3 23.6

1

 RECEIVER     LEQ(H)   L10
 37            65.4    66.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           48.5
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           49.6 48.9 53.8 56.5 57.2 55.4 52.5 47.4 48.6 45.3

           42.8 42.0 39.6 38.3
    3        1    2    3
           36.8 35.3 33.5
    4        1    2    3
           35.3 35.6 37.7
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           39.0 41.0 42.7 44.4 42.9 49.8 47.2 52.2 53.9 53.1

           52.2 51.0 48.7
    6        1
           47.6
    7        1    2    3    4    5    6    7    8
           30.1 29.5 26.9 25.7 26.0 26.1 25.3 24.6
    8        1    2    3    4    5    6    7    8    9   10

           22.9 21.1 19.9 20.0 19.2 19.1 21.5 22.2 22.1 23.4

1

 RECEIVER     LEQ(H)   L10
 38            67.6    69.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           48.2
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           49.7 49.2 54.7 60.1 61.3 57.4 52.6 46.9 48.0 45.1

           42.9 41.9 39.8 38.8
    3        1    2    3
           37.6 36.5 34.9
    4        1    2    3
           36.3 36.4 38.1
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           39.1 41.1 42.6 44.4 42.9 50.1 47.9 53.4 56.6 56.5

           54.5 52.0 49.4
    6        1
           47.7
    7        1    2    3    4    5    6    7    8
           30.7 29.9 27.1 27.0 27.0 25.9 25.2 24.5
    8        1    2    3    4    5    6    7    8    9   10

           23.0 21.0 19.8 20.1 21.6 22.1 22.6 23.1 22.8 24.1

1

 RECEIVER     LEQ(H)   L10
 39            57.9    58.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           48.1
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           46.8 41.7 46.0 46.4 45.1 44.9 44.2 40.7 42.7 40.6

           37.3 33.9 30.8 29.2
    3        1    2    3
           27.9 27.2 25.5
    4        1    2    3
           27.0 26.7 28.5
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           29.9 32.8 37.0 39.2 37.2 43.0 39.1 42.6 42.9 42.4
```

```
18          6339634.0 1804109.2      577.4      577.4
19          6339663.6 1803997.1      576.0      576.0
1

BARRIER   4   TYPE(A)      R-O-W barrier trf to top of slope barrier

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ          P
19          6339663.6 1803997.1      576.0      576.0        .0          0
20          6339705.0 1803857.9      574.7      574.7
21          6339735.2 1803763.2      573.9      573.9
22          6339758.3 1803694.7      573.5      573.5
23          6339774.3 1803649.9      573.0      573.0
24          6339798.4 1803582.7      572.6      572.6
2-rev       6339886.3 1803152.2      571.0      571.0
3-rev       6339854.5 1803141.6      571.0      571.0
1

BARRIER   5   TYPE(A)      S-F Pad Edges

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ          P
1           6338450.5 1805660.4      570.7      570.7          0          0
2           6338496.9 1805688.8      570.7      570.7
3           6338586.8 1805745.8      572.3      572.3
4           6338643.8 1805781.6      572.3      572.3
5           6338703.0 1805818.1      574.7      574.7
6           6338761.4 1805846.6      574.7      574.7
7           6338765.1 1805848.1      576.8      576.8
8           6338814.8 1805859.8      576.8      576.8
9           6338819.2 1805860.5      578.2      578.2
1

BARRIER   6   TYPE(A)      S-F Pad Edges cont'd.1

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ          P
9           6338819.2 1805860.5      578.2      578.2        .0          0
10          6338898.8 1805853.9      578.2      578.2
11          6338994.5 1805823.2      578.2      578.2
12          6338998.2 1805822.5      578.5      578.5
1

BARRIER   7   TYPE(A)      S-F Pad Edges cont'd.2

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ          P
12          6338998.2 1805822.5      578.5      578.5        .0          0
13          6339061.0 1805801.3      578.5      578.5
14          6339065.4 1805799.9      580.7      580.7
15          6339173.6 1805762.6      580.7      580.7
16          6339241.5 1805697.6      580.7      580.7
1

BARRIER   8   TYPE(A)      Elem School Pad Edges

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ          P
40          6339064.2 1804045.1      548.0      548.0        .0          0
41          6339477.3 1804188.3      550.0      550.0
42          6339517.0 1804198.4      550.2      550.2
43          6339575.6 1804002.5      552.0      552.0
44          6339641.2 1803781.3      554.0      554.0
45          6339706.8 1803560.2      556.0      556.0
46          6339706.8 1803544.3      556.1      556.1
1

BARRIER   9   TYPE(A)      Elem to Park Pads

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ          P
46          6339706.8 1803544.3      556.1      556.1        .0          0
48          6339717.2 1803526.8      561.3      561.3
1

BARRIER  10   TYPE(A)      Park Pad Edges

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ          P
47          6339591.3 1803493.6      560.0      560.0        .0          0
48          6339717.2 1803526.8      561.3      561.3
49          6339762.7 1803371.2      561.5      561.5
50          6339808.2 1803214.7      562.0      562.0
51          6339819.6 1803172.7      562.1      562.1
1

BARRIER  11   TYPE(A)      Park to High Pads

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ          P
51          6339819.6 1803172.7      562.1      562.1        .0          0
53          6339837.0 1803137.7      579.5      579.5
52          6339709.4 1803101.9      576.9      576.9
1

BARRIER  12   TYPE(A)      High School Pad Edges

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ          P
3-rev       6339854.5 1803141.6      571.0      571.0          0          0
53          6339837.0 1803137.7      579.5      579.5
54          6339875.5 1803030.2      578.6      578.6
55          6339921.0 1802903.4      578.5      578.5
56          6339942.8 1802838.7      578.4      578.4
57          6339950.7 1802716.3      578.0      578.0
58          6339953.3 1802656.0      577.5      577.5
59          6339944.6 1802632.3      577.3      577.3
60a         6339822.2 1802585.1      574.6      574.6
1

BARRIER  13   TYPE(A)      High School Pad Edges cont'd.

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ          P
60a         6339822.2 1802585.1      574.6      574.6        .0          0
60b         6339807.2 1802441.6      578.7      578.7
60c         6339785.7 1802288.4      579.1      579.1
61          6339775.0 1802195.2      580.8      580.8
62          6339763.6 1802083.2      579.7      579.7
63          6339781.1 1801897.9      570.4      570.4
64          6339783.7 1801794.7      570.4      570.4
1

Contour Receivers 41-80(at 5 feet)

                         ------------COORDINATES------------
                              X          Y          Z
41                       6338070.8  1803187.4       539.0
42                       6339244.4  1802893.9       571.4
43                       6338776.5  1803471.9       537.0
44                       6338589.1  1804385.1       549.5
45                       6339611.9  1803351.3       565.0
46                       6339439.1  1803856.9       557.0
47                       6339285.4  1805273.6       579.8
48                       6338622.4  1805101.8       573.7
49                       6339001.9  1803688.5       555.0
50                       6339497.8  1802932.8       576.1
51                       6339452.7  1802166.8       570.0
52                       6338744.9  1801344.3       552.4
53                       6338511.2  1805352.8       577.3
54                       6338532.9  1804708.7       559.9
55                       6338504.0  1804307.0       549.5
56                       6338710.2  1804079.1       543.0
57                       6339260.2  1804629.1       568.1
58                       6339375.2  1805106.0       577.0
59                       6339400.5  1804943.0       575.8
60                       6339257.0  1803956.8       555.0
61                       6339405.0  1803398.8       563.0
62                       6338054.1  1802788.7       547.0
63                       6339708.9  1802913.9       579.6
64                       6339760.8  1802629.3       578.6
65                       6339673.3  1801745.9       572.7
66                       6338638.3  1803837.3       553.0
67                       6338973.6  1803367.9       557.0
68                       6339082.4  1803004.7       561.0
69                       6339641.9  1802406.0       575.0
70                       6339217.4  1804815.7       572.0
71                       6339112.3  1804545.1       567.6
72                       6339160.2  1804279.7       558.1
73                       6339135.8  1804712.2       567.6
74                       6339361.7  1803483.9       559.0
75                       6338516.7  1802300.6       552.5
76                       6339765.1  1801796.8       574.7
77                       6339790.6  1802556.2       578.8
78                       6339826.6  1802766.3       580.6
79                       6339658.7  1803051.4       580.3
80                       6339569.9  1803119.4       564.8
1

 ALPHA 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
      .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  .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  .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  .0  .0
 7 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
      .0  .0  .0  .0  .0  .0  .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  .0  .0  .0  .0  .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

 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
      .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  .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  .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  .0  .0
 7 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
      .0  .0  .0  .0  .0  .0  .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  .0  .0  .0  .0  .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
 41            57.8     59.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
           40.2
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           40.4 38.8 42.7 43.8 45.5 46.7 47.7 45.1 47.8 45.5

           39.3 37.5 34.9 33.4
    3        1    2    3
           31.4 30.0 28.3
    4        1    2    3
           29.7 30.2 32.1
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           34.1 36.1 38.3 42.6 41.9 47.2 42.3 44.8 43.8 42.3
```

```
          41.1 41.0 40.0
   6        1
          39.6
   7        1    2    3    4    5    6    7    8
          29.2 26.3 23.3 23.7 27.6 26.8 25.4 24.2
   8        1    2    3    4    5    6    7    8    9   10

          22.2 20.1 19.0 19.1 19.1 18.0 18.5 18.6 18.0 18.6

1

 RECEIVER     LEQ(H)    L10
 42            62.8    64.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          39.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          39.8 38.0 41.5 44.8 46.7 48.7 51.3 50.3 54.4 52.9

          48.9 46.8 43.6 43.0
   3        1    2    3
          40.8 38.5 36.5
   4        1    2    3
          37.9 38.9 41.8
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          42.8 44.9 47.4 50.1 49.6 53.3 46.7 48.0 46.0 44.2

          42.7 41.3 39.9
   6        1
          39.4
   7        1    2    3    4    5    6    7    8
          38.5 35.0 32.8 33.1 36.6 36.2 33.6 32.5
   8        1    2    3    4    5    6    7    8    9   10

          30.1 28.5 27.6 28.2 28.7 28.1 28.6 28.2 27.7 28.7

1

 RECEIVER     LEQ(H)    L10
 43            61.3    62.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          41.2
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          41.4 39.9 43.3 45.6 48.6 50.7 52.3 50.0 52.5 49.5

          42.2 39.7 36.3 34.7
   3        1    2    3
          33.6 32.0 30.0
   4        1    2    3
          31.7 32.1 33.7
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          35.0 37.7 40.3 46.4 45.4 51.0 46.1 48.1 46.5 44.7

          42.4 41.7 41.3
   6        1
          40.8
   7        1    2    3    4    5    6    7    8
          33.2 30.5 26.4 26.6 29.4 29.4 26.8 25.9
   8        1    2    3    4    5    6    7    8    9   10

          23.5 21.6 20.5 21.2 21.5 20.7 20.1 19.6 19.1 20.4

1

 RECEIVER     LEQ(H)    L10
 44            62.0    63.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          44.2
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.8 43.5 48.3 49.8 52.3 53.0 52.2 48.1 49.5 46.2

          43.0 39.7 35.3 33.4
   3        1    2    3
          31.8 30.3 28.8
   4        1    2    3
          30.2 30.6 32.6
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          34.2 38.7 41.8 44.4 42.9 49.5 46.0 49.6 49.4 47.5

          46.4 46.2 44.6
   6        1
          43.7
   7        1    2    3    4    5    6    7    8
          30.1 29.2 24.2 24.1 26.2 26.9 25.0 24.0
   8        1    2    3    4    5    6    7    8    9   10

          23.1 20.8 19.9 20.2 19.1 17.7 17.8 17.0 17.6 18.9

1

 RECEIVER     LEQ(H)    L10
 45            68.6    70.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          40.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          41.1 39.5 43.3 46.7 48.3 51.4 55.8 56.5 63.1 60.9

          54.1 47.6 43.1 41.1
   3        1    2    3
          39.5 37.9 35.9
   4        1    2    3
          37.4 37.7 39.8
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          41.4 46.3 51.6 56.1 55.9 59.4 50.9 51.4 48.6 46.3

          44.5 42.8 41.3
   6        1
          40.7
   7        1    2    3    4    5    6    7    8
          45.7 42.4 34.7 34.0 34.6 34.0 32.9 31.6
   8        1    2    3    4    5    6    7    8    9   10

          27.6 26.3 25.9 26.8 26.5 25.9 26.2 26.3 25.8 26.6

1

 RECEIVER     LEQ(H)    L10
 46            68.2    70.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          41.1
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          41.7 40.4 44.8 49.0 51.6 56.5 62.4 60.6 59.8 52.7

          48.6 45.8 42.4 40.1
   3        1    2    3
          38.2 36.8 34.7
   4        1    2    3
          36.3 36.7 38.9
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          40.4 43.7 46.5 50.1 49.8 58.0 53.8 54.2 50.7 47.8

          45.4 43.4 41.6
   6        1
          40.8
   7        1    2    3    4    5    6    7    8
          37.9 36.3 32.8 29.6 30.5 30.1 29.3 28.3
   8        1    2    3    4    5    6    7    8    9   10

          24.9 23.5 22.8 23.3 22.8 22.1 23.4 25.2 24.5 25.6

1

 RECEIVER     LEQ(H)    L10
 47            68.7    70.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          49.7
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          51.7 51.8 58.8 64.0 58.4 54.0 50.5 45.2 46.5 43.9

          41.6 41.0 38.9 38.1
   3        1    2    3
          36.9 36.2 34.8
   4        1    2    3
          36.0 36.0 37.5
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          38.4 40.2 41.5 43.3 41.7 48.7 46.2 51.4 54.1 58.4

          58.3 55.1 51.4
   6        1
          49.3
   7        1    2    3    4    5    6    7    8
          30.0 28.9 26.0 26.1 26.8 25.3 24.4 23.8
   8        1    2    3    4    5    6    7    8    9   10

          22.8 21.1 19.4 21.0 22.2 21.5 22.2 22.3 22.2 23.5

1

 RECEIVER     LEQ(H)    L10
 48            63.5    64.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          48.6
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          49.6 48.9 53.4 54.6 53.4 52.1 50.0 45.4 47.0 44.3

          41.3 40.7 38.2 36.3
   3        1    2    3
          34.7 33.2 31.6
   4        1    2    3
          33.1 33.7 35.6
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          37.4 39.8 41.5 42.9 41.3 47.8 44.8 49.2 50.5 50.3

          51.2 50.8 48.8
   6        1
          47.5
   7        1    2    3    4    5    6    7    8
          28.4 28.2 25.0 23.5 24.8 25.1 24.4 23.5
   8        1    2    3    4    5    6    7    8    9   10

          22.0 20.2 19.1 19.0 18.0 17.2 18.1 20.5 20.6 21.7

1

 RECEIVER     LEQ(H)    L10
 49            63.7    65.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          42.2
   2        1    2    3    4    5    6    7    8    9   10
```

```
11        12    13    14
        42.5 41.0 44.4 47.5 50.6 53.2 55.4 52.9 54.8 51.2

        46.0 41.8 38.3 36.5
 3        1     2     3
        34.6 33.2 31.8
 4          1     2     3
        32.9 33.3 35.4
 5          1     2     3     4     5     6     7     8     9    10

11        12    13
        36.9 39.9 44.5 48.7 47.6 53.9 49.3 51.1 49.1 46.9

        44.5 43.1 42.0
 6          1
        41.8
 7          1     2     3     4     5     6     7     8
        35.0 33.1 28.2 26.0 30.2 30.7 28.3 27.1
 8          1     2     3     4     5     6     7     8     9    10

        26.0 23.8 23.1 23.7 22.8 21.4 21.1 21.2 20.9 21.8

1

RECEIVER     LEQ(H)    L10
50             64.8    66.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

 1          1
        40.1
 2          1     2     3     4     5     6     7     8     9    10

11        12    13    14
        40.1 38.3 42.0 45.4 47.1 49.3 52.2 51.5 56.5 55.5

        52.7 50.2 46.3 44.5
 3          1     2     3
        43.3 42.1 40.5
 4          1     2     3
        41.5 41.7 43.3
 5          1     2     3     4     5     6     7     8     9    10

11        12    13
        44.8 48.0 50.9 53.1 52.0 55.2 47.8 48.8 46.6 44.7

        43.1 41.7 40.4
 6          1
        39.9
 7          1     2     3     4     5     6     7     8
        41.5 39.4 36.9 36.7 39.1 39.1 35.9 34.1
 8          1     2     3     4     5     6     7     8     9    10

        32.7 31.4 31.0 32.1 32.2 31.1 30.6 29.7 29.0 30.2

1

RECEIVER     LEQ(H)    L10
51             60.0    61.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

 1          1
        38.0
 2          1     2     3     4     5     6     7     8     9    10

11        12    13    14
        37.8 35.9 39.5 42.4 43.6 45.3 47.3 45.7 48.7 47.6

        47.3 47.6 45.4 43.7
 3          1     2     3
        42.2 41.1 39.9
 4          1     2     3
        40.9 40.6 42.5
 5          1     2     3     4     5     6     7     8     9    10

11        12    13
        43.7 46.5 47.4 47.5 44.3 48.6 42.8 44.6 43.0 41.6

        40.4 39.3 38.1
 6          1
        37.8
 7          1     2     3     4     5     6     7     8
        31.8 32.7 31.7 34.0 38.0 38.6 37.6 37.3
 8          1     2     3     4     5     6     7     8     9    10

        33.6 32.1 31.1 31.5 30.6 29.4 29.2 28.8 28.1 29.2

1

RECEIVER     LEQ(H)    L10
52             59.6    60.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

 1          1
        36.7
 2          1     2     3     4     5     6     7     8     9    10

11        12    13    14
        36.2 33.8 36.9 39.4 40.7 41.8 43.2 41.2 44.3 41.0

        39.8 39.2 38.5 46.3
 3          1     2     3
        49.9 49.8 49.1
 4          1     2     3
        49.8 49.3 49.8
 5          1     2     3     4     5     6     7     8     9    10

11        12    13
        45.9 39.4 39.5 40.5 37.9 44.1 38.7 40.9 39.7 38.6

        37.6 36.5 35.6
 6          1
        35.6
 7          1     2     3     4     5     6     7     8
        25.9 25.4 23.9 25.7 28.9 29.2 31.2 33.9
 8          1     2     3     4     5     6     7     8     9    10

        34.0 27.5 26.4 25.4 23.8 22.2 22.1 22.5 23.2 33.0

1

RECEIVER     LEQ(H)    L10
53             63.3    64.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

 1          1
        50.0
 2          1     2     3     4     5     6     7     8     9    10

11        12    13    14
        51.2 49.7 54.1 54.1 51.8 50.4 48.5 44.1 45.7 43.2

        40.5 39.6 37.5 35.8
 3          1     2     3
        34.2 32.6 30.9
 4          1     2     3
        32.6 33.3 35.1
 5          1     2     3     4     5     6     7     8     9    10

11        12    13
        36.6 39.1 40.6 42.0 40.2 46.6 43.5 47.8 49.0 50.0

        51.5 51.8 50.2
 6          1
        49.2
 7          1     2     3     4     5     6     7     8
        27.4 27.2 24.4 22.7 23.9 24.3 23.6 22.7
 8          1     2     3     4     5     6     7     8     9    10

        21.3 19.5 18.4 18.3 17.2 16.6 17.7 20.1 20.0 21.2

1

RECEIVER     LEQ(H)    L10
54             62.2    63.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

 1          1
        45.5
 2          1     2     3     4     5     6     7     8     9    10

11        12    13    14
        46.4 45.4 50.1 51.6 52.7 52.5 51.0 46.7 48.1 44.9

        42.1 40.6 36.3 33.8
 3          1     2     3
        32.0 30.5 28.9
 4          1     2     3
        30.5 31.0 33.7
 5          1     2     3     4     5     6     7     8     9    10

11        12    13
        36.4 39.2 41.8 43.7 42.0 48.5 45.3 49.3 49.8 48.5

        48.1 47.7 46.0
 6          1
        45.0
 7          1     2     3     4     5     6     7     8
        29.1 28.8 23.6 23.6 25.4 26.1 24.7 23.5
 8          1     2     3     4     5     6     7     8     9    10

        22.6 20.8 19.7 19.6 18.5 17.1 17.5 17.9 18.0 19.1

1

RECEIVER     LEQ(H)    L10
55             61.5    62.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

 1          1
        43.9
 2          1     2     3     4     5     6     7     8     9    10

11        12    13    14
        44.4 43.1 47.0 49.2 51.4 52.2 51.7 47.8 49.3 46.5

        42.8 38.3 35.0 33.3
 3          1     2     3
        31.6 30.3 28.8
 4          1     2     3
        30.1 30.5 32.4
 5          1     2     3     4     5     6     7     8     9    10

11        12    13
        34.0 37.4 41.9 44.4 42.9 49.3 45.7 49.1 48.8 46.9

        45.9 45.7 44.1
 6          1
        43.3
 7          1     2     3     4     5     6     7     8
        30.0 28.9 24.1 24.0 26.2 27.0 24.8 24.0
 8          1     2     3     4     5     6     7     8     9    10

        22.8 20.5 19.6 20.3 19.3 17.8 17.7 17.9 17.7 18.8

1

RECEIVER     LEQ(H)    L10
56             62.2    63.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

 1          1
        43.2
 2          1     2     3     4     5     6     7     8     9    10

11        12    13    14
        43.6 42.2 46.4 48.4 51.7 53.3 53.5 49.8 51.2 47.7

        43.7 38.9 35.5 33.8
 3          1     2     3
        32.1 30.8 29.2
 4          1     2     3
        30.5 31.0 32.8
 5          1     2     3     4     5     6     7     8     9    10

11        12    13
        34.4 37.2 42.4 45.4 44.1 50.6 46.9 49.8 48.9 46.8

        44.9 44.6 43.4
 6          1
        42.7
 7          1     2     3     4     5     6     7     8
        31.5 30.1 25.1 25.0 27.3 27.9 25.7 24.6
 8          1     2     3     4     5     6     7     8     9    10
```

```
   4        1    2    3
           47.3 48.0 50.1
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           51.8 53.5 55.0 54.6 50.1 52.4 45.1 46.6 44.8 43.3

           41.9 40.7 39.5
   6        1
           39.1
   7        1    2    3    4    5    6    7    8
           38.5 40.7 40.9 43.5 48.4 46.9 41.9 39.0
   8        1    2    3    4    5    6    7    8    9   10

           37.2 36.6 36.9 38.6 39.5 38.9 38.7 38.0 37.1 37.6

1

 RECEIVER    LEQ(H)   L10
 65            65.3   66.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           37.3
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           37.0 35.0 38.5 41.1 41.9 43.7 45.4 42.2 45.7 46.0

           47.8 50.2 50.5 54.1
   3        1    2    3
           56.1 55.3 53.5
   4        1    2    3
           54.2 54.5 55.7
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           53.3 50.7 49.6 47.5 42.6 46.4 40.5 42.9 41.7 40.5

           39.4 38.4 37.4
   6        1
           37.3
   7        1    2    3    4    5    6    7    8
           30.3 31.1 31.0 34.2 38.5 41.1 42.7 45.4
   8        1    2    3    4    5    6    7    8    9   10

           43.3 38.7 38.0 38.0 37.1 35.6 35.4 35.3 35.4 40.7

1

 RECEIVER    LEQ(H)   L10
 66            61.2   62.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           42.2
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           42.5 41.1 45.0 46.8 50.0 51.7 52.5 49.3 51.2 47.7

           42.2 38.3 35.0 33.4
   3        1    2    3
           31.8 30.8 29.2
   4        1    2    3
           30.4 30.4 32.3
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           33.8 36.5 40.4 44.9 43.9 50.1 45.8 48.4 47.3 45.3

           43.4 43.1 42.3
   6        1
           41.6
   7        1    2    3    4    5    6    7    8
           31.5 29.5 24.9 25.0 27.6 27.9 25.3 24.5
   8        1    2    3    4    5    6    7    8    9   10

           22.4 20.3 19.4 20.2 20.1 18.7 18.2 18.2 17.8 18.7

1

 RECEIVER    LEQ(H)   L10
 67            62.7   64.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           41.3
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           41.5 39.8 43.1 46.1 48.7 50.9 53.2 51.5 54.4 52.0

           44.7 42.5 39.1 37.2
   3        1    2    3
           36.2 34.9 32.8
   4        1    2    3
           34.5 34.6 36.2
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           37.8 40.6 43.4 48.9 47.9 53.3 47.8 49.4 47.5 45.6

           43.5 42.1 41.0
   6        1
           40.8
   7        1    2    3    4    5    6    7    8
           35.6 32.9 28.9 28.9 31.6 31.8 29.2 28.2
   8        1    2    3    4    5    6    7    8    9   10

           26.3 24.2 23.3 24.1 24.4 23.4 22.6 22.1 21.7 22.9

1

 RECEIVER    LEQ(H)   L10
 68            62.0   63.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           40.4
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           40.3 38.3 41.8 44.9 46.9 49.0 51.4 50.1 53.7 52.0

           46.3 44.0 40.8 39.9
   3        1    2    3
           37.8 35.8 33.9
   4        1    2    3
           35.3 36.1 38.7
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           39.8 42.2 44.9 48.7 48.3 52.6 46.5 48.0 46.1 44.3

           42.8 41.1 39.9
   6        1
           39.6
   7        1    2    3    4    5    6    7    8
           36.8 33.1 30.5 30.7 34.1 33.7 31.3 30.2
   8        1    2    3    4    5    6    7    8    9   10

           28.0 26.1 25.1 25.4 25.8 25.2 25.6 25.1 24.5 25.6

1

 RECEIVER    LEQ(H)   L10
 69            63.0   63.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           38.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           38.7 36.8 40.3 43.2 44.3 46.4 48.7 47.1 49.9 50.7

           51.0 52.7 49.9 47.9
   3        1    2    3
           45.8 43.9 41.7
   4        1    2    3
           43.1 43.8 46.1
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           48.0 50.6 52.1 50.8 47.1 50.2 44.2 46.0 44.2 42.6

           41.4 40.2 39.1
   6        1
           38.8
   7        1    2    3    4    5    6    7    8
           34.8 36.2 35.9 38.3 43.6 43.8 41.3 38.9
   8        1    2    3    4    5    6    7    8    9   10

           36.0 35.0 34.7 35.4 35.7 34.2 33.8 33.2 32.6 33.3

1

 RECEIVER    LEQ(H)   L10
 70            67.8   69.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           46.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           48.1 47.3 52.0 56.9 62.3 59.9 55.0 48.7 49.3 46.2

           43.7 42.7 40.3 38.9
   3        1    2    3
           37.8 36.5 34.8
   4        1    2    3
           36.2 36.4 38.2
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           39.4 41.6 43.4 45.3 43.8 51.2 49.2 54.8 57.3 55.3

           51.8 49.6 47.9
   6        1
           46.5
   7        1    2    3    4    5    6    7    8
           31.6 30.6 27.9 27.7 27.4 26.6 25.8 25.1
   8        1    2    3    4    5    6    7    8    9   10

           23.2 21.4 20.2 20.4 21.0 22.2 22.9 23.2 23.1 24.3

1

 RECEIVER    LEQ(H)   L10
 71            66.5   68.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           45.7
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           46.5 45.5 49.7 53.5 58.6 59.6 56.7 50.8 51.3 47.5

           44.6 43.4 40.6 39.0
   3        1    2    3
           37.0 35.6 33.9
   4        1    2    3
           35.5 35.9 38.1
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           39.6 42.1 44.1 46.2 45.0 52.4 50.3 55.1 55.4 52.6

           49.4 47.7 46.3
   6        1
           45.1
   7        1    2    3    4    5    6    7    8
           32.2 31.4 28.8 27.0 27.5 27.4 26.6 25.9
   8        1    2    3    4    5    6    7    8    9   10

           23.9 22.1 21.0 21.0 20.4 20.1 22.6 23.1 23.0 24.1

1

 RECEIVER    LEQ(H)   L10
 72            66.2   67.9
```

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
44.4
2 1 2 3 4 5 6 7 8 9 10
11 12 13 14
45.0 43.6 47.3 51.0 55.9 59.4 58.8 53.2 53.4 48.9

45.4 43.5 40.2 38.3
3 1 2 3
36.5 34.9 33.2
4 1 2 3
34.8 35.2 37.1
5 1 2 3 4 5 6 7 8 9 10
11 12 13
38.8 41.6 44.5 47.0 45.9 53.5 51.1 54.8 53.3 50.4

46.9 45.3 43.9
6 1
43.6
7 1 2 3 4 5 6 7 8
33.5 32.6 29.3 27.0 28.2 28.3 27.4 26.6
8 1 2 3 4 5 6 7 8 9 10

24.2 22.5 21.4 21.4 20.7 19.9 20.9 23.1 22.8 23.7

1

RECEIVER LEQ(H) L10
73 66.7 68.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
46.4
2 1 2 3 4 5 6 7 8 9 10
11 12 13 14
47.3 46.4 51.0 55.1 60.1 59.4 55.6 49.7 49.9 46.6

44.0 42.9 40.1 38.7
3 1 2 3
37.1 35.6 33.8
4 1 2 3
35.3 35.7 37.7
5 1 2 3 4 5 6 7 8 9 10
11 12 13
39.0 41.5 43.3 45.4 44.1 51.3 49.2 54.4 55.8 53.5

50.5 48.6 47.2
6 1
45.9
7 1 2 3 4 5 6 7 8
31.5 30.8 28.1 27.4 27.1 26.9 26.0 25.3
8 1 2 3 4 5 6 7 8 9 10

23.3 21.5 20.3 20.4 20.0 20.8 22.5 22.9 22.7 23.7

1

RECEIVER LEQ(H) L10
74 66.1 67.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
41.1
2 1 2 3 4 5 6 7 8 9 10
11 12 13 14
41.1 39.4 43.2 47.2 49.3 52.8 56.6 56.1 59.5 55.5

49.6 44.4 40.8 38.7
3 1 2 3
36.9 35.5 33.5
4 1 2 3
35.0 35.4 37.6
5 1 2 3 4 5 6 7 8 9 10
11 12 13
39.3 42.2 47.7 52.2 51.6 57.2 50.8 51.6 48.9 46.6

44.7 42.9 41.4
6 1
40.7
7 1 2 3 4 5 6 7 8
39.8 37.3 31.4 31.0 32.8 32.7 31.2 29.6
8 1 2 3 4 5 6 7 8 9 10

27.8 26.2 25.2 25.5 24.7 23.5 23.7 23.6 23.2 24.1

1

RECEIVER LEQ(H) L10
75 57.5 58.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
38.8
2 1 2 3 4 5 6 7 8 9 10
11 12 13 14
38.7 36.8 39.6 41.8 43.5 44.8 46.4 44.4 47.6 44.5

41.5 40.7 37.8 35.9
3 1 2 3
34.6 34.4 44.7
4 1 2 3
41.6 33.9 35.1
5 1 2 3 4 5 6 7 8 9 10
11 12 13
36.4 39.3 40.9 42.1 42.4 47.1 41.6 43.6 42.4 41.1

39.5 38.8 38.1
6 1
38.0
7 1 2 3 4 5 6 7 8
29.7 27.3 25.4 26.7 30.4 29.9 28.6 29.2
8 1 2 3 4 5 6 7 8 9 10

26.2 23.7 22.2 22.5 22.1 21.2 21.1 21.0 20.6 21.4

1

RECEIVER LEQ(H) L10
76 67.8 68.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
37.7
2 1 2 3 4 5 6 7 8 9 10
11 12 13 14
37.3 35.3 38.7 41.4 42.1 43.9 44.6 41.8 45.9 46.9

52.4 56.1 56.6 57.3
3 1 2 3
57.0 55.9 54.0
4 1 2 3
54.7 55.1 56.5
5 1 2 3 4 5 6 7 8 9 10
11 12 13
56.6 56.7 55.3 51.9 43.5 46.8 40.1 42.7 41.5 40.3

39.2 38.2 37.1
6 1
36.8
7 1 2 3 4 5 6 7 8
31.0 32.1 34.1 38.3 43.3 47.1 49.2 50.6
8 1 2 3 4 5 6 7 8 9 10

46.1 45.4 44.7 44.6 43.6 42.0 41.7 41.6 41.7 43.5

1

RECEIVER LEQ(H) L10
77 67.3 68.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
39.0
2 1 2 3 4 5 6 7 8 9 10
11 12 13 14
39.0 37.1 40.6 43.5 44.3 45.9 47.9 46.6 51.6 53.7

55.2 59.1 56.6 53.7
3 1 2 3
51.1 49.0 46.8
4 1 2 3
48.0 48.9 51.4
5 1 2 3 4 5 6 7 8 9 10
11 12 13
53.7 57.4 57.3 54.2 49.5 51.8 44.7 46.2 44.5 43.0

41.7 40.4 39.2
6 1
38.8
7 1 2 3 4 5 6 7 8
37.9 40.0 40.5 43.5 52.5 49.5 43.6 40.3
8 1 2 3 4 5 6 7 8 9 10

38.5 38.0 38.3 40.2 41.2 40.5 40.3 39.5 38.6 39.0

1

RECEIVER LEQ(H) L10
78 67.6 68.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
39.7
2 1 2 3 4 5 6 7 8 9 10
11 12 13 14
39.7 37.9 41.4 44.4 45.3 47.0 49.3 48.4 54.1 57.4

59.0 58.1 53.6 51.0
3 1 2 3
48.8 46.9 45.0
4 1 2 3
46.2 46.8 49.1
5 1 2 3 4 5 6 7 8 9 10
11 12 13
51.2 54.7 57.7 57.5 52.4 53.9 46.0 47.4 45.6 43.9

42.4 41.2 39.9
6 1
39.5
7 1 2 3 4 5 6 7 8
41.8 45.0 45.7 47.3 47.5 44.3 40.6 38.3
8 1 2 3 4 5 6 7 8 9 10

36.3 35.6 35.7 37.2 37.6 37.2 36.9 36.5 35.8 36.3

1

RECEIVER LEQ(H) L10
79 67.7 69.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
41.1
2 1 2 3 4 5 6 7 8 9 10
11 12 13 14
41.0 39.2 42.8 46.1 47.5 50.2 53.4 53.2 59.6 59.6

56.5 53.2 48.8 46.7
3 1 2 3
44.6 42.7 40.8
4 1 2 3
42.2 43.0 45.3
5 1 2 3 4 5 6 7 8 9 10
11 12 13
47.3 50.7 54.4 57.1 55.7 58.3 49.4 50.3 47.8 45.8

```
          44.2 42.8 41.5
   6        1
          41.1
   7        1    2    3    4    5    6    7    8
          48.2 44.3 40.8 39.4 40.0 38.6 36.6 34.8
   8        1    2    3    4    5    6    7    8    9   10

          33.1 32.1 31.7 32.3 32.0 31.0 31.3 31.4 31.0 31.8

1

RECEIVER    LEQ(H)    L10
80           65.9    67.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
          40.4
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          40.4 38.7 42.5 45.7 47.0 50.0 53.4 53.1 59.1 58.2

          50.7 48.0 43.9 41.9
   3        1    2    3
          39.7 38.1 36.2
   4        1    2    3
          37.6 38.0 40.4
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          42.2 45.3 48.5 54.2 53.7 56.6 48.7 49.7 47.2 45.3

          43.6 42.1 40.6
   6        1
          40.1
   7        1    2    3    4    5    6    7    8
          44.2 40.0 36.1 35.6 37.0 36.4 34.5 32.6
   8        1    2    3    4    5    6    7    8    9   10

          30.6 29.2 28.5 28.9 28.2 27.1 27.0 26.8 26.3 27.1
```

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2 CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Otay Ranch - Village 7: 02/2004

EMISSION LEVELS: Calveno Levels (trucks>30mph)

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)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

OROADWAY 1 Southbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6339513.3	1806920.6	600.4	0
2	6339510.5	1806467.0	598.8	0

OROADWAY 2 Southbound SR-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
2	6339510.5	1806467.0	598.8	0
3	6339509.1	1806114.7	593.8	0
4	6339508.2	1805921.3	592.2	0
5	6339506.6	1805567.2	590.6	0
6	6339518.4	1805084.1	587.3	0
7	6339558.1	1804696.4	584.0	0
8	6339626.5	1804317.1	580.7	0
9	6339721.1	1803940.3	577.4	0
10	6339779.5	1803754.4	575.8	0
11	6339915.4	1803392.1	572.5	0
12	6340052.2	1803092.3	569.2	0
13	6340182.4	1802843.8	564.3	0
14	6340344.6	1802558.3	554.5	0
15	6340485.7	1802306.5	544.6	0
16	6340646.7	1802025.4	531.5	0

OROADWAY 3 Southbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
16	6340646.7	1802025.4	531.5	0
17	6340806.7	1801741.3	516.7	0
18	6340985.8	1801426.3	500.3	0
19	6341154.7	1801109.5	483.9	0

OROADWAY 4 Northbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6341260.4	1801145.7	485.6	1
2	6341061.5	1801517.5	503.6	1
3	6340903.6	1801796.7	516.7	1
4	6340743.5	1802078.7	531.5	1

OROADWAY 5 Northbound SR-125, Birch to RM

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
4	6340743.5	1802078.7	531.5	1
5	6340583.6	1802361.5	544.6	1
6	6340405.7	1802676.0	556.1	1
7	6340228.9	1802992.4	564.3	1
8	6340066.7	1803323.5	569.2	1
9	6339993.2	1803497.7	570.9	1
10	6339809.9	1804036.4	575.8	1
11	6339761.7	1804219.9	577.4	1
12	6339684.8	1804591.6	580.7	1
13	6339638.4	1804969.2	584.0	1
14	6339618.1	1805346.8	587.3	1
15	6339618.1	1805728.7	590.6	1
16	6339621.4	1806111.3	593.8	1
17	6339622.2	1806484.0	598.8	1

OROADWAY 6 Northbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
17	6339622.2	1806484.0	598.8	1
18	6339626.5	1806918.9	600.4	1

OROADWAY 7 Southbound Ramp to Rock Mountain

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	561.	45.0
VEH5	18.	45.0
VEH6	12.	45.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6339864.2	1803405.4	565.9	1
2	6339924.1	1803175.4	566.5	1
3	6339984.3	1802962.1	567.1	1
4	6340015.7	1802831.9	567.5	1
5	6340026.5	1802684.8	567.9	1
6	6340003.6	1802446.2	568.5	1
7	6339995.2	1802224.4	569.1	1
8	6340032.5	1802046.0	569.6	1
9	6340089.2	1801885.6	570.0	1

OROADWAY 8 Ramp from wb Rock Mountain to sb-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	671.	45.0
VEH5	21.	45.0
VEH6	14.	45.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6340294.9	1801957.4	570.0	0
2	6340188.4	1802001.2	565.7	0
3	6340138.6	1802064.9	562.8	0
4	6340116.7	1802131.7	560.3	0
5	6340125.6	1802215.3	557.2	0
6	6340173.4	1802290.0	554.0	0
7	6340242.1	1802330.8	551.1	0
8	6340334.8	1802336.8	547.7	0
9	6340430.4	1802292.0	543.8	0
10	6340498.1	1802198.4	539.7	0
11	6340589.7	1802044.0	533.1	0
1				

BARRIER 1 TYPE(A) R-O-W barrier 1acont'd

-	COORDINATES					
	X	Y	Z	Z0	DELZ	P
bf-16	6339241.5	1805697.6	580.7	580.7	.0	0
6a	6339296.6	1805665.7	582.0	582.0		
6b	6339342.5	1805640.0	583.1	583.1		
6c	6339383.5	1805617.1	584.0	584.0		
7	6339406.4	1805509.8	584.0	584.0		
8	6339434.3	1805343.0	588.9	588.9		
1						

BARRIER 2 TYPE(A) R-O-W barrier 1bcont'd

--	COORDINATES					
	X	Y	Z	Z0	DELZ	P
8	6339434.3	1805343.0	588.9	588.9	.0	0
9	6339453.5	1805206.6	589.6	589.6		
10	6339469.4	1805092.9	589.9	589.9		
1						

BARRIER 3 TYPE(A) R-O-W barrier 2cont'd

---	COORDINATES					
	X	Y	Z	Z0	DELZ	P
10	6339469.4	1805092.9	589.9	589.9	.0	0
11	6339469.8	1805006.9	588.9	588.9		
12	6339469.6	1804987.8	587.3	587.3		
13	6339479.8	1804897.0	585.1	585.1		
14	6339495.0	1804777.7	584.0	584.0		
15	6339517.8	1804626.1	582.3	582.3		
16	6339550.1	1804460.9	580.8	580.8		
17	6339589.1	1804285.5	579.1	579.1		

```
          44.0 44.1 46.1
   6        1
          47.6
   7        1    2    3    4    5    6    7    8
          24.0 23.2 19.0 18.9 21.6 22.4 20.5 20.1
   8        1    2    3    4    5    6    7    8    9   10

          18.5 16.2 14.9 15.5 15.6 14.1 13.4 13.5 13.4 14.6

1

 RECEIVER     LEQ(H)    L10
 40            57.6    58.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
          41.8
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
          42.2 40.9 44.6 45.4 46.0 46.6 46.7 43.7 45.8 43.8

          38.2 36.0 32.9 32.1
    3        1    2    3
          30.3 28.8 27.0
    4        1    2    3
          28.6 29.0 31.3
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
          32.2 34.6 37.0 41.8 40.1 45.8 41.5 44.5 44.1 42.7

          42.5 42.8 41.7
    6        1
          41.1
    7        1    2    3    4    5    6    7    8
          27.0 25.0 21.4 21.5 24.8 24.9 23.3 22.4
    8        1    2    3    4    5    6    7    8    9   10

          20.9 18.6 17.3 17.3 17.4 16.9 17.3 16.8 16.5 17.8
```

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.
****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Otay Ranch - Village 7: 02/2004

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM 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)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Southbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6339513.3	1806920.6	600.4	0
2	6339510.5	1806467.0	598.8	0

0ROADWAY 2 Southbound SR-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
2	6339510.5	1806467.0	598.8	0
3	6339509.1	1806114.7	593.8	0
4	6339508.2	1805921.3	592.2	0
5	6339506.6	1805567.2	590.6	0
6	6339518.4	1805084.1	587.3	0
7	6339558.1	1804696.4	584.0	0
8	6339626.5	1804317.1	580.7	0
9	6339721.1	1803940.3	577.4	0
10	6339779.5	1803754.4	575.8	0
11	6339915.4	1803392.1	572.5	0
12	6340052.2	1803092.3	569.2	0
13	6340182.4	1802843.8	564.3	0
14	6340344.6	1802558.3	554.5	0
15	6340485.7	1802306.5	544.6	0
16	6340646.7	1802025.4	531.5	0

0ROADWAY 3 Southbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
16	6340646.7	1802025.4	531.5	0
17	6340806.7	1801741.3	516.7	0
18	6340985.8	1801426.3	500.3	0
19	6341154.7	1801109.5	483.9	0

0ROADWAY 4 Northbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6341260.4	1801145.7	485.6	1
2	6341061.5	1801517.5	503.6	1
3	6340903.6	1801796.7	516.7	1
4	6340743.5	1802078.7	531.5	1

0ROADWAY 5 Northbound SR-125, Birch to RM

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
4	6340743.5	1802078.7	531.5	1
5	6340583.6	1802361.5	544.6	1
6	6340405.7	1802676.0	556.1	1
7	6340228.9	1802992.4	564.3	1
8	6340066.7	1803323.5	569.2	1
9	6339993.2	1803497.7	570.9	1
10	6339809.9	1804036.4	575.8	1
11	6339761.7	1804219.9	577.4	1
12	6339684.8	1804591.6	580.7	1
13	6339638.4	1804969.2	584.0	1
14	6339618.1	1805346.8	587.3	1
15	6339618.1	1805728.7	590.6	1
16	6339621.4	1806111.3	593.8	1
17	6339622.2	1806484.0	598.8	1

0ROADWAY 6 Northbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
17	6339622.2	1806484.0	598.8	1
18	6339626.5	1806918.9	600.4	1

0ROADWAY 7 Southbound Ramp to Rock Mountain

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	561.	45.0
VEH5	18.	45.0
VEH6	12.	45.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6339864.2	1803405.4	565.9	1
2	6339924.1	1803175.4	566.5	1
3	6339984.3	1802962.1	567.1	1
4	6340015.7	1802831.9	567.5	1
5	6340026.5	1802684.8	567.9	1
6	6340003.6	1802446.2	568.5	1
7	6339995.2	1802224.4	569.1	1
8	6340032.5	1802046.0	569.6	1
9	6340089.2	1801885.6	570.0	1

0ROADWAY 8 Ramp from wb Rock Mountain to sb-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	671.	45.0
VEH5	21.	45.0
VEH6	14.	45.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6340294.9	1801957.4	570.0	0
2	6340188.4	1802001.2	565.7	0
3	6340138.6	1802064.9	562.8	0
4	6340116.7	1802131.7	560.3	0
5	6340125.6	1802215.3	557.2	0
6	6340173.4	1802290.0	554.0	0
7	6340242.1	1802330.8	551.1	0
8	6340334.8	1802336.8	547.7	0
9	6340430.4	1802292.0	543.8	0
10	6340498.1	1802198.4	539.7	0
11	6340589.7	1802044.0	533.1	0
1				

BARRIER 1 TYPE(A) R-O-W barrier 1acont'd

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
8f-16	6339241.5	1805697.6	580.7	580.7	.0	0
6a	6339296.6	1805665.7	582.0	582.0		
6b	6339342.5	1805640.0	583.1	583.1		
6c	6339383.5	1805617.1	584.0	584.0		
7	6339406.4	1805509.8	584.0	584.0		
8	6339434.3	1805343.0	588.9	588.9		
1						

BARRIER 2 TYPE(A) R-O-W barrier 1bcont'd

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
8	6339434.3	1805343.0	588.9	588.9	.0	0
9	6339453.5	1805206.6	589.6	589.6		
10	6339469.4	1805092.9	589.9	589.9		
1						

BARRIER 3 TYPE(A) R-O-W barrier 2cont'd

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
10	6339469.4	1805092.9	589.9	589.9	.0	0
11	6339469.8	1805006.9	588.9	588.9		
12	6339469.6	1804987.8	587.3	587.3		
13	6339479.8	1804897.0	585.1	585.1		
14	6339495.0	1804777.7	584.0	584.0		
15	6339517.8	1804626.1	582.3	582.3		
16	6339550.1	1804460.9	580.8	580.8		
17	6339589.1	1804285.5	579.1	579.1		

18	6339634.0	1804109.2	577.4	577.4
19	6339663.6	1803997.1	576.0	576.0

1

BARRIER 4 TYPE(A) R-O-W barrier trf to top of slope barrier

	X	Y	Z	Z0	DELZ	P
19	6339663.6	1803997.1	576.0	576.0	.0	0
20	6339705.0	1803857.9	574.7	574.7		
21	6339735.2	1803763.2	573.9	573.9		
22	6339758.3	1803694.7	573.5	573.5		
23	6339774.3	1803649.9	573.0	573.0		
24	6339798.4	1803582.7	572.6	572.6		
2-rev	6339886.3	1803152.2	571.0	571.0		
3-rev	6339854.5	1803141.6	571.0	571.0		

1

BARRIER 5 TYPE(A) S-F Pad Edges

	X	Y	Z	Z0	DELZ	P
1	6338450.5	1805660.4	570.7	570.7	.0	0
2	6338496.9	1805688.8	570.7	570.7		
3	6338586.8	1805745.8	572.3	572.3		
4	6338643.8	1805781.6	572.3	572.3		
5	6338703.0	1805818.1	574.7	574.7		
6	6338761.4	1805846.6	574.7	574.7		
7	6338765.1	1805848.1	576.8	576.8		
8	6338814.8	1805859.8	576.8	576.8		
9	6338819.2	1805860.5	578.2	578.2		

1

BARRIER 6 TYPE(A) S-F Pad Edges cont'd.1

	X	Y	Z	Z0	DELZ	P
9	6338819.2	1805860.5	578.2	578.2	.0	0
10	6338898.8	1805853.9	578.2	578.2		
11	6338994.5	1805823.2	578.2	578.2		
12	6338998.2	1805822.5	578.5	578.5		

1

BARRIER 7 TYPE(A) S-F Pad Edges cont'd.2

	X	Y	Z	Z0	DELZ	P
12	6338998.2	1805822.5	578.5	578.5	0	0
13	6339061.0	1805801.3	578.5	578.5		
14	6339065.4	1805799.9	580.7	580.7		
15	6339173.6	1805762.6	580.7	580.7		
16	6339241.5	1805697.6	580.7	580.7		

1

BARRIER 8 TYPE(A) Elem School Pad Edges

	X	Y	Z	Z0	DELZ	P
40	6339064.2	1804045.1	548.0	548.0	.0	0
41	6339477.3	1804188.3	550.0	550.0		
42	6339517.0	1804198.4	550.2	550.2		
43	6339575.6	1804002.5	552.0	552.0		
44	6339641.2	1803781.3	554.0	554.0		
45	6339706.8	1803560.2	556.0	556.0		
46	6339706.8	1803544.3	556.1	556.1		

1

BARRIER 9 TYPE(A) Elem to Park Pads

	X	Y	Z	Z0	DELZ	P
46	6339706.8	1803544.3	556.1	556.1	.0	0
48	6339717.2	1803526.8	561.3	561.3		

1

BARRIER 10 TYPE(A) Park Pad Edges

	X	Y	Z	Z0	DELZ	P
47	6339591.3	1803493.6	560.0	560.0	.0	0
48	6339717.2	1803526.8	561.3	561.3		
49	6339762.7	1803371.2	561.5	561.5		
50	6339808.2	1803214.7	562.0	562.0		
51	6339819.6	1803172.7	562.1	562.1		

1

BARRIER 11 TYPE(A) Park to High Pads

	X	Y	Z	Z0	DELZ	P
51	6339819.6	1803172.7	562.1	562.1	.0	0
53	6339837.0	1803137.7	579.5	579.5		
52	6339709.4	1803101.9	576.9	576.9		

1

BARRIER 12 TYPE(A) High School Pad Edges

	X	Y	Z	Z0	DELZ	P
3-rev	6339854.5	1803141.6	571.0	571.0	.0	0
53	6339837.0	1803137.7	579.5	579.5		
54	6339875.5	1803030.2	578.6	578.6		
55	6339921.0	1802903.4	578.5	578.5		
56	6339942.8	1802838.7	578.4	578.4		
57	6339950.7	1802716.3	578.0	578.0		
58	6339953.3	1802656.0	577.5	577.5		
59	6339944.6	1802632.3	577.3	577.3		
60a	6339822.2	1802585.1	574.6	574.6		

1

BARRIER 13 TYPE(A) High School Pad Edges cont'd.

	X	Y	Z	Z0	DELZ	P
60a	6339822.2	1802585.1	574.6	574.6	.0	0
60b	6339807.2	1802441.6	578.7	578.7		
60c	6339785.7	1802288.4	579.1	579.1		
61	6339775.0	1802195.2	580.8	580.8		
62	6339763.6	1802083.2	579.7	579.7		
63	6339781.1	1801897.9	570.4	570.4		
64	6339783.7	1801794.7	570.4	570.4		

1

Contour Receivers 81-95(at 5 feet)

	X	Y	Z
81	6339288.4	1804392.9	568.0
82	6338876.6	1804132.0	542.0
83	6339267.3	1804274.4	568.4
84	6338446.2	1805645.0	576.1
85	6338799.9	1804290.1	545.0
86	6338683.4	1804652.8	559.7
87	6339341.7	1804293.3	568.4
88	6338939.6	1804167.4	542.0
89	6339542.5	1802727.8	575.0
90	6339457.4	1804167.4	555.0
91	6339436.9	1804328.2	568.4
92	6339022.7	1804171.2	558.0
93	6338863.6	1804325.7	545.0
94	6338809.5	1804642.2	559.8
95	6338361.8	1805578.5	574.0

1

ALPHA FACTORS - RECEIVER ACROSS,ROADWAY DOWN

1 *	.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					
3 *	.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					
5 *	.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					
7 *	.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	.0	.0	.0					

1

SHIELDING FACTORS - RECEIVER ACROSS,ROADWAY DOWN

1 *	.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					
3 *	.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					
5 *	.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					
7 *	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	.0	.0	.0					

1

RECEIVER LEQ(H) L10
81 68.3 70.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
44.9
2 1 2 3 4 5 6 7 8 9 10
11 12 13 14
45.5 44.1 48.3 52.8 58.5 62.8 60.4 53.4 53.0 49.0

45.8 44.3 41.6 40.1
3 1 2 3
38.5 37.0 35.1
4 1 2 3
36.7 37.1 39.2
5 1 2 3 4 5 6 7 8 9 10
11 12 13
40.6 43.1 45.1 47.5 46.4 54.4 53.0 57.7 56.3 52.5

48.9 46.3 44.6
6 1
43.9
7 1 2 3 4 5 6 7 8
33.9 32.8 29.9 29.3 28.7 28.3 27.4 26.6
8 1 2 3 4 5 6 7 8 9 10
24.5 22.8 21.6 21.7 21.5 22.6 24.0 24.4 24.2 25.3

1

RECEIVER LEQ(H) L10
82 63.2 64.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
43.4
2 1 2 3 4 5 6 7 8 9 10
11 12 13 14
43.9 42.6 46.5 48.9 52.8 55.0 55.2 51.1 52.1 48.0

44.4 40.8 35.9 34.1
3 1 2 3
32.4 31.0 29.3
4 1 2 3
30.6 31.1 33.2
5 1 2 3 4 5 6 7 8 9 10
11 12 13
34.6 39.5 42.5 45.7 44.6 51.3 47.8 50.9 49.7 47.4

45.0 44.5 43.7
6 1
42.8
7 1 2 3 4 5 6 7 8
32.2 31.0 25.4 25.4 27.6 28.0 26.3 24.7
8 1 2 3 4 5 6 7 8 9 10
23.6 21.8 20.7 20.8 19.8 18.6 18.7 18.7 18.5 19.5

1

RECEIVER LEQ(H) L10
83 67.9 69.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
44.5
2 1 2 3 4 5 6 7 8 9 10

```
   11        12   13   14
            45.0 43.6 47.6 51.9 56.9 61.4 60.9 54.4 54.2 49.8

            46.4 45.0 42.0 40.2
    3         1    2    3
            38.7 37.1 35.1
    4         1    2    3
            36.9 37.3 39.4
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            41.0 43.6 45.8 48.1 47.2 55.3 53.7 57.5 55.2 51.7

            48.5 46.0 44.3
    6         1
            43.6
    7         1    2    3    4    5    6    7    8
            34.5 33.4 30.5 29.0 29.0 28.8 27.9 27.1
    8         1    2    3    4    5    6    7    8    9   10

            25.0 23.2 22.2 22.2 21.8 21.5 24.2 24.7 24.5 25.5

1

 RECEIVER    LEQ(H)   L10
 84           63.4   64.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
            54.0
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            51.5 50.1 53.7 53.9 50.1 48.8 47.0 42.7 44.4 41.7

            39.6 39.0 36.6 35.0
    3         1    2    3
            33.5 31.9 30.2
    4         1    2    3
            32.0 32.6 34.4
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            36.1 38.0 39.5 41.0 39.1 45.3 42.1 46.3 47.4 49.0

            51.9 51.7 50.4
    6         1
            52.8
    7         1    2    3    4    5    6    7    8
            26.3 26.1 23.6 22.0 23.0 23.4 22.8 22.0
    8         1    2    3    4    5    6    7    8    9   10

            20.4 18.6 17.4 17.3 16.3 15.8 17.8 19.1 19.2 20.4

1

 RECEIVER    LEQ(H)   L10
 85           63.0   64.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
            44.0
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            44.6 43.3 47.6 49.8 53.4 54.8 54.2 49.9 51.0 47.1

            43.9 41.0 35.6 33.9
    3         1    2    3
            32.2 30.7 29.1
    4         1    2    3
            30.6 31.0 32.9
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            35.6 39.4 42.1 45.1 43.8 50.5 47.2 50.7 50.1 47.9

            46.0 45.6 44.3
    6         1
            43.5
    7         1    2    3    4    5    6    7    8
            31.2 30.4 24.9 24.9 26.9 27.4 25.9 24.4
    8         1    2    3    4    5    6    7    8    9   10

            23.3 21.4 20.3 20.4 19.3 18.1 18.3 18.3 18.3 19.2

1

 RECEIVER    LEQ(H)   L10
 86           63.0   64.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
            45.5
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            46.4 45.3 50.3 52.1 54.0 53.9 52.3 47.7 49.0 45.5

            42.7 41.4 38.1 34.7
    3         1    2    3
            32.7 31.3 29.4
    4         1    2    3
            31.2 32.9 35.1
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            36.9 39.8 42.2 44.4 42.6 49.4 46.4 50.4 50.9 49.3

            48.4 47.9 46.0
    6         1
            45.0
    7         1    2    3    4    5    6    7    8
            29.8 29.5 24.5 24.3 25.9 26.4 25.3 24.1
    8         1    2    3    4    5    6    7    8    9   10

            22.9 21.1 19.9 19.9 18.7 17.6 18.0 18.6 18.6 19.6

1

 RECEIVER    LEQ(H)   L10
 87           68.9   70.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
            44.3
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            44.6 43.3 47.5 52.3 57.5 63.1 62.4 55.0 54.2 49.8

            46.4 45.1 42.2 40.7
    3         1    2    3
            39.0 37.5 35.7
    4         1    2    3
            37.3 37.7 39.7
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            41.2 43.7 45.7 48.2 47.4 55.7 54.5 58.5 55.8 52.0

            49.0 46.0 43.9
    6         1
            43.2
    7         1    2    3    4    5    6    7    8
            34.8 33.6 30.6 30.0 29.2 28.7 27.8 26.9
    8         1    2    3    4    5    6    7    8    9   10

            25.0 23.2 22.1 22.3 22 1 23.3 24.7 25.0 24.7 25.8

1

 RECEIVER    LEQ(H)   L10
 88           63.7   65.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
            43.5
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            44.1 42.8 46.6 49.2 53.3 55.8 55.8 51.6 52.5 48.0

            44.3 41.7 35.9 34.2
    3         1    2    3
            32.5 31.1 29.5
    4         1    2    3
            30.9 31.3 33.2
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            36.3 39.5 42.6 45.7 44.6 51.5 48.2 51.3 50.1 47.7

            45.1 44.4 43.7
    6         1
            42.9
    7         1    2    3    4    5    6    7    8
            32.4 31.4 25.5 25.5 27.6 27.9 26.5 25.0
    8         1    2    3    4    5    6    7    8    9   10

            23.5 21.7 20.6 20.7 19.7 18.6 18.7 18.8 18.7 19.7

1

 RECEIVER    LEQ(H)   L10
 89           63.7   64.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
            39.6
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            39.5 37.7 41.3 44.5 45.7 48.1 50.6 49.6 54.0 52.9

            52.0 50.8 48.1 47.5
    3         1    2    3
            45.2 42.9 40.5
    4         1    2    3
            42.2 43.2 46.0
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            47.1 48.7 51.1 52.1 48.9 53.2 46.2 47.6 45.5 43.8

            42.4 41.1 39.8
    6         1
            39.4
    7         1    2    3    4    5    6    7    8
            38.1 38.4 36.9 38.0 41.6 41.0 37.4 35.7
    8         1    2    3    4    5    6    7    8    9   10

            33.6 32.1 31.7 32.8 33.5 32.9 33.1 32.8 32.2 32.9

1

 RECEIVER    LEQ(H)   L10
 90           67.5   69.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
            40.9
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            41.5 40.4 45.0 50.2 53.8 60.1 63.4 56.2 54.8 50.0

            46.2 43.7 40.6 38.6
    3         1    2    3
            37.1 35.6 33.8
    4         1    2    3
            35.1 35.4 37.2
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            38.8 41.4 43.8 46.5 45.8 53.9 52.4 54.8 51.1 47.7

            45.1 42.8 40.7
    6         1
            39.8
    7         1    2    3    4    5    6    7    8
            35.6 34.0 31.0 30.6 29.5 28.2 26.8 25.7
    8         1    2    3    4    5    6    7    8    9   10

            23.7 22.0 21.4 21.6 22.1 23.3 23.9 23.7 23.1 24.1
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1

 RECEIVER     LEQ(H)    L10
 91            70.2    72.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             43.3
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             43.8  42.5  47.4  52.8  57.4  65.7  64.2  54.6  53.8  49.5

             46.5  44.8  42.2  40.8
    3          1     2     3
             39.1  38.0  36.3
    4          1     2     3
             37.6  37.9  39.7
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             41.0  43.4  45.5  48.0  47.1  55.5  54.8  59.6  56.1  51.9

             48.8  46.2  44.1
    6          1
             43.1
    7          1     2     3     4     5     6     7     8
             35.0  33.7  30.6  30.3  29.9  28.6  27.6  26.7
    8          1     2     3     4     5     6     7     8     9    10

             25.2  23.1  22.0  22.4  23.8  24.4  25.0  25.2  25.0  26.1

1

 RECEIVER     LEQ(H)    L10
 92            64.9    66.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             43.9
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             44.5  43.2  47.0  50.1  54.3  56.9  57.1  52.5  53.2  48.8

             45.5  43.6  39.7  36.1
    3          1     2     3
             34.4  32.9  31.1
    4          1     2     3
             32.7  33.4  37.0
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             38.7  41.7  44.6  47.1  46.0  53.3  50.2  53.4  52.0  49.4

             46.5  45.3  44.3
    6          1
             43.5
    7          1     2     3     4     5     6     7     8
             33.3  32.5  27.0  26.8  28.4  28.6  27.6  26.3
    8          1     2     3     4     5     6     7     8     9    10

             24.7  22.9  21.8  21.8  20.8  19.8  20.2  20.5  20.5  21.5

1

 RECEIVER     LEQ(H)    L10
 93            63.4    65.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             44.1
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             44.8  43.5  47.8  50.1  54.0  55.6  54.8  50.2  51.3  47.0

             43.7  41.5  36.9  34.0
    3          1     2     3
             32.5  31.0  29.1
    4          1     2     3
             30.8  31.3  34.2
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             36.4  39.5  42.1  45.2  43.9  50.7  47.5  51.1  50.5  48.2

             46.1  45.6  44.5
    6          1
             43.5
    7          1     2     3     4     5     6     7     8
             31.4  30.7  25.0  25.0  26.9  27.3  26.1  24.6
    8          1     2     3     4     5     6     7     8     9    10

             23.2  21.3  20.2  20.3  19.3  18.2  18.4  18.6  18.5  19.5

1

 RECEIVER     LEQ(H)    L10
 94            63.8    65.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             45.6
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             46.5  45.4  50.5  52.6  55.2  55.3  53.3  48.4  49.6  46.0

             43.2  41.6  38.5  36.7
    3          1     2     3
             35.0  32.2  30.0
    4          1     2     3
             33.0  33.5  35.5
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             37.3  40.0  42.5  44.7  43.1  50.0  47.1  51.4  51.9  50.1

             48.7  48.2  46.2

    6          1
             45.1
    7          1     2     3     4     5     6     7     8
             30.3  29.9  25.8  24.8  26.2  26.6  25.7  24.6
    8          1     2     3     4     5     6     7     8     9    10

             23.0  21.2  20.0  20.0  19.0  18.1  18.5  19.3  20.7  21.7

1

 RECEIVER     LEQ(H)    L10
 95            62.6    63.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             52.4
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             50.1  48.9  52.9  53.3  49.9  48.7  47.0  42.7  44.5  42.1

             39.6  38.6  36.5  34.7
    3          1     2     3
             33.1  31.6  29.7
    4          1     2     3
             31.5  32.2  34.0
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             35.5  38.1  39.5  40.9  39.0  45.3  42.0  46.2  47.2  48.5

             51.2  50.9  49.3
    6          1
             51.0
    7          1     2     3     4     5     6     7     8
             26.2  26.1  23.2  21.7  23.0  23.4  22.8  21.9
    8          1     2     3     4     5     6     7     8     9    10

             20.5  18.6  17.5  17.4  16.3  15.6  16.6  19.0  18.9  20.1
```

ATTACHMENT 2

KEY TO FILE CODES

ATTACHMENT 2

*.STA	-	STAMINA output files
*.OPT	-	OPTIMA output files
V71	-	Village 7, first-floor receivers, no barriers.
V72	-	Village 7, second-floor receivers, no barriers.
V73	-	Village 7, third-floor receivers, no barriers.
V7W1	-	Village 7, first-floor receivers, with proposed barriers.
V7W2	-	Village 7, second-floor receivers, with proposed barriers.
V7W3	-	Village 7, third-floor receivers, with proposed barriers.
V7W1BLDG	-	Village 7, first-floor multi-family receivers, with multi-family building shielding, and proposed barriers.
V7W2BLDG	-	Village 7, second-floor multi-family receivers, with multi-family building shielding, and proposed barriers.
V7W3BLDG	-	Village 7, third-floor multi-family receivers, with multi-family building shielding, and proposed barriers.
V7W1BLDA	-	Village 7, first-floor single-family and high-school receivers, with multi-family building shielding, and proposed barriers.
V7W2BLDA	-	Village 7, second-floor single-family and high-school receivers, with multi-family building shielding, and proposed barriers.

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Olay Ranch - Village 7: 02/2004

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM 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)	
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)	
.000	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)	
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 =	.00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 =	.00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 =	.00

0ROADWAY 1 Southbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	X	Y	Z	GRADE
1	6339513.3	1806920.6	600.4	0
2	6339510.5	1806467.0	598.8	0

0ROADWAY 2 Southbound SR-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	X	Y	Z	GRADE
2	6339510.5	1806467.0	598.8	0
3	6339509.1	1806114.7	593.8	0
4	6339508.2	1805921.3	592.2	0
5	6339506.6	1805567.2	590.6	0
6	6339518.4	1805084.1	587.3	0
7	6339558.1	1804696.4	584.0	0
8	6339626.5	1804317.1	580.7	0
9	6339721.1	1803940.3	577.4	0
10	6339779.5	1803754.4	575.8	0
11	6339915.4	1803392.1	572.5	0
12	6340052.2	1803092.3	569.2	0
13	6340182.4	1802843.8	564.3	0
14	6340344.6	1802558.3	554.5	0
15	6340485.7	1802306.5	544.6	0
16	6340646.7	1802025.4	531.5	0

0ROADWAY 3 Southbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	X	Y	Z	GRADE
16	6340646.7	1802025.4	531.5	0
17	6340806.7	1801741.3	516.7	0
18	6340985.8	1801426.3	500.3	0
19	6341154.7	1801109.5	483.9	0

0ROADWAY 4 Northbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	X	Y	Z	GRADE
1	6341260.4	1801145.7	485.6	1
2	6341061.5	1801517.5	503.6	1
3	6340903.6	1801796.7	516.7	1
4	6340743.5	1802078.7	531.5	1

0ROADWAY 5 Northbound SR-125, Birch to RM

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	X	Y	Z	GRADE
4	6340743.5	1802078.7	531.5	1
5	6340583.6	1802361.5	544.6	1
6	6340405.7	1802676.0	556.1	1
7	6340228.9	1802992.4	564.3	1
8	6340066.7	1803323.5	569.2	1
9	6339993.2	1803497.7	570.9	1
10	6339809.9	1804036.4	575.8	1
11	6339761.7	1804219.9	577.4	1
12	6339684.8	1804591.6	580.7	1
13	6339638.4	1804969.2	584.0	1
14	6339618.1	1805346.8	587.3	1
15	6339618.1	1805728.7	590.6	1
16	6339621.4	1806111.3	593.8	1
17	6339622.2	1806484.0	598.8	1

0ROADWAY 6 Northbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	X	Y	Z	GRADE
17	6339622.2	1806484.0	598.8	1
18	6339626.5	1806918.9	600.4	1

0ROADWAY 7 Southbound Ramp to Rock Mountain

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	561.	45.0
VEH5	18.	45.0
VEH6	12.	45.0

0	X	Y	Z	GRADE
1	6339864.2	1803405.4	565.9	1
2	6339924.1	1803175.4	566.5	1
3	6339984.3	1802962.1	567.1	1
4	6340015.7	1802831.9	567.5	1
5	6340026.5	1802684.8	567.9	1
6	6340003.6	1802446.2	568.5	1
7	6339995.2	1802224.4	569.1	1
8	6340032.5	1802046.0	569.6	1
9	6340089.2	1801885.6	570.0	1

0ROADWAY 8 Ramp from wb Rock Mountain to sb-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	671.	45.0
VEH5	21.	45.0
VEH6	14.	45.0

0	X	Y	Z	GRADE
1	6340294.9	1801957.4	570.0	0
2	6340188.4	1802001.2	565.7	0
3	6340138.6	1802064.9	562.8	0
4	6340116.7	1802131.7	560.3	0
5	6340125.6	1802215.3	557.2	0
6	6340173.4	1802290.0	554.0	0
7	6340242.1	1802330.8	551.1	0
8	6340334.8	1802336.8	547.7	0
9	6340430.4	1802292.0	543.8	0
10	6340498.1	1802198.4	539.7	0
11	6340589.7	1802044.0	533.1	0

1

BARRIER 1 TYPE(A) R-O-W barrier 1acont'd

	X	Y	Z	Z0	DELZ	P
sf-16	6339241.5	1805697.6	580.7	580.7	.0	0
6a	6339296.6	1805665.7	582.0	582.0		
6b	6339342.5	1805640.0	583.1	583.1		
6c	6339383.5	1805617.1	584.0	584.0		
7	6339406.4	1805509.8	584.0	584.0		
8	6339434.3	1805343.0	588.9	588.9		

1

BARRIER 2 TYPE(A) R-O-W barrier 1bcont'd

	X	Y	Z	Z0	DELZ	P
8	6339434.3	1805343.0	588.9	588.9	.0	0
9	6339453.5	1805206.6	589.6	589.6		
10	6339469.4	1805092.9	589.9	589.9		

1

BARRIER 3 TYPE(A) R-O-W barrier 2cont'd

	X	Y	Z	Z0	DELZ	P
10	6339469.4	1805092.9	589.9	589.9	.0	0
11	6339469.8	1805006.9	588.9	588.9		
12	6339469.6	1804987.8	587.3	587.3		
13	6339479.8	1804897.0	585.1	585.1		
14	6339495.0	1804777.7	584.0	584.0		
15	6339517.8	1804626.1	582.3	582.3		
16	6339550.1	1804460.9	580.8	580.8		
17	6339589.1	1804285.5	579.1	579.1		

```
18        6339634.0 1804109.2      577.4      577.4
19        6339663.6 1803997.1      576.0      576.0
1

BARRIER   4   TYPE(A)      R-O-W barrier trf to top of slope barrier

          ---------COORDINATES----------
               X          Y          Z         ZO       DELZ        P
19        6339663.6 1803997.1      576.0      576.0        .0        0
20        6339705.0 1803857.9      574.7      574.7
21        6339735.2 1803763.2      573.9      573.9
22        6339758.3 1803694.7      573.5      573.5
23        6339774.3 1803649.9      573.0      573.0
24        6339798.4 1803582.7      572.6      572.6
2-rev     6339886.3 1803152.2      571.0      571.0
3-rev     6339854.5 1803141.6      571.0      571.0
1

BARRIER   5   TYPE(A)      S-F Pad Edges

          ---------COORDINATES----------
               X          Y          Z         ZO       DELZ        P
1         6338450.5 1805660.4      570.7      570.7        .0        0
2         6338496.9 1805688.8      570.7      570.7
3         6338586.8 1805745.8      572.3      572.3
4         6338643.8 1805781.6      572.3      572.3
5         6338703.0 1805818.1      574.7      574.7
6         6338761.4 1805846.6      574.7      574.7
7         6338765.1 1805848.1      576.8      576.8
8         6338814.8 1805859.8      576.8      576.8
9         6338819.2 1805860.5      578.2      578.2
1

BARRIER   6   TYPE(A)      S-F Pad Edges cont'd.1

          ---------COORDINATES----------
               X          Y          Z         ZO       DELZ        P
9         6338819.2 1805860.5      578.2      578.2        .0        0
10        6338898.8 1805853.9      578.2      578.2
11        6338994.5 1805823.2      578.2      578.2
12        6338998.2 1805822.5      578.5      578.5
1

BARRIER   7   TYPE(A)      S-F Pad Edges cont'd.2

          ---------COORDINATES----------
               X          Y          Z         ZO       DELZ        P
12        6338998.2 1805822.5      578.5      578.5        .0        0
13        6339061.0 1805801.3      578.5      578.5
14        6339065.4 1805799.9      580.7      580.7
15        6339173.6 1805762.6      580.7      580.7
16        6339241.5 1805697.6      580.7      580.7
1

BARRIER   8   TYPE(A)      Elem School Pad Edges

          ---------COORDINATES----------
               X          Y          Z         ZO       DELZ        P
40        6339064.2 1804045.1      548.0      548.0        .0        0
41        6339477.3 1804188.3      550.0      550.0
42        6339517.0 1804198.4      550.2      550.2
43        6339575.6 1804002.5      552.0      552.0
44        6339641.2 1803781.3      554.0      554.0
45        6339706.8 1803560.2      556.0      556.0
46        6339706.8 1803544.3      556.1      556.1
1

BARRIER   9   TYPE(A)      Elem to Park Pads

          ---------COORDINATES----------
               X          Y          Z         ZO       DELZ        P
46        6339706.8 1803544.3      556.1      556.1        .0        0
48        6339717.2 1803526.8      561.3      561.3
1

BARRIER   10   TYPE(A)      Park Pad Edges

          ---------COORDINATES----------
               X          Y          Z         ZO       DELZ        P
47        6339591.3 1803493.6      560.0      560.0        .0        0
48        6339717.2 1803526.8      561.3      561.3
49        6339762.7 1803371.2      561.5      561.5
50        6339808.2 1803214.7      562.0      562.0
51        6339819.6 1803172.7      562.1      562.1
1

BARRIER   11   TYPE(A)      Park to High Pads

          ---------COORDINATES----------
               X          Y          Z         ZO       DELZ        P
51        6339819.6 1803172.7      562.1      562.1        .0        0
53        6339837.0 1803137.7      579.5      579.5
52        6339709.4 1803101.9      576.9      576.9
1

BARRIER   12   TYPE(A)      High School Pad Edges

          ---------COORDINATES----------
               X          Y          Z         ZO       DELZ        P
3-rev     6339854.5 1803141.6      571.0      571.0        .0        0
53        6339837.0 1803137.7      579.5      579.5
54        6339875.5 1803030.2      578.6      578.6
55        6339921.0 1802903.4      578.5      578.5
56        6339942.8 1802838.7      578.4      578.4
57        6339950.7 1802716.3      578.0      578.0
58        6339953.3 1802656.0      577.5      577.5
59        6339944.6 1802632.3      577.3      577.3
60a       6339822.2 1802585.1      574.6      574.6
1

BARRIER   13   TYPE(A)      High School Pad Edges cont'd.

          ---------COORDINATES----------
               X          Y          Z         ZO       DELZ        P
60a       6339822.2 1802585.1      574.6      574.6        .0        0
60b       6339807.2 1802441.6      578.7      578.7
60c       6339785.7 1802288.4      579.1      579.1
61        6339775.0 1802195.2      580.8      580.8
62        6339763.6 1802083.2      579.7      579.7
63        6339781.1 1801897.9      570.4      570.4
64        6339783.7 1801794.7      570.4      570.4
1

First-floor Receivers (at 5 feet)

          ------------COORDINATES-------------
               X          Y          Z
1         6338479.4 1805665.4      575.7
2         6338619.2 1805753.4      577.3
3         6338733.3 1805822.9      579.7
4         6338855.3 1805846.9      583.2
5         6339024.6 1805803.3      583.5
6         6339119.0 1805771.7      585.7
7         6339203.7 1805718.6      585.7
8         6339251.7 1805661.2      584.7
9         6339273.2 1805611.7      584.7
10        6339288.6 1805561.7      583.9
11        6339301.3 1805516.7      583.9
12        6339316.9 1805468.2      582.6
13        6339327.2 1805419.0      582.6
14        6339335.0 1805369.9      581.2
15        6339341.9 1805324.7      581.2
16        6339363.2 1805182.2      578.4
17        6339385.5 1805043.2      577.0
18        6339414.0 1804855.2      573.8
19        6339431.0 1804701.9      570.3
20        6339425.1 1804573.3      568.7
21        6339440.9 1804451.3      568.0
22        6339468.2 1804409.0      568.4
23        6339493.4 1804369.0      568.4
24        6339521.3 1804149.7      555.6
25        6339568.0 1803991.8      557.0
26        6339634.0 1803772.5      559.0
27        6339685.1 1803601.7      560.6
28        6339732.4 1803437.3      566.3
29        6339776.4 1803284.2      566.6
30        6339806.0 1803190.2      567.0
31        6339845.6 1803083.2      583.8
32        6339888.6 1802961.6      583.2
33        6339928.8 1802847.1      583.2
34        6339938.9 1802755.1      582.9
35        6339942.7 1802657.4      582.3
36        6339815.4 1802591.7      579.5
37        6339770.7 1802344.7      577.2
38        6339735.0 1802080.3      575.0
39        6339766.6 1801907.1      574.9
1

ALPHA 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
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
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  .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  .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  .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  .0
7 *   .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
      .0  .0  .0  .0  .0  .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  .0  .0  .0  .0  .0  .0  .0  .0
      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
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
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
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  .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  .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  .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  .0
7 *   0  .0  .0  .0  .0  .0  .0  .0  .0  .0
      .0  .0  .0  .0  .0  .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  .0  .0  .0  .0  .0  .0  .0  .0
      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
1

RECEIVER     LEQ(H)    L10
1             63.5    64.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1       1
          54.3
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          51.4 50.1 53.9 54.1 50.2 48.8 47.0 42.7 44.3 41.7

          39.6 39.0 36.6 35.1
   3        1    2    3
          33.5 32.0 30.2
   4        1    2    3
          32.2 32.7 34.4
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          35.8 38.0 39.5 41.0 39.1 45.3 42.1 46.3 47.4 49.2

          52.1 51.9 50.3
```

```
   6        1
           52.5
   7          1     2     3     4     5     6     7     8
           26.3  26.0  23.7  22.2  23.0  23.3  22.7  22.0
   8          1     2     3     4     5     6     7     8     9    10

           20.4  18.5  17.3  17.2  16.4  15.9  18.2  19.2  19.1  20.4
1

 RECEIVER      LEQ(H)    L10
 2              64.3    65.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           55.4
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           52.7  51.2  54.9  55.0  50.3  49.0  47.1  42.7  43.9  41.4

           39.6  39.0  36.8  35.5
   3          1     2     3
           34.0  32.7  31.0
   4          1     2     3
           33.0  33.2  35.1
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           36.3  38.3  39.6  41.0  39.1  45.3  42.1  46.4  47.6  50.0

           53.0  52.9  51.7
   6        1
           53.4
   7          1     2     3     4     5     6     7     8
           26.5  26.1  23.7  23.1  23.1  23.2  22.6  22.1
   8          1     2     3     4     5     6     7     8     9    10

           20.3  18.4  17.2  17.1  16.6  17.1  19.1  19.5  19.6  20.8
1

 RECEIVER      LEQ(H)    L10
 3              65.3    66.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           56.3
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           54.8  52.6  55.9  55.8  50.4  49.0  46.9  42.2  43.7  41.4

           39.5  39.0  36.9  36.0
   3          1     2     3
           34.8  33.3  31.9
   4          1     2     3
           33.4  33.5  35.3
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           36.4  38.3  39.6  41.0  39.0  45.4  42.2  46.5  47.8  50.7

           53.7  54.2  53.8
   6        1
           55.0
   7          1     2     3     4     5     6     7     8
           26.7  26.2  23.6  23.7  23.3  23.2  22.5  22.0
   8          1     2     3     4     5     6     7     8     9    10

           20.3  18.3  17.1  17.1  16.9  18.2  19.4  19.7  19.8  21.3
1

 RECEIVER      LEQ(H)    L10
 4              68.0    69.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.3
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           58.8  57.6  59.5  56.9  50.8  49.0  46.6  42.0  43.6  41.5

           39.5  39.0  37.2  36.4
   3          1     2     3
           35.1  34.2  32.7
   4          1     2     3
           34.1  34.2  35.8
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           36.7  38.5  39.8  41.1  39.2  45.6  42.4  46.8  48.4  51.8

           55.7  59.3  58.0
   6        1
           56.4
   7          1     2     3     4     5     6     7     8
           26.8  26.3  23.8  23.7  23.8  23.2  22.6  22.0
   8          1     2     3     4     5     6     7     8     9    10

           20.3  18.5  17.2  17.4  18.2  19.1  19.9  20.3  20.3  21.7
1

 RECEIVER      LEQ(H)    L10
 5              69.6    70.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.8
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.2  59.8  62.0  58.9  51.5  49.3  46.9  42.2  44.0  41.6

           39.8  39.3  37.4  36.6
   3          1     2     3
           35.7  34.7  33.3
   4          1     2     3
           34.6  34.6  36.2
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           36.8  38.7  40.0  41.4  39.5  46.1  42.9  47.4  49.3  51.6

           57.7  61.2  59.3
   6        1
           57.0
   7          1     2     3     4     5     6     7     8
           27.5  26.8  24.1  24.2  24.5  23.5  22.8  22.2
   8          1     2     3     4     5     6     7     8     9    10

           21.1  18.4  17.6  17.5  19.9  19.8  20.4  20.7  20.7  22.1
1

 RECEIVER      LEQ(H)    L10
 6              71.2    72.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           58.0
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.8  61.1  64.9  60.6  52.2  49.6  47.2  42.5  44.1  41.9

           40.0  39.5  37.8  37.1
   3          1     2     3
           36.0  35.3  33.8
   4          1     2     3
           34.5  34.9  36.4
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           37.3  39.1  40.2  41.7  39.8  46.4  43.3  47.6  50.2  54.8

           61.5  62.8  59.9
   6        1
           57.2
   7          1     2     3     4     5     6     7     8
           28.0  27.0  24.2  24.4  25.0  23.7  22.9  22.4
   8          1     2     3     4     5     6     7     8     9    10

           21.5  19.4  18.0  19.0  20.7  20.0  20.8  21.2  21.0  22.5
1

 RECEIVER      LEQ(H)    L10
 7              72.4    73.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.8
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.9  61.8  66.9  62.5  52.9  50.0  47.5  42.8  44.4  42.1

           40.2  39.7  37.5  36.7
   3          1     2     3
           35.8  34.9  33.5
   4          1     2     3
           34.9  34.8  36.1
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           37.0  38.7  40.0  41.6  39.9  46.5  43.3  47.9  51.1  56.0

           63.2  63.9  60.2
   6        1
           57.2
   7          1     2     3     4     5     6     7     8
           28.3  27.2  24.4  24.3  25.3  23.9  23.1  22.5
   8          1     2     3     4     5     6     7     8     9    10

           21.3  20.2  18.4  20.2  20.6  20.4  21.0  21.3  21.0  22.2
1

 RECEIVER      LEQ(H)    L10
 8              72.6    74.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.4
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.4  61.6  67.6  63.8  53.6  50.4  47.7  43.0  44.6  42.2

           40.1  39.3  37.3  36.5
   3          1     2     3
           35.7  34.9  33.7
   4          1     2     3
           35.1  35.0  36.3
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           37.0  38.6  39.9  41.5  39.7  46.4  43.4  48.2  51.7  56.9

           62.4  63.6  59.9
   6        1
           56.9
   7          1     2     3     4     5     6     7     8
           28.4  27.4  24.6  24.5  25.4  24.1  23.3  22.7
   8          1     2     3     4     5     6     7     8     9    10

           21.6  20.2  19.9  20.6  20.9  20.5  21.0  20.8  20.7  22.0
1

 RECEIVER      LEQ(H)    L10
 9              71.5    73.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           54.8
   2          1     2     3     4     5     6     7     8     9    10
```

```
 11       12   13   14
         57.7 59.0 66.2 64.9 54.2 50.8 48.1 43.3 44.9 42.5

         40.2 39.5 37.5 36.6
  3        1    2    3
         35.9 35.1 33.9
  4        1    2    3
         35.3 35.2 36.5
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         37.2 38.8 40.0 41.7 39.9 46.6 43.7 48.6 52.2 57.8

         62.2 60.8 56.8
  6        1
         54.0
  7        1    2    3    4    5    6    7    8
         28.6 27.5 24.7 24.7 25.6 24.3 23.4 22.8
  8        1    2    3    4    5    6    7    8    9   10

         21.8 20.3 20.2 20.8 21.1 20.7 21.1 20.9 20.8 22.2

1

 RECEIVER    LEQ(H)   L10
 10           71.1   73.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         52.7
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         55.5 56.6 65.5 65.7 54.8 51.1 48.4 43.5 45.0 42.7

         40.3 39.5 37.5 36.7
  3        1    2    3
         35.7 35.0 33.8
  4        1    2    3
         35.2 35.1 36.4
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         37.1 38.8 40.1 41.7 39.9 46.7 43.9 48.8 52.5 58.1

         62.2 59.5 54.8
  6        1
         52.0
  7        1    2    3    4    5    6    7    8
         28.8 27.7 24.9 24.8 25.7 24.4 23.6 23.0
  8        1    2    3    4    5    6    7    8    9   10

         21.9 20.4 20.3 20.9 21.2 20.7 21.2 20.9 20.8 22.2

1

 RECEIVER    LEQ(H)   L10
 11           71.3   73.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         52.2
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         54.8 55.8 65.2 66.7 55.4 51.6 48.7 43.8 45.3 42.9

         40.5 39.6 37.7 36.9
  3        1    2    3
         35.9 35.1 33.9
  4        1    2    3
         35.3 35.2 36.5
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         37.2 38.8 40.3 41.9 40.1 47.0 44.2 49.1 52.9 58.7

         62.5 59.0 54.2
  6        1
         51.5
  7        1    2    3    4    5    6    7    8
         29.0 27.9 25.1 25.0 25.9 24.6 23.7 23.1
  8        1    2    3    4    5    6    7    8    9   10

         22.1 20.6 20.4 21.1 21.4 20.9 21.4 21.1 21.0 22.3

1

 RECEIVER    LEQ(H)   L10
 12           71.0   73.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         51.2
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         53.8 54.6 64.0 66.8 55.9 51.9 49.0 44.0 45.4 42.9

         40.5 39.5 37.5 36.7
  3        1    2    3
         35.8 34.7 33.6
  4        1    2    3
         34.9 34.8 36.2
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         36.9 38.7 40.1 41.8 40.0 46.9 44.2 49.2 53.0 59.0

         62.2 58.1 53.4
  6        1
         50.7
  7        1    2    3    4    5    6    7    8
         29.1 27.9 25.1 25.0 26.0 24.7 23.9 23.2
  8        1    2    3    4    5    6    7    8    9   10

         22.1 20.7 20.4 21.1 21.3 20.8 21.3 20.9 20.8 22.1

1

 RECEIVER    LEQ(H)   L10
 13           70.7   72.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         50.9
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         53.3 53.9 62.9 66.7 56.7 52.4 49.4 44.3 45.7 43.1

         40.9 39.8 37.7 36.9
  3        1    2    3
         36.0 35.1 33.8
  4        1    2    3
         35.0 34.9 36.3
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         37.1 38.9 40.3 42.0 40.3 47.2 44.5 49.6 53.5 59.2

         61.6 57.5 52.9
  6        1
         50.4
  7        1    2    3    4    5    6    7    8
         29.3 28.2 25.3 25.2 26.2 24.9 24.0 23.4
  8        1    2    3    4    5    6    7    8    9   10

         22.3 20.8 20.6 21.2 21.5 21.1 21.7 21.3 21.0 22.3

1

 RECEIVER    LEQ(H)   L10
 14           69.8   71.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         50.4
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         52.6 53.0 60.8 65.8 57.2 52.9 49.6 44.5 45.9 43.1

         41.0 40.0 37.7 36.6
  3        1    2    3
         35.7 34.8 33.5
  4        1    2    3
         34.7 34.6 36.1
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         36.9 38.7 40.2 42.1 40.7 47.6 44.6 49.6 53.4 58.7

         60.5 56.6 52.4
  6        1
         49.9
  7        1    2    3    4    5    6    7    8
         29.4 28.2 25.4 25.3 26.3 25.0 24.2 23.5
  8        1    2    3    4    5    6    7    8    9   10

         22.3 20.9 20.7 21.3 21.5 21.0 21.6 21.5 21.3 22.1

1

 RECEIVER    LEQ(H)   L10
 15           69.6   71.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         50.1
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         52.2 52.5 59.7 65.8 58.0 53.4 49.9 44.8 46.1 43.5

         41.2 40.5 38.3 37.4
  3        1    2    3
         35.9 35.0 33.7
  4        1    2    3
         34.9 34.8 36.3
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         37.1 38.8 40.9 42.6 41.1 48.1 45.4 50.1 53.9 59.1

         59.6 55.8 52.0
  6        1
         49.6
  7        1    2    3    4    5    6    7    8
         29.7 28.5 25.6 25.6 26.5 25.2 24.3 23.7
  8        1    2    3    4    5    6    7    8    9   10

         22.5 21.2 20.9 21.5 21.7 21.2 21.8 22.0 21.6 22.8

1

 RECEIVER    LEQ(H)   L10
 16           68.5   70.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         49.0
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         50.7 50.4 56.1 64.3 60.3 55.0 51.0 45.6 46 7 43.8

         41.5 40.7 38.5 37.6
  3        1    2    3
         36.6 35.7 34.3
  4        1    2    3
         35.3 35.3 36.8
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         37.7 39.7 41.1 43.1 41.5 48.7 46.3 51.1 54.3 58.0

         56.0 52.5 49.8
  6        1
         48.4
  7        1    2    3    4    5    6    7    8
         30.1 28.9 26.0 25.9 27.0 25.6 24.7 24.1
  8        1    2    3    4    5    6    7    8    9   10

         22.8 21.5 21.1 22.0 21.8 21.3 21.8 22.0 21.8 23.1
```

```
1

 RECEIVER     LEQ(H)   L10
 17            68.4   70.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             47.9
    2          1    2    3    4    5    6    7    8    9   10

   11        12   13   14
             49.0 48.3 53.7 62.0 63.5 56.9 52.2 46.6 47.5 44.5

             42.0 41.1 38.8 37.8
    3          1    2    3
             36.9 36.0 34.6
    4          1    2    3
             35.7 35.7 37.2
    5          1    2    3    4    5    6    7    8    9   10

   11        12   13
             38.1 40.0 41.6 43.5 42.0 49.3 47.2 52.9 56.4 57.1

             53.7 50.2 47.7
    6          1
             46.4
    7          1    2    3    4    5    6    7    8
             30.8 29.5 26.6 26.5 27.7 26.0 25.2 24.5
    8          1    2    3    4    5    6    7    8    9   10

             23.2 22.4 20.2 22.4 22.3 21.8 22.4 22.4 22.1 23.4

1

 RECEIVER     LEQ(H)   L10
 18            69.0   71.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             45.7
    2          1    2    3    4    5    6    7    8    9   10

   11        12   13   14
             46.6 45.7 50.8 57.7 65.8 60.0 54.1 47.9 48.7 45.2

             42.6 41.5 39.1 38.0
    3          1    2    3
             36.9 35.7 34.5
    4          1    2    3
             35.5 35.6 37.1
    5          1    2    3    4    5    6    7    8    9   10

   11        12   13
             38.1 40.1 41.8 43.9 42.6 50.1 48.2 54.2 58.3 56.1

             50.6 47.5 45.3
    6          1
             44.2
    7          1    2    3    4    5    6    7    8
             31.7 30.5 27.5 27.6 28.5 26.7 25.8 25.0
    8          1    2    3    4    5    6    7    8    9   10

             24.0 22.6 20.6 22.6 23.3 22.2 22.6 22.6 22.3 23.5

1

 RECEIVER     LEQ(H)   L10
 19            68.8   71.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             44.2
    2          1    2    3    4    5    6    7    8    9   10

   11        12   13   14
             45.0 44.0 48.9 55.8 64.1 63.4 55.8 49.2 49.7 45.9

             43.1 41.9 39.2 38.0
    3          1    2    3
             36.8 35.7 34.2
    4          1    2    3
             35.3 35.4 37.0
    5          1    2    3    4    5    6    7    8    9   10

   11        12   13
             37.9 40.1 42.0 44.3 43.0 50.7 49.0 55.3 57.6 53.7

             49.9 46.6 43.8
    6          1
             42.6
    7          1    2    3    4    5    6    7    8
             32.8 31.7 28.7 28.5 28.9 27.1 26.2 25.4
    8          1    2    3    4    5    6    7    8    9   10

             24.9 22.6 20.9 22.4 23.8 23.0 23.2 22.9 22.4 23.5

1

 RECEIVER     LEQ(H)   L10
 20            69.1   71.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             44.0
    2          1    2    3    4    5    6    7    8    9   10

   11        12   13   14
             44.6 43.5 48.3 54.6 61.4 65.2 58.2 50.8 51.1 47.4

             44.5 42.9 40.3 39.0
    3          1    2    3
             37.7 36.5 34.9
    4          1    2    3
             36.0 36.2 37.9
    5          1    2    3    4    5    6    7    8    9   10

   11        12   13
             39.0 41.2 43.3 45.6 44.4 52.2 50.9 57.2 57.5 53.0

             49.4 46.6 44.1

    6          1
             42.4
    7          1    2    3    4    5    6    7    8
             33.5 32.3 29.3 29.1 29.2 27.5 26.6 25.7
    8          1    2    3    4    5    6    7    8   .9   10

             25.1 22.3 21.2 21.6 23.9 23.6 23.8 23.8 23.3 24.5

1

 RECEIVER     LEQ(H)   L10
 21            69.4   71.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             43.4
    2          1    2    3    4    5    6    7    8    9   10

   11        12   13   14
             43.9 42.7 47.6 53.6 59.1 65.8 60.8 52.5 52.4 48.5

             45.4 44.0 41.2 39.6
    3          1    2    3
             38.4 37.1 35.5
    4          1    2    3
             36.6 36.8 38.6
    5          1    2    3    4    5    6    7    8    9   10

   11        12   13
             39.8 42.1 44.2 46.6 45.5 53.5 52.6 58.5 56.7 52.1

             48.8 46.2 44.0
    6          1
             42.9
    7          1    2    3    4    5    6    7    8
             34.2 32.9 29.9 29.7 29.6 28.1 27.1 26.2
    8          1    2    3    4    5    6    7    8    9   10

             25.3 22.2 21.6 21.6 24.2 24.0 24.5 24.4 24.2 25.3

1

 RECEIVER     LEQ(H)   L10
 22            69.7   71.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             43.4
    2          1    2    3    4    5    6    7    8    9   10

   11        12   13   14
             44.1 43.0 47.8 53.2 58.3 66.1 61.9 53.1 52.8 48.7

             45.6 44.2 41.3 40.0
    3          1    2    3
             38.6 37.3 35.7
    4          1    2    3
             36.8 37.0 38.7
    5          1    2    3    4    5    6    7    8    9   10

   11        12   13
             39.9 42.2 44.3 46.8 45.7 54.0 53.2 58.9 56.2 51.7

             48.4 45.8 43.6
    6          1
             42.5
    7          1    2    3    4    5    6    7    8
             34.6 33.3 30.2 30.0 30.0 28.2 27.3 26.4
    8          1    2    3    4    5    6    7    8    9   10

             25.7 22.9 21.8 22.2 24.5 24.3 24.7 24.7 24.4 25.4

1

 RECEIVER     LEQ(H)   L10
 23            69.8   72.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             42.9
    2          1    2    3    4    5    6    7    8    9   10

   11        12   13   14
             43.6 42.5 47.2 52.7 57.4 66.2 63.0 53.6 53.1 49.0

             45.7 44.0 41.3 40.0
    3          1    2    3
             38.6 37.4 35.8
    4          1    2    3
             36.8 37.0 38.7
    5          1    2    3    4    5    6    7    8    9   10

   11        12   13
             39.9 42.0 44.3 46.7 45.9 54.2 53.6 58.8 55.4 51.0

             47.9 45.3 43.1
    6          1
             42.1
    7          1    2    3    4    5    6    7    8
             35.0 33.6 30.5 30.2 30.3 28.5 27.4 26.5
    8          1    2    3    4    5    6    7    8    9   10

             26.0 23.0 22.1 22.4 25.0 24.6 24.8 25.0 24.3 25.5

1

 RECEIVER     LEQ(H)   L10
 24            67.3   69.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             39.5
    2          1    2    3    4    5    6    7    8    9   10

   11        12   13   14
             40.1 38.9 43.7 48.8 52.8 59.1 63.9 56.0 54.6 49.6

             45.9 43.3 39.9 38.2
    3          1    2    3
             36.8 35.4 33.6
    4          1    2    3
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```
          34.6 34.8 36.7
  5         1    2    3    4    5    6    7    8    9   10

 11        12   13
          38.0 40.5 42.9 45.5 44.8 53.1 51.8 53.7 49.7 46.3

          43.6 41.3 39.3
  6         1
          38.3
  7         1    2    3    4    5    6    7    8
          36.0 34.3 31.1 30.9 30.4 28.3 26.8 25.7
  8         1    2    3    4    5    6    7    8    9   10

          25.3 22.0 21.4 21.7 23.9 23.6 24.1 23.7 23.2 23.9

1

 RECEIVER     LEQ(H)   L10
 25            68.3   70.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          39.3
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          39.9 38.6 43.2 48.3 51.5 56.7 64.7 60.4 57.5 51.6

          47.3 44.6 41.4 39.6
   3         1    2    3
          37.9 36.5 34.7
   4         1    2    3
          35.7 36.1 38.0
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          39.4 41.9 44.4 47.4 46.9 55.7 53.0 53.1 49.2 46.0

          43.5 41.3 39.3
   6         1
          38.4
   7         1    2    3    4    5    6    7    8
          37.6 35.7 32.4 32.0 31.2 29.0 27.4 26.3
   8         1    2    3    4    5    6    7    8    9   10

          25.8 22.6 22.1 22.5 24.5 24.5 25.0 24.6 24.0 25.0

1

 RECEIVER     LEQ(H)   L10
 26            69.7   72.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          39.6
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          40.0 38.6 43.0 47.4 50.1 54.3 61.5 65.0 63.4 54.5

          49.2 46.2 42.8 40.9
   3         1    2    3
          39.2 37.7 35.8
   4         1    2    3
          37.0 37.4 39.4
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          41.0 43.8 46.8 50.4 50.5 58.8 52.7 52.4 48.9 45.9

          43.6 41.5 39.6
   6         1
          38.8
   7         1    2    3    4    5    6    7    8
          40.6 37.9 34.3 33.7 32.6 30.0 28.2 27.0
   8         1    2    3    4    5    6    7    8    9   10

          26.6 23.5 23.0 23.6 25.7 25.9 26.5 26.0 25.4 26.3

1

 RECEIVER     LEQ(H)   L10
 27            70.5   73.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          39.9
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          40.3 38.8 43.0 46.8 49.2 52.7 58.3 61.9 67.5 57.3

          51.1 48.0 44.1 42.1
   3         1    2    3
          40.3 38.7 36.9
   4         1    2    3
          38.1 38.5 40.6
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          42.2 45.1 48.3 52.5 53.5 60.3 51.9 52.0 48.8 46.1

          43.9 41.9 40.2
   6         1
          39.4
   7         1    2    3    4    5    6    7    8
          43.8 40.3 36.2 35.3 33.6 30.7 28.8 27.5
   8         1    2    3    4    5    6    7    8    9   10

          26.8 24.1 23.7 24.4 26.5 27.0 27.6 27.2 26.6 27.5

1

 RECEIVER     LEQ(H)   L10
 28            71.0   73.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          41.0
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          41.3 39.7 43.5 46.9 48.6 51.6 56.3 58.4 67.3 62.1

          54.5 51.1 47.1 45.0
   3         1    2    3
          43.1 41.5 39.6
   4         1    2    3
          40.9 41.4 43.6
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          45.3 48.4 51.9 56.8 58.1 61.8 51.9 52.1 49.1 46.7

          44.7 43.0 41.5
   6         1
          40.8
   7         1    2    3    4    5    6    7    8
          40.8 43.8 38.9 37.6 35.2 32.5 30.4 29.0
   8         1    2    3    4    5    6    7    8    9   10

          27.6 25.8 25.5 26.2 27.6 29.5 30.1 30.0 29.5 30.3

1

 RECEIVER     LEQ(H)   L10
 29            70.2   71.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          40.8
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          40.9 39.2 43.0 46.2 47.7 50.4 54.3 55.4 63.6 64.6

          56.9 52.6 48.3 46.1
   3         1    2    3
          44.1 42.4 40.5
   4         1    2    3
          41.8 42.3 44.5
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          46.2 49.7 53.5 50.8 58.5 59.7 50.4 50.9 48.2 46.0

          44.2 42.6 41.1
   6         1
          40.5
   7         1    2    3    4    5    6    7    8
          52.5 47.5 41.4 37.8 34.4 32.2 29.8 28.2
   8         1    2    3    4    5    6    7    8    9   10

          26.4 25.3 25.0 26.0 26.3 27.9 30.6 31.1 30.6 31.3

1

 RECEIVER     LEQ(H)   L10
 30            69.8   71.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          40.5
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          40.6 38.9 42.6 45.9 47.2 49.7 53.2 54.0 61.3 64.7

          58.6 52.9 46.3 43.1
   3         1    2    3
          40.5 38.7 36.5
   4         1    2    3
          38.7 39.9 42.7
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          45.7 50.2 54.7 60.0 57.8 58.6 49.5 50.2 47.7 45.6

          43.9 42.3 40.9
   6         1
          40.3
   7         1    2    3    4    5    6    7    8
          52.6 50.4 38.0 33.1 32.5 29.8 27.1 25.4
   8         1    2    3    4    5    6    7    8    9   10

          23.9 22.8 22.7 23.9 24.5 24.2 25.0 26.4 26.7 27.5

1

 RECEIVER     LEQ(H)   L10
 31            75.5   76.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          45.2
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          44.6 42.6 46.0 48.2 49.2 51.2 53.4 54.3 64.1 69.9

          67.0 61.9 57.3 55.0
   3         1    2    3
          52.3 49.8 47.5
   4         1    2    3
          50.3 51.4 53.4
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          55.2 58.5 62.8 66.9 62.8 62.8 53.0 52.9 50.4 48.8

          47.6 47.0 45.6
   6         1
          45.1
   7         1    2    3    4    5    6    7    8
          56.0 61.0 52.9 46.7 42.8 39.3 36.8 35.0
   8         1    2    3    4    5    6    7    8    9   10

          33.6 32.6 32.4 33.7 34.6 35.6 36.5 37.8 38.7 39.3

1

 RECEIVER     LEQ(H)   L10
 32            75.3   76.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA
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```
ROADWAY  SEGMENT

   1        1
           44.9
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           44.9 42.6 45.4 48.0 48.5 50.3 52.9 52.6 62.0 67.7

           68.7 63.9 58.6 56.0
   3         1    2    3
           52.3 49.7 47.3
   4         1    2    3
           49.8 51.4 54.2
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           56.1 59.8 64.3 66.6 60.8 61.2 52.5 53.0 50.1 48.6

           48.0 46.6 45.2
   6         1
           44.7
   7         1    2    3    4    5    6    7    8
           52.3 60.8 58.4 50.7 45.7 41.2 38.1 36.1
   8         1    2    3    4    5    6    7    8    9   10

           34.9 33.8 33.9 35.4 36.4 36.7 37.3 38.6 39.1 39.6

1

 RECEIVER     LEQ(H)   L10
 33            75.1    76.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           44.5
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           44.6 42.8 45.7 47.5 48.0 49.6 52.0 51.5 60.0 65.1

           68.5 65.8 60.1 57.1
   3         1    2    3
           54.8 52.9 50.9
   4         1    2    3
           52.0 52.8 55.0
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.1 61.0 65.3 65.5 59.1 60.0 51.6 52.2 50.0 48.4

           47.5 46.2 44.8
   6         1
           44.4
   7         1    2    3    4    5    6    7    8
           48.5 56.5 61.0 58.7 51.8 43.6 39.7 37.7
   8         1    2    3    4    5    6    7    8    9   10

           38.6 36.7 36.5 38.3 40.6 42.2 42.8 42.9 42.0 42.5

1

 RECEIVER     LEQ(H)   L10
 34            74.3    75.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           41.0
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           40.8 38.9 42.4 45.1 45.8 47.5 49.7 48.8 54.9 62.5

           67.0 66.5 61.0 57.8
   3         1    2    3
           55.3 53.4 51.3
   4         1    2    3
           52.4 53.2 55.6
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.8 61.8 65.1 64.1 57.8 55.5 47.0 48.3 46.4 44.9

           43.6 42.5 41.3
   6         1
           41.0
   7         1    2    3    4    5    6    7    8
           43.5 49.7 56.9 61.5 57.5 46.4 41.8 39.7
   8         1    2    3    4    5    6    7    8    9   10

           41.7 40.1 39.4 41.6 44.4 44.3 44.5 43.9 42.9 43.2

1

 RECEIVER     LEQ(H)   L10
 35            73.7    75.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           39.9
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           39.8 37.9 41.4 44.1 44.8 46.5 48.6 47.5 53.2 58.9

           65.0 66.3 61.8 58.6
   3         1    2    3
           56.0 53.9 51.8
   4         1    2    3
           52.8 53.7 56.1
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           58.4 62.2 64.5 62.6 53.8 53.6 45.6 47.1 45.3 43.8

           42.5 41.3 40.1
   6         1
           39.8
   7         1    2    3    4    5    6    7    8
           41.5 45.9 50.9 59.1 62.0 52.7 47.2 44.3
   8         1    2    3    4    5    6    7    8    9   10

           42.8 42.3 42.7 44.7 46.0 45.9 45.8 45.0 43.8 44.0

1

 RECEIVER     LEQ(H)   L10
 36            69.5    70.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           39.2
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           39.1 37.2 40.8 43.6 44.4 46.0 48.1 46.9 52.1 54.4

           56.3 59.2 60.2 57.8
   3         1    2    3
           55.5 53.6 51.6
   4         1    2    3
           52.6 53.3 55.6
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.5 60.5 56.5 55.1 50.1 52.2 44.9 46.4 44.6 43.1

           41.7 40.6 39.3
   6         1
           39.0
   7         1    2    3    4    5    6    7    8
           38.7 41.0 41.8 45.0 55.9 52.7 47.8 44.7
   8         1    2    3    4    5    6    7    8    9   10

           42.7 42.3 42.8 44.6 45.5 45.0 44.7 43.9 42.9 43.3

1

 RECEIVER     LEQ(H)   L10
 37            64.3    65.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           38.5
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           38.3 36.5 40.0 43.2 44.1 45.6 46.7 45.2 49.7 51.1

           52.5 54.0 52.7 50.9
   3         1    2    3
           48.8 47.0 44.9
   4         1    2    3
           45.9 46.6 48.9
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           50.6 52.9 52.9 51.9 47.4 50.1 43.4 45.1 43.5 42.2

           40.9 39.7 38.6
   6         1
           38.3
   7         1    2    3    4    5    6    7    8
           35.4 36.9 37.1 40.5 46.0 48.1 45.0 41.5
   8         1    2    3    4    5    6    7    8    9   10

           38.3 38.0 38.3 39.7 39.9 38.3 37.5 36.7 35.9 36.5

1

 RECEIVER     LEQ(H)   L10
 38            61.0    61.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           38.2
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           37.9 36.0 39.5 42.2 43.1 45.0 46.3 43.6 47.8 48.4

           47.8 48.6 47.9 47.1
   3         1    2    3
           46.0 44.8 43.3
   4         1    2    3
           44.0 44.2 45.7
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           46.7 48.0 48.0 47.7 45.0 48.3 42.0 43.9 42.8 41.7

           40.6 39.5 38.4
   6         1
           37.6
   7         1    2    3    4    5    6    7    8
           32.8 33.9 34.0 35.2 39.2 41.8 42.4 41.5
   8         1    2    3    4    5    6    7    8    9   10

           36.7 36.0 35.6 36.3 35.4 33.6 33.0 32.4 31.9 32.9

1

 RECEIVER     LEQ(H)   L10
 39            68.2    69.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           38.0
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           37.6 35.6 39.0 41.7 42.5 44.3 45.0 42.0 46.4 47.6

           51.7 56.9 57.4 57.8
   3         1    2    3
           57.1 55.7 53.7
   4         1    2    3
           54.5 55.0 56.7
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.1 57.3 56.1 51.0 44.2 47.3 40.4 42.7 41.8 40.6

           39.5 38.4 37.4
```

```
6         1
        37.1
7         1     2     3     4     5     6     7     8
        31.7  32.9  33.8  37.9  43.2  48.8  51.1  51.7
8         1     2     3     4     5     6     7     8     9    10

       46.7  46.4  45.9  46.0  44.9  43.1  42.7  42.4  42.3  43.9
```

```
 18       6339634.0 1804109.2     577.4      577.4
 19       6339663.6 1803997.1     576.0      576.0
1

BARRIER   4   TYPE(A)     R-O-W barrier trf to top of slope barrier

          ---------COORDINATES---------
               X          Y          Z          ZO       DELZ        P
 19       6339663.6 1803997.1     576.0      576.0         .0         0
 20       6339705.0 1803857.9     574.7      574.7
 21       6339735.2 1803763.2     573.9      573.9
 22       6339758.3 1803694.7     573.5      573.5
 23       6339774.3 1803649.9     573.0      573.0
 24       6339798.4 1803582.7     572.6      572.6
 2-rev    6339886.3 1803152.2     571.0      571.0
 3-rev    6339854.5 1803141.6     571.0      571.0
1

BARRIER   5   TYPE(A)     S-F Pad Edges

          ---------COORDINATES---------
               X          Y          Z          ZO       DELZ        P
 1        6338450.5 1805660.4     570.7      570.7         .0         0
 2        6338496.9 1805688.8     570.7      570.7
 3        6338586.8 1805745.8     572.3      572.3
 4        6338643.8 1805781.6     572.3      572.3
 5        6338703.0 1805818.1     574.7      574.7
 6        6338761.4 1805846.6     574.7      574.7
 7        6338765.1 1805848.1     576.8      576.8
 8        6338814.8 1805859.8     576.8      576.8
 9        6338819.2 1805860.5     578.2      578.2
1

BARRIER   6   TYPE(A)     S-F Pad Edges cont'd.1

          ---------COORDINATES---------
               X          Y          Z          ZO       DELZ        P
 9        6338819.2 1805860.5     578.2      578.2         .0         0
 10       6338898.8 1805853.9     578.2      578.2
 11       6338994.5 1805823.2     578.2      578.2
 12       6338998.2 1805822.5     578.5      578.5
1

BARRIER   7   TYPE(A)     S-F Pad Edges cont'd.2

          ---------COORDINATES---------
               X          Y          Z          ZO       DELZ        P
 12       6338998.2 1805822.5     578.5      578.5         .0         0
 13       6339061.0 1805801.3     578.5      578.5
 14       6339065.4 1805799.9     580.7      580.7
 15       6339173.6 1805762.6     580.7      580.7
 16       6339241.5 1805697.6     580.7      580.7
1

BARRIER   8   TYPE(A)     Elem School Pad Edges

          ---------COORDINATES---------
               X          Y          Z          ZO       DELZ        P
 40       6339064.2 1804045.1     548.0      548.0         .0         0
 41       6339477.3 1804188.3     550.0      550.0
 42       6339517.0 1804198.4     550.2      550.2
 43       6339575.6 1804002.5     552.0      552.0
 44       6339641.2 1803781.3     554.0      554.0
 45       6339706.8 1803560.2     556.0      556.0
 46       6339706.8 1803544.3     556.1      556.1
1

BARRIER   9   TYPE(A)     Elem to Park Pads

          ---------COORDINATES---------
               X          Y          Z          ZO       DELZ        P
 46       6339706.8 1803544.3     556.1      556.1         .0         0
 48       6339717.2 1803526.8     561.3      561.3
1

BARRIER  10   TYPE(A)     Park Pad Edges

          ---------COORDINATES---------
               X          Y          Z          ZO       DELZ        P
 47       6339591.3 1803493.6     560.0      560.0         .0         0
 48       6339717.2 1803526.8     561.3      561.3
 49       6339762.7 1803371.2     561.5      561.5
 50       6339808.2 1803214.7     562.0      562.0
 51       6339819.6 1803172.7     562.1      562.1
1

BARRIER  11   TYPE(A)     Park to High Pads

          ---------COORDINATES---------
               X          Y          Z          ZO       DELZ        P
 51       6339819.6 1803172.7     562.1      562.1         .0         0
 53       6339837.0 1803137.7     579.5      579.5
 52       6339709.4 1803101.9     576.9      576.9
1

BARRIER  12   TYPE(A)     High School Pad Edges

          ---------COORDINATES---------
               X          Y          Z          ZO       DELZ        P
 3-rev    6339854.5 1803141.6     571.0      571.0         .0         0
 53       6339837.0 1803137.7     579.5      579.5
 54       6339875.5 1803030.2     578.6      578.6
 55       6339921.0 1802903.4     578.5      578.5
 56       6339942.8 1802838.7     578.4      578.4
 57       6339950.7 1802716.3     578.0      578.0
 58       6339953.3 1802656.0     577.5      577.5
 59       6339944.6 1802632.3     577.3      577.3
 60a      6339822.2 1802585.1     574.6      574.6
1

BARRIER  13   TYPE(A)     High School Pad Edges cont'd.

          ---------COORDINATES---------
               X          Y          Z          ZO       DELZ        P
 60a      6339822.2 1802585.1     574.6      574.6         .0         0
 60b      6339807.2 1802441.6     578.7      578.7
 60c      6339785.7 1802288.4     579.1      579.1
 61       6339775.0 1802195.2     580.8      580.8
 62       6339763.6 1802083.2     579.7      579.7
 63       6339781.1 1801897.9     570.4      570.4
 64       6339783.7 1801794.7     570.4      570.4
1

 Second-floor Receivers (at 15 feet)


                      ------------COORDINATES-------------
                          X           Y            Z
 1                    6338479.4   1805665.4      585.7
 2                    6338619.2   1805753.4      587.3
 3                    6338733.3   1805822.9      589.7
 4                    6338855.3   1805846.9      593.2
 5                    6339024.6   1805803.3      593.5
 6                    6339119.0   1805771.7      595.7
 7                    6339203.7   1805718.6      595.7
 8                    6339251.7   1805661.2      594.7
 9                    6339273.2   1805611.7      594.7
 10                   6339288.6   1805561.7      593.9
 11                   6339301.3   1805516.7      593.9
 12                   6339316.9   1805468.2      592.6
 13                   6339327.2   1805419.0      592.6
 14                   6339335.0   1805369.9      591.2
 15                   6339341.9   1805324.7      591.2
 16                   6339363.2   1805182.2      588.4
 17                   6339385.5   1805043.2      587.0
 18                   6339414.0   1804855.2      583.8
 19                   6339431.0   1804701.9      580.3
 20                   6339425.1   1804573.3      578.7
 21                   6339440.9   1804451.3      578.0
 22                   6339468.2   1804409.0      578.4
 23                   6339493.4   1804369.0      578.4
 24                   6339521.3   1804149.7      565.6
 25                   6339568.0   1803991.8      567.0
 26                   6339634.0   1803772.5      569.0
 27                   6339685.1   1803601.7      570.6
 28                   6339732.4   1803437.3      576.3
 29                   6339776.4   1803284.2      576.6
 30                   6339806.0   1803190.2      577.0
 31                   6339845.6   1803083.2      593.8
 32                   6339888.6   1802961.6      593.2
 33                   6339928.8   1802847.1      593.2
 34                   6339938.9   1802755.1      592.9
 35                   6339942.7   1802657.4      592.3
 36                   6339815.4   1802591.7      589.5
 37                   6339770.7   1802344.7      587.2
 38                   6339735.0   1802080.3      585.0
 39                   6339766.6   1801907.1      584.9
1

 ALPHA 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
 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
 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   .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   .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   .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   .0
 7 *   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
       .0   .0   .0   .0   .0   .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   .0   .0   .0   .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

 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
 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
 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   .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   .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   .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   .0
 7 *   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
       .0   .0   .0   .0   .0   .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   .0   .0   .0   .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
1              64.8   65.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
          54.3
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          54.8 53.2 55.7 54.7 50.5 48.9 47.1 42.8 44.5 42.0

          39.7 39.2 37.1 36.0
   3        1    2    3
          34.3 32.9 31.1
   4        1    2    3
          33.2 33.6 35.6
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          36.5 38.5 39.8 41.2 39.3 45.6 42.4 46.6 47.9 49.6

          52.8 54.3 54.2
```

```
   6        1
           53.5
   7          1     2     3     4     5     6     7     8
           26.5  26.2  23.9  22.5  23.2  23.5  22.9  22.1
   8          1     2     3     4     5     6     7     8     9    10

           20.6  18.8  17.7  17.6  16.8  16.4  18.7  19.7  19.8  21.1

1

 RECEIVER      LEQ(H)    L10
 2              66.0     67.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           55.4
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           56.1  54.7  57.4  55.8  50.7  49.0  47.1  42.8  44.3  41.6

           39.7  39.2  37.3  36.2
   3          1     2     3
           35.2  33.6  32.0
   4          1     2     3
           34.1  34.2  36.0
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           37.0  38.8  39.9  41.2  39.3  45.6  42.4  46.7  48.1  50.5

           54.2  56.3  55.5
   6        1
           54.6
   7          1     2     3     4     5     6     7     8
           26.7  26.3  23.8  23.3  23.3  23.4  22.8  22.2
   8          1     2     3     4     5     6     7     8     9    10

           20.5  18.7  17.6  17.5  17.0  17.6  19.6  20.1  20.2  21.5

1

 RECEIVER      LEQ(H)    L10
 3              67.1     68.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           56.4
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           57.5  56.0  58.7  56.6  50.9  49.1  47.1  42.7  44.0  41.6

           39.6  39.2  37.4  36.7
   3          1     2     3
           35.7  34.4  33.1
   4          1     2     3
           34.6  34.7  36.3
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           37.2  38.8  39.9  41.2  39.3  45.6  42.5  46.8  48.4  51.5

           55.9  57.9  56.8
   6        1
           55.5
   7          1     2     3     4     5     6     7     8
           26.9  26.4  23.8  23.8  23.5  23.4  22.7  22.1
   8          1     2     3     4     5     6     7     8     9    10

           20.5  18.7  17.5  17.5  17.4  18.7  19.9  20.3  20.5  22.0

1

 RECEIVER      LEQ(H)    L10
 4              68.4     69.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.3
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           58.8  57.6  60.2  58.0  51.3  49.4  47.2  42.3  43.9  41.6

           39.6  39.3  37.7  37.1
   3          1     2     3
           36.2  35.4  34.0
   4          1     2     3
           35.5  35.4  36.8
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           37.6  39.1  40.1  41.4  39.4  45.8  42.7  47.2  48.9  52.7

           57.7  59.3  58.0
   6        1
           56.4
   7          1     2     3     4     5     6     7     8
           27.1  26.5  24.0  23.9  24.0  23.4  22.8  22.2
   8          1     2     3     4     5     6     7     8     9    10

           20.6  18.8  17.6  17.8  18.6  19.5  20.3  20.9  21.0  22.5

1

 RECEIVER      LEQ(H)    L10
 5              70.3     71.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.8
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.2  59.8  62.9  60.9  52.1  49.7  47.2  42.4  44.1  41.8

           40.0  39.7  38.1  37.5
   3          1     2     3
           36.9  36.1  34.9
   4          1     2     3
           36.2  36.1  37.4
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           37.9  39.4  40.5  41.8  39.8  46.4  43.2  47.8  50.0  55.0

           60.3  61.4  59.3
   6        1
           57.0
   7          1     2     3     4     5     6     7     8
           27.8  27.0  24.3  24.3  24.7  23.6  23.0  22.4
   8          1     2     3     4     5     6     7     8     9    10

           21.4  18.7  18.0  18.0  20.2  20.2  21.0  21.4  21.6  23.0

1

 RECEIVER      LEQ(H)    L10
 6              71.5     72.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           58.0
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.8  61.1  64.9  62.5  52.8  50.1  47.5  42.7  44.3  42.1

           40.3  39.9  38.3  37.9
   3          1     2     3
           37.3  36.7  35.5
   4          1     2     3
           36.4  36.6  37.7
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           38.3  39.7  40.7  42.0  40.1  46.7  43.6  48.2  50.9  56.2

           62.2  62.8  59.9
   6        1
           57.2
   7          1     2     3     4     5     6     7     8
           28.3  27.1  24.4  24.6  25.2  23.9  23.1  22.5
   8          1     2     3     4     5     6     7     8     9    10

           21.8  19.6  18.4  19.3  20.9  20.4  21.3  21.8  21.9  23.4

1

 RECEIVER      LEQ(H)    L10
 7              72.8     74.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.8
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.9  61.8  66.9  64.4  53.6  50.4  47.8  43.0  44.7  42.4

           40.5  40.2  38.5  38.0
   3          1     2     3
           37.4  36.8  35.6
   4          1     2     3
           37.0  36.8  37.9
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           38.5  39.9  40.9  42.2  40.4  47.1  44.0  48.7  51.8  58.6

           64.0  63.9  60.2
   6        1
           57.2
   7          1     2     3     4     5     6     7     8
           28.6  27.5  24.7  24.5  25.5  24.1  23.3  22.7
   8          1     2     3     4     5     6     7     8     9    10

           21.7  20.4  18.8  20.5  20.9  21.0  21.6  22.0  22.1  23.5

1

 RECEIVER      LEQ(H)    L10
 8              73.7     75.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.4
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.5  61.6  68.0  66.1  54.3  50.8  48.0  43.3  44.9  42.6

           40.7  40.3  38.7  38.2
   3          1     2     3
           37.6  37.1  36.0
   4          1     2     3
           37.4  37.1  38.3
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           38.7  40.1  41.1  42.5  40.7  47.3  44.4  49.2  52.5  61.3

           65.3  64.3  59.9
   6        1
           56.9
   7          1     2     3     4     5     6     7     8
           28.9  27.7  24.9  24.8  25.6  24.3  23.5  22.9
   8          1     2     3     4     5     6     7     8     9    10

           21.9  20.4  20.1  20.8  21.3  21.2  21.8  22.1  22.2  23.7

1

 RECEIVER      LEQ(H)    L10
 9              74.1     75.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.0
   2          1     2     3     4     5     6     7     8     9    10
```

```
 11       12   13   14
         59.9 61.0 68.3 67.3 55.0 51.2 48.5 43.6 45.2 42.9

         40.8 40.5 38.9 38.4
  3        1    2    3
         37.9 37.3 36.3
  4        1    2    3
         37.7 37.4 38.5
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         38.9 40.3 41.3 42.7 40.9 47.6 44.7 49.7 53.1 62.1

         66.0 64.1 59.5
  6        1
         56.5
  7        1    2    3    4    5    6    7    8
         29.1 27.9 25.1 25.0 25.8 24.5 23.6 23.0
  8        1    2    3    4    5    6    7    8    9   10

         22.2 20.6 20.4 21.1 21.5 21.3 22.0 22.3 22.5 23.9

1

 RECEIVER     LEQ(H)   L10
 10            74.3   75.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         56.7
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         59.4 60.3 68.1 68.4 55.7 51.6 48.8 43.9 45.4 43.1

         41.0 40.7 39.1 38.6
  3        1    2    3
         37.9 37.4 36.4
  4        1    2    3
         37.7 37.5 38.6
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         39.0 40.4 41.5 42.9 41.1 47.9 45.0 50.0 53.6 62.7

         66.5 63.7 59.1
  6        1
         56.2
  7        1    2    3    4    5    6    7    8
         29.3 28.1 25.3 25.2 26.0 24.6 23.8 23.2
  8        1    2    3    4    5    6    7    8    9   10

         22.3 20.7 20.5 21.2 21.7 21.5 22.1 22.5 22.6 24.1

1

 RECEIVER     LEQ(H)   L10
 11            74.5   75.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         56.3
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         58.9 59.7 67.7 69.3 56.4 52.1 49.1 44.2 45.7 43.3

         41.3 40.8 39.2 38.8
  3        1    2    3
         38.1 37.6 36.5
  4        1    2    3
         37.9 37.6 38.7
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         39.2 40.5 41.7 43.1 41.3 48.1 45.4 50.4 54.1 63.2

         66.8 63.3 58.7
  6        1
         55.9
  7        1    2    3    4    5    6    7    8
         29.6 28.3 25.5 25.4 26.2 24.8 23.9 23.3
  8        1    2    3    4    5    6    7    8    9   10

         22.5 20.9 20.7 21.4 21.9 21.7 22.3 22.6 22.8 24.2

1

 RECEIVER     LEQ(H)   L10
 12            74.6   76.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         55.9
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         58.4 59.1 67.2 70.2 57.1 52.5 49.4 44.4 45.9 43.5

         41.4 41.0 39.4 38.8
  3        1    2    3
         38.2 37.5 36.5
  4        1    2    3
         37.9 37.6 38.8
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         39.3 40.7 41.9 43.3 41.5 48.4 45.6 50.8 54.7 61.6

         67.1 62.9 58.2
  6        1
         55.5
  7        1    2    3    4    5    6    7    8
         29.8 28.5 25.6 25.5 26.3 24.9 24.1 23.4
  8        1    2    3    4    5    6    7    8    9   10

         22.6 21.1 20.7 21.6 22.0 21.8 22.5 22.8 22.9 24.3

1

 RECEIVER     LEQ(H)   L10
 13            74.5   76.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         55.6
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         57.9 58.4 66.3 70.7 58.0 53.0 49.8 44.7 46.2 43.7

         41.7 41.2 39.6 39.0
  3        1    2    3
         38.4 37.8 36.7
  4        1    2    3
         38.0 37.7 38.9
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         39.5 40.9 42.1 43.5 41.8 48.7 46.0 51.3 55.3 62.1

         66.5 62.3 57.8
  6        1
         55.2
  7        1    2    3    4    5    6    7    8
         30.0 28.7 25.9 25.7 26.5 25.1 24.2 23.6
  8        1    2    3    4    5    6    7    8    9   10

         22.8 21.2 20.9 21.7 22.2 22.0 22.7 23.0 23.1 24.5

1

 RECEIVER     LEQ(H)   L10
 14            73.9   75.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         55.3
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         57.0 57.8 65.3 70.7 58.7 53.5 50.1 44.9 46.4 43.9

         41.9 41.4 39.6 39.1
  3        1    2    3
         38.4 37.8 36.7
  4        1    2    3
         37.9 37.7 38.9
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         39.5 41.0 42.2 43.7 42.0 48.9 46.3 51.6 55.8 61.7

         63.7 61.3 57.4
  6        1
         54.7
  7        1    2    3    4    5    6    7    8
         30.2 28.9 26.0 25.9 26.7 25.2 24.4 23.7
  8        1    2    3    4    5    6    7    8    9   10

         22.8 21.3 21.1 21.8 22.3 22.2 22.8 23.2 23.3 24.5

1

 RECEIVER     LEQ(H)   L10
 15            72.6   74.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         54.3
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         56.3 57.2 63.5 68.6 59.6 54.1 50.4 45.3 46.6 44.2

         42.1 41.6 39.9 39.4
  3        1    2    3
         38.6 38.0 36.9
  4        1    2    3
         38.1 38.0 39.2
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         39.7 41.2 42.4 43.9 42.3 49.3 46.7 52.1 56.4 62.3

         62.6 59.1 56.9
  6        1
         54.6
  7        1    2    3    4    5    6    7    8
         30.4 29.1 26.2 26.1 26.8 25.4 24.5 23.9
  8        1    2    3    4    5    6    7    8    9   10

         23.0 21.5 21.2 22.0 22.5 22.3 22.9 23.4 23.5 24.9

1

 RECEIVER     LEQ(H)   L10
 16            71.5   73.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1        1
         51.3
  2        1    2    3    4    5    6    7    8    9   10

 11       12   13   14
         52.6 51.8 57.6 67.6 62.7 55.9 51.6 46.2 47.4 44.7

         42.6 42.1 40.4 39.9
  3        1    2    3
         39.2 38.6 37.5
  4        1    2    3
         38.7 38.5 39.7
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         40.3 41.8 42.9 44.6 43.0 50.1 47.8 53.6 58.0 62.8

         59.8 54.6 51.2
  6        1
         49.7
  7        1    2    3    4    5    6    7    8
         31.1 29.7 26.7 26.5 27.4 25.8 25.0 24.3
  8        1    2    3    4    5    6    7    8    9   10

         23.3 21.8 21.4 22.4 22.7 22.8 23.4 23.8 23.9 25.4
```

```
1

 RECEIVER     LEQ(H)    L10
 17            71.4    73.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            48.8
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            49.9 49.4 55.2 65.0 66.7 58.1 52.9 47.2 48.2 45.5

            43.3 42.7 40.9 40.3
    3         1    2    3
            39.7 39.0 37.9
    4         1    2    3
            39.2 39.0 40.2
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            40.7 42.3 43.5 45.2 43.7 51.0 49.1 55.3 60.6 62.4

            57.5 53.1 49.8
    6         1
            47.9
    7         1    2    3    4    5    6    7    8
            31.8 30.4 27.4 27.1 28.0 26.3 25.4 24.7
    8         1    2    3    4    5    6    7    8    9   10

            23.6 22.6 20.7 22.8 23.1 23.3 23.9 24.3 24.4 25.8
1

 RECEIVER     LEQ(H)    L10
 18            72.7    75.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            47.1
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            48.3 47.5 52.6 60.3 69.7 62.7 55.0 48.7 49.5 46.4

            44.1 43.4 41.5 40.8
    3         1    2    3
            40.1 39.3 38.2
    4         1    2    3
            39.4 39.3 40.6
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            41.3 42.9 44.3 46.1 44.7 52.4 50.9 57.9 63.6 61.3

            54.7 50.8 48.1
    6         1
            46.6
    7         1    2    3    4    5    6    7    8
            32.8 31.2 28.2 27.9 28.7 27.0 26.0 25.3
    8         1    2    3    4    5    6    7    8    9   10

            24.3 22.9 21.2 23.1 23.9 23.7 24.5 24.9 24.9 26.3
1

 RECEIVER     LEQ(H)    L10
 19            72.5    75.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            46.0
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            46.9 46.0 50.8 57.7 67.9 66.9 57.1 50.0 50.6 47.2

            44.8 43.9 41.9 41.0
    3         1    2    3
            40.1 39.2 37.9
    4         1    2    3
            39.2 39.2 40.6
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            41.3 43.2 44.8 46.8 45.5 53.5 52.4 60.0 63.3 58.2

            53.3 49.8 46.8
    6         1
            45.3
    7         1    2    3    4    5    6    7    8
            33.5 32.1 29.0 28.8 29.2 27.5 26.6 25.8
    8         1    2    3    4    5    6    7    8    9   10

            25.1 23.0 21.6 23.0 24.5 24.0 24.9 25.2 25.2 26.5
1

 RECEIVER     LEQ(H)    L10
 20            71.9    74.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            45.4
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            46.2 45.1 49.8 56.0 64.0 68.1 59.8 51.5 51.7 48.1

            45.5 44.4 42.3 41.4
    3         1    2    3
            40.4 39.4 37.9
    4         1    2    3
            39.3 39.3 40.9
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            41.8 43.7 45.4 47.5 46.3 54.6 53.8 61.3 61.9 56.3

            52.1 49.0 46.4
    6         1
            44.8
    7         1    2    3    4    5    6    7    8
            34.0 32.7 29.6 29.4 29.5 27.9 27.0 26.2
    8         1    2    3    4    5    6    7    8    9   10

            25.3 23.0 21.8 22.3 24.6 24.6 25.1 25.6 25.5 26.8
1

 RECEIVER     LEQ(H)    L10
 21            71.8    74.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            44.8
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            45.5 44.2 49.0 54.7 61.2 68.2 62.5 53.3 53.0 49.0

            46.2 45.1 42.9 41.8
    3         1    2    3
            40.9 39.8 38.3
    4         1    2    3
            39.6 39.7 41.3
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            42.3 44.3 46.0 48.3 47.2 55.9 55.6 62.5 60.4 54.9

            51.0 48.3 46.0
    6         1
            44.8
    7         1    2    3    4    5    6    7    8
            34.7 33.4 30.3 30.0 30.0 28.5 27.5 26.7
    8         1    2    3    4    5    6    7    8    9   10

            25.7 23.0 22.3 22.4 25.0 25.0 25.6 26.0 26.1 27.3
1

 RECEIVER     LEQ(H)    L10
 22            72.4    74.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            44.9
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            45.7 44.5 49.1 54.3 59.9 68.9 64.0 54.0 53.4 49.3

            46.5 45.4 43.2 42.3
    3         1    2    3
            41.2 40.2 38.7
    4         1    2    3
            40.0 40.1 41.7
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            42.6 44.6 46.4 48.6 47.6 56.6 56.7 63.4 60.1 54.5

            50.9 48.1 45.8
    6         1
            44.6
    7         1    2    3    4    5    6    7    8
            35.2 33.8 30.6 30.3 30.3 28.7 27.7 26.9
    8         1    2    3    4    5    6    7    8    9   10

            26.0 23.6 22.6 23.1 25.3 25.4 25.8 26.4 26.4 27.7
1

 RECEIVER     LEQ(H)    L10
 23            73.0    75.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            44.8
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            45.5 44.3 48.8 53.9 59.0 69.4 65.7 54.7 53.8 49.7

            46.8 45.6 43.5 42.5
    3         1    2    3
            41.5 40.5 39.1
    4         1    2    3
            40.4 40.4 42.0
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            42.9 44.7 46.6 48.9 48.1 57.3 57.7 64.0 59.7 54.2

            50.6 47.9 45.7
    6         1
            44.5
    7         1    2    3    4    5    6    7    8
            35.6 34.1 30.9 30.5 30.7 28.9 27.9 27.1
    8         1    2    3    4    5    6    7    8    9   10

            26.2 23.8 22.9 23.3 25.8 25.7 26.1 26.7 26.6 27.9
1

 RECEIVER     LEQ(H)    L10
 24            70.1    72.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            42.2
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            42.7 41.5 46.0 50.8 54.5 61.4 67.0 58.0 55.9 50.9

            47.5 45.7 42.3 41.0
    3         1    2    3
            39.4 38.0 36.3
    4         1    2    3
```

```
          37.5 37.8 39.7
  5         1    2    3    4    5    6    7    8    9   10

 11        12   13
          41.0 43.5 45.9 48.6 48.0 56.9 56.2 58.0 53.2 49.6

          46.8 44.4 42.4
  6         1
          41.5
  7         1    2    3    4    5    6    7    8
          36.7 35.0 31.8 31.4 31.0 29.3 28.0 27.1
  8         1    2    3    4    5    6    7    8    9   10

          26.2 23.4 22.6 22.9 25.1 25.1 25.7 25.7 25.4 26.3
1

 RECEIVER     LEQ(H)   L10
 25            71.5   74.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          42.1
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          42.6 41.2 45.5 50.0 52.9 58.5 68.3 63.5 59.1 52.7

          48.9 47.0 43.8 42.2
   3         1    2    3
          40.6 39.2 37.4
   4         1    2    3
          38.8 39.1 41.1
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          42.5 45.0 47.4 50.5 50.3 60.2 58.1 57.3 52.6 49.2

          46.6 44.4 42.5
   6         1
          41.6
   7         1    2    3    4    5    6    7    8
          38.4 36.4 33.1 32.6 32.0 30.2 28.9 27.8
   8         1    2    3    4    5    6    7    8    9   10

          26.8 24.2 23.4 23.8 26.0 26.2 26.8 26.8 26.5 27.5
1

 RECEIVER     LEQ(H)   L10
 26            72.3   74.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          42.1
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          42.4 40.9 45.0 48.9 51.1 55.4 63.5 67.4 65.7 55.9

          51.1 48.9 45.6 43.9
   3         1    2    3
          42.2 40.8 39.0
   4         1    2    3
          40.4 40.8 42.8
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          44.3 47.0 49.8 53.5 54.0 63.6 56.8 55.8 51.6 48.5

          46.3 44.3 42.5
   6         1
          41.8
   7         1    2    3    4    5    6    7    8
          41.5 38.9 35.1 34.5 33.6 31.6 30.1 28.9
   8         1    2    3    4    5    6    7    8    9   10

          27.9 25.5 24.8 25.3 27.3 27.8 28.4 28.5 28.2 29.2
1

 RECEIVER     LEQ(H)   L10
 27            72.4   74.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          41.8
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          42.1 40.5 44.4 47.9 49.9 53.3 59.7 63.1 68.9 59.2

          53.1 50.5 47.1 45.4
   3         1    2    3
          43.7 42.2 40.3
   4         1    2    3
          41.8 42.2 44.2
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          45.8 48.6 51.7 56.0 57.2 64.3 54.7 54.1 50.6 47.9

          45.8 44.0 42.4
   6         1
          41.6
   7         1    2    3    4    5    6    7    8
          45.0 41.5 37.2 36.2 35.2 32.9 31.2 29.9
   8         1    2    3    4    5    6    7    8    9   10

          28.5 26.6 25.9 26.5 28.6 29.3 29.8 29.9 29.7 30.6
1

 RECEIVER     LEQ(H)   L10
 28            73.2   75.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          41.8
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          42.0 40.4 44.2 47.5 49.2 52.4 57.5 59.3 69.3 64.5

          56.1 52.6 49.1 47.4
   3         1    2    3
          45.9 44.6 42.9
   4         1    2    3
          44.2 44.6 46.4
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          47.8 50.6 54.0 59.6 61.5 64.7 53.1 53.1 49.9 47.5

          45.6 43.9 42.4
   6         1
          41.8
   7         1    2    3    4    5    6    7    8
          51.3 45.4 40.0 38.5 37.1 34.6 33.1 31.8
   8         1    2    3    4    5    6    7    8    9   10

          30.1 28.7 27.9 28.6 30.2 31.4 32.0 32.1 31.8 32.8
1

 RECEIVER     LEQ(H)   L10
 29            73.2   75.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          41.7
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          41.7 40.0 43.8 47.0 48.4 51.3 55.5 56.2 66.4 67.9

          59.8 54.5 50.5 48.6
   3         1    2    3
          46.9 45.6 43.9
   4         1    2    3
          45.0 45.4 47.3
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          48.8 52.1 56.3 62.8 62.3 63.0 51.5 51.8 49.0 46.8

          45.1 43.6 42.1
   6         1
          41.5
   7         1    2    3    4    5    6    7    8
          56.7 50.4 43.2 40.5 38.3 36.1 34.3 32.7
   8         1    2    3    4    5    6    7    8    9   10

          31.1 29.9 29.2 30.0 30.5 32.1 33.3 33.6 33.1 34.0
1

 RECEIVER     LEQ(H)   L10
 30            73.5   75.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          41.6
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          41.6 39.9 43.6 46.7 48.0 50.7 54.4 54.8 64.1 68.9

          62.3 57.7 51.4 49.1
   3         1    2    3
          47.2 45.4 43.4
   4         1    2    3
          45.3 45.8 47.9
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          50.4 55.1 58.5 64.6 62.4 61.7 50.6 51.2 48.6 46.5

          44.9 43.4 42.1
   6         1
          41.6
   7         1    2    3    4    5    6    7    8
          57.0 54.6 44.1 40.4 39.6 37.1 34.8 33.2
   8         1    2    3    4    5    6    7    8    9   10

          31.7 30.6 30.1 31.0 31.5 31.8 32.4 32.9 33.3 34.1
1

 RECEIVER     LEQ(H)   L10
 31            75.7   77.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1         1
          45.2
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          45.3 43.6 47.2 50.3 51.5 53.7 56.7 56.5 64.1 69.9

          67.0 61.9 57.3 55.0
   3         1    2    3
          51.1 51.6 49.8
   4         1    2    3
          50.9 51.4 53.4
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
          55.2 58.5 62.8 66.9 62.8 62.8 53.6 54.4 52.1 50.1

          48.4 47.0 45.6
   6         1
          45.1
   7         1    2    3    4    5    6    7    8
          57.1 60.9 52.9 49.4 44.7 40.1 38.0 37.0
   8         1    2    3    4    5    6    7    8    9   10

          38.5 33.8 33.3 34.6 35.9 39.7 40.3 40.2 39.7 40.4
1

 RECEIVER     LEQ(H)   L10
 32            75.4   76.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA
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```
ROADWAY  SEGMENT

   1        1
          44.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.9 43.2 46.8 49.8 50.8 52.9 55.0 54.7 62.0 67.7

          68.6 63.9 58.6 56.0
   3        1    2    3
          53.9 52.3 50.4
   4        1    2    3
          51.5 52.1 54.2
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          56.1 59.8 64.3 66.5 60.8 61.2 52.5 53.6 51.4 49.5

          48.0 46.6 45.2
   6        1
          44.7
   7        1    2    3    4    5    6    7    8
          53.0 60.7 58.3 53.3 49.0 42.7 40.6 39.4
   8        1    2    3    4    5    6    7    8    9   10

          39.6 38.8 37.0 38.8 41.4 41.2 41.8 41.5 40.8 41.4

1

 RECEIVER    LEQ(H)   L10
 33           75.2   76.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          44.5
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.6 42.8 46.3 49.3 50.2 52.2 53.9 53.5 60.2 65.1

          68.5 65.8 60.1 57.1
   3        1    2    3
          54.8 52.9 50.9
   4        1    2    3
          52.0 52.8 55.0
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.1 61.0 65.3 65.5 59.1 60.0 51.6 52.8 50.7 49.0

          47.5 46.2 44.8
   6        1
          44.4
   7        1    2    3    4    5    6    7    8
          50.1 56.4 60.8 58.9 54.0 48.3 44.4 42.1
   8        1    2    3    4    5    6    7    8    9   10

          40.8 40.0 40.2 41.9 43.0 43.0 43.3 42.9 42.0 42.4

1

 RECEIVER    LEQ(H)   L10
 34           74.7   76.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          44.3
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.2 42.4 46.0 48.9 49.7 50.8 52.7 52.2 59.1 63.2

          66.9 66.5 61.0 57.8
   3        1    2    3
          55.3 53.4 51.3
   4        1    2    3
          52.4 53.2 55.6
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.8 61.7 65.1 64.1 57.8 59.0 51.0 52.3 50.3 48.6

          47.1 45.9 44.6
   6        1
          44.1
   7        1    2    3    4    5    6    7    8
          48.3 53.0 56.9 61.3 57.6 50.2 45.7 43.0
   8        1    2    3    4    5    6    7    8    9   10

          41.7 41.0 41.3 43.1 44.4 44.3 44.5 43.9 42.9 43.2

1

 RECEIVER    LEQ(H)   L10
 35           74.1   75.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          44.0
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.0 42.2 45.7 48.5 48.8 49.6 51.5 50.6 58.0 61.4

          65.0 66.2 61.8 58.6
   3        1    2    3
          55.9 53.9 51.8
   4        1    2    3
          52.8 53.7 56.1
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          58.4 62.2 64.5 62.5 56.5 58.1 50.3 51.8 49.8 48.2

          46.8 45.5 44.2
   6        1
          43.8
   7        1    2    3    4    5    6    7    8
          43.7 50.0 52.7 58.9 61.8 52.7 47.2 44.3
   8        1    2    3    4    5    6    7    8    9   10

          42.8 42.2 42.7 44.7 46.0 45.9 45.8 45.0 43.8 44.0

1

 RECEIVER    LEQ(H)   L10
 36           70.3   71.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          42.8
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          42.4 40.5 43.8 46.0 46.3 48.1 50.0 48.0 52.7 55.4

          57.8 61.6 60.2 57.8
   3        1    2    3
          55.5 53.6 51.6
   4        1    2    3
          52.6 53.3 55.6
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.5 60.5 59.7 56.6 51.0 53.0 46.0 48.0 46.8 45.6

          44.5 43.5 42.4
   6        1
          42.3
   7        1    2    3    4    5    6    7    8
          40.0 42.4 43.6 47.2 56.0 52.7 47.8 44.7
   8        1    2    3    4    5    6    7    8    9   10

          42.7 42.3 42.8 44.6 45.5 45.0 44.7 43.8 42.8 43.3

1

 RECEIVER    LEQ(H)   L10
 37           69.8   70.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          40.7
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          40.3 38.2 41.6 44.1 45.0 46.5 47.6 45.7 50.2 52.0

          56.6 60.7 59.6 58.2
   3        1    2    3
          56.3 54.4 52.3
   4        1    2    3
          53.3 54.0 56.1
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.6 59.6 59.5 54.6 48.1 50.6 43.9 45.9 44.7 43.6

          42.5 41.5 40.4
   6        1
          40.3
   7        1    2    3    4    5    6    7    8
          36.3 37.9 38.2 45.3 52.7 55.0 51.7 47.8
   8        1    2    3    4    5    6    7    8    9   10

          44.8 44.8 45.4 47.1 47.3 45.9 45.1 44.1 43.3 43.9

1

 RECEIVER    LEQ(H)   L10
 38           68.4   69.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          39.4
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          38.8 36.8 40.3 42.9 43.9 45.3 46.6 43.9 48.2 49.3

          52.1 57.0 57.7 57.9
   3        1    2    3
          56.7 55.1 53.0
   4        1    2    3
          53.9 54.5 56.3
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.2 58.1 56.2 51.4 45.8 48.8 42.3 44.4 43.6 42.5

          41.5 40.6 39.7
   6        1
          39.1
   7        1    2    3    4    5    6    7    8
          33.6 34.7 34.8 39.0 44.9 50.7 52.4 50.6
   8        1    2    3    4    5    6    7    8    9   10

          46.1 46.1 46.2 47.0 45.2 43.0 42.5 42.3 42.7 43.8

1

 RECEIVER    LEQ(H)   L10
 39           68.4   69.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          39.2
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          38.5 36.4 39.8 42.3 43.2 44.5 45.3 42.9 47.1 48.2

          54.5 56.9 57.4 57.8
   3        1    2    3
          57.1 55.7 53.7
   4        1    2    3
          54.5 55.0 56.7
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.1 57.3 56.1 53.8 44.8 47.8 41.5 43.5 42.4 41.4

          40.4 39.4 38.5
```

```
6         1
        38.3
7       1     2     3     4     5     6     7     8
        32.4 33.6 36.5 41.5 45.8 48.8 51.1 51.7
8          1     2     3     4     5     6     7     8     9    10

        46.7 46.4 45.9 46.0 44.9 43.1 42.7 42.4 42.3 43.9
```

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Otay Ranch - Village 7: 02/2004

EMISSION LEVELS: Calveno Levels (trucks>30mph)

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)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

OROADWAY 1 Southbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
1	6339513.3	1806920.6	600.4	0
2	6339510.5	1806467.0	598.8	0

OROADWAY 2 Southbound SR-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
2	6339510.5	1806467.0	598.8	0
3	6339509.1	1806114.7	593.8	0
4	6339508.2	1805921.3	592.2	0
5	6339506.6	1805567.2	590.6	0
6	6339518.4	1805084.1	587.3	0
7	6339558.1	1804696.4	584.0	0
8	6339626.5	1804317.1	580.7	0
9	6339721.1	1803940.3	577.4	0
10	6339779.5	1803754.4	575.8	0
11	6339915.4	1803392.1	572.5	0
12	6340052.2	1803092.3	569.2	0
13	6340182.4	1802843.8	564.3	0
14	6340344.6	1802558.3	554.5	0
15	6340485.7	1802306.5	544.6	0
16	6340646.7	1802025.4	531.5	0

OROADWAY 3 Southbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES X	Y	Z	GRADE
16	6340646.7	1802025.4	531.5	0
17	6340806.7	1801741.3	516.7	0
18	6340985.8	1801426.3	500.3	0
19	6341154.7	1801109.5	483.9	0

OROADWAY 4 Northbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES X	Y	Z	GRADE
1	6341260.4	1801145.7	485.6	1
2	6341061.5	1801517.5	503.6	1
3	6340903.6	1801796.7	516.7	1
4	6340743.5	1802078.7	531.5	1

OROADWAY 5 Northbound SR-125, Birch to RM

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
4	6340743.5	1802078.7	531.5	1
5	6340583.6	1802361.5	544.6	1
6	6340405.7	1802676.0	556.1	1
7	6340228.9	1802992.4	564.3	1
8	6340066.7	1803323.5	569.2	1
9	6339993.2	1803497.7	570.9	1
10	6339809.9	1804036.4	575.8	1
11	6339761.7	1804219.9	577.4	1
12	6339684.8	1804591.6	580.7	1
13	6339638.4	1804969.2	584.0	1
14	6339618.1	1805346.8	587.3	1
15	6339618.1	1805728.7	590.6	1
16	6339621.4	1806111.3	593.8	1
17	6339622.2	1806484.0	598.8	1

OROADWAY 6 Northbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
17	6339622.2	1806484.0	598.8	1
18	6339626.5	1806918.9	600.4	1

OROADWAY 7 Southbound Ramp to Rock Mountain

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	561.	45.0
VEH5	18.	45.0
VEH6	12.	45.0

0	COORDINATES X	Y	Z	GRADE
1	6339864.2	1803405.4	565.9	1
2	6339924.1	1803175.4	566.5	1
3	6339984.3	1802962.1	567.1	1
4	6340015.7	1802831.9	567.5	1
5	6340026.5	1802684.8	567.9	1
6	6340003.6	1802446.2	568.5	1
7	6339995.2	1802224.4	569.1	1
8	6340032.5	1802046.0	569.6	1
9	6340089.2	1801885.6	570.0	1

OROADWAY 8 Ramp from wb Rock Mountain to sb-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	671.	45.0
VEH5	21.	45.0
VEH6	14.	45.0

0	COORDINATES X	Y	Z	GRADE
1	6340294.9	1801957.4	570.0	0
2	6340188.4	1802001.2	565.7	0
3	6340138.6	1802064.9	562.8	0
4	6340116.7	1802131.7	560.3	0
5	6340125.6	1802215.3	557.2	0
6	6340173.4	1802290.0	554.0	0
7	6340242.1	1802330.8	551.1	0
8	6340334.8	1802336.8	547.7	0
9	6340430.4	1802292.0	543.8	0
10	6340498.1	1802198.4	539.7	0
11	6340589.7	1802044.0	533.1	0

1

BARRIER 1 TYPE(A) R-O-W barrier 1acont'd

	X	Y	Z	Z0	DELZ	P
sf-16	6339241.5	1805697.6	580.7	580.7	.0	0
6a	6339296.6	1805665.7	582.0	582.0		
6b	6339342.5	1805640.0	583.1	583.1		
6c	6339381.5	1805617.1	584.0	584.0		
7	6339406.4	1805509.8	584.0	584.0		
8	6339434.3	1805343.0	588.9	588.9		

1

BARRIER 2 TYPE(A) R-O-W barrier 1bcont'd

	X	Y	Z	Z0	DELZ	P
8	6339434.3	1805343.0	588.9	588.9	.0	0
9	6339453.5	1805206.6	589.6	589.6		
10	6339469.4	1805092.9	589.9	589.9		

1

BARRIER 3 TYPE(A) R-O-W barrier 2cont'd

	X	Y	Z	Z0	DELZ	P
10	6339469.4	1805092.9	589.9	589.9	.0	0
11	6339469.8	1805006.9	588.9	588.9		
12	6339469.6	1804987.8	587.3	587.3		
13	6339479.8	1804897.0	585.1	585.1		
14	6339495.0	1804777.7	584.0	584.0		
15	6339517.8	1804626.1	582.3	582.3		
16	6339550.1	1804460.9	580.8	580.8		
17	6339589.1	1804285.5	579.1	579.1		

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 18          6339634.0 1804109.2      577.4      577.4
 19          6339663.6 1803997.1      576.0      576.0
1

 BARRIER   4   TYPE(A)      R-O-W barrier trf to top of slope barrier

             ---------COORDINATES----------
                  X          Y          Z          ZO        DELZ          P
 19          6339663.6 1803997.1      576.0      576.0        .0           0
 20          6339705.0 1803857.9      574.7      574.7
 21          6339735.2 1803763.2      573.9      573.9
 22          6339758.3 1803694.7      573.5      573.5
 23          6339774.3 1803649.9      573.0      573.0
 24          6339798.4 1803582.7      572.6      572.6
 2-rev       6339886.3 1803152.2      571.0      571.0
 3-rev       6339854.5 1803141.6      571.0      571.0
1

 BARRIER   5   TYPE(A)      S-F Pad Edges

             ---------COORDINATES----------
                  X          Y          Z          ZO        DELZ          P
 1           6338450.5 1805660.4      570.7      570.7        .0           0
 2           6338496.9 1805688.8      570.7      570.7
 3           6338586.8 1805745.8      572.3      572.3
 4           6338643.8 1805781.6      572.3      572.3
 5           6338703.0 1805818.1      574.7      574.7
 6           6338761.4 1805846.6      574.7      574.7
 7           6338765.1 1805848.1      576.8      576.8
 8           6338814.8 1805859.8      576.8      576.8
 9           6338819.2 1805860.5      578.2      578.2
1

 BARRIER   6   TYPE(A)      S-F Pad Edges cont'd.1

             ---------COORDINATES----------
                  X          Y          Z          ZO        DELZ          P
 9           6338819.2 1805860.5      578.2      578.2        .0           0
 10          6338898.8 1805853.9      578.2      578.2
 11          6338994.5 1805823.2      578.2      578.2
 12          6338998.2 1805822.5      578.5      578.5
1

 BARRIER   7   TYPE(A)      S-F Pad Edges cont'd.2

             ---------COORDINATES----------
                  X          Y          Z          ZO        DELZ          P
 12          6338998.2 1805822.5      578.5      578.5        .0           0
 13          6339061.0 1805801.3      578.5      578.5
 14          6339065.4 1805799.9      580.7      580.7
 15          6339173.6 1805762 6      580.7      580.7
 16          6339241.5 1805697.6      580.7      580.7
1

 BARRIER   8   TYPE(A)      Elem School Pad Edges

             ---------COORDINATES----------
                  X          Y          Z          ZO        DELZ          P
 40          6339064.2 1804045.1      548.0      548.0        .0           0
 41          6339477.3 1804188.3      550.0      550.0
 42          6339517.0 1804198.4      550.2      550.2
 43          6339575.6 1804002.5      552.0      552.0
 44          6339641.2 1803781.3      554.0      554.0
 45          6339706.8 1803560.2      556.0      556.0
 46          6339706.8 1803544.3      556.1      556.1
1

 BARRIER   9   TYPE(A)      Elem to Park Pads

             ---------COORDINATES----------
                  X          Y          Z          ZO        DELZ          P
 46          6339706.8 1803544.3      556.1      556.1        .0           0
 48          6339717.2 1803526.8      561.3      561.3
1

 BARRIER  10   TYPE(A)      Park Pad Edges

             ---------COORDINATES----------
                  X          Y          Z          ZO        DELZ          P
 47          6339591.3 1803493.6      560.0      560.0        .0           0
 48          6339717.2 1803526.8      561.3      561.3
 49          6339762.7 1803371.2      561.5      561.5
 50          6339808.2 1803214.7      562.0      562.0
 51          6339819.6 1803172.7      562.1      562.1
1

 BARRIER  11   TYPE(A)      Park to High Pads

             ---------COORDINATES----------
                  X          Y          Z          ZO        DELZ          P
 51          6339819.6 1803172.7      562.1      562.1        .0           0
 53          6339837.0 1803137.7      579.5      579.5
 52          6339709.4 1803101.9      576.9      576.9
1

 BARRIER  12   TYPE(A)      High School Pad Edges

             ---------COORDINATES----------
                  X          Y          Z          ZO        DELZ          P
 3-rev       6339854.5 1803141.6      571.0      571.0        .0           0
 53          6339837.0 1803137.7      579.5      579.5
 54          6339875.5 1803030.2      578.6      578.6
 55          6339921.0 1802903.4      578.5      578.5
 56          6339942.8 1802838.7      578.4      578.4
 57          6339950.7 1802716.3      578.0      578.0
 58          6339953.3 1802656.0      577.5      577.5
 59          6339944.6 1802632.3      577.3      577.3
 60a         6339822.2 1802585.1      574.6      574.6
1

 BARRIER  13   TYPE(A)      High School Pad Edges cont'd.

             ---------COORDINATES----------
                  X          Y          Z          ZO        DELZ          P
 60a         6339822.2 1802585.1      574.6      574.6        .0           0
 60b         6339807.2 1802441.6      578.7      578.7
 60c         6339785.7 1802288.4      579.1      579.1
 61          6339775.0 1802195.2      580.8      580.8
 62          6339763.6 1802083.2      579.7      579.7
 63          6339781.1 1801897.9      570.4      570.4
 64          6339783.7 1801794.7      570.4      570.4
1

 Third-floor Receivers (at 25 feet)

                         ------------COORDINATES------------
                               X           Y             Z
 1                         6338479.4   1805665.4      595.7
 2                         6338619.2   1805753.4      597.3
 3                         6338733.3   1805822.9      599.7
 4                         6338855.3   1805846.9      603.2
 5                         6339024.6   1805803.3      603.5
 6                         6339119.0   1805771.7      605.7
 7                         6339203.7   1805718.6      605.7
 8                         6339251.7   1805661.2      604.7
 9                         6339273.2   1805611.7      604.7
 10                        6339288.6   1805561.7      603.9
 11                        6339301.3   1805516.7      603.9
 12                        6339316.9   1805468.2      602.6
 13                        6339327.2   1805419.0      602.6
 14                        6339335.0   1805369.9      601.2
 15                        6339341.9   1805324.7      601.2
 16                        6339363.2   1805182.2      598.4
 17                        6339385.5   1805043.2      597.0
 18                        6339414.0   1804855.2      593.8
 19                        6339431.0   1804701.9      590.3
 20                        6339425.1   1804573.3      588.7
 21                        6339440.9   1804451.3      588.0
 22                        6339468.2   1804409.0      588.4
 23                        6339493.4   1804369.0      588.4
 24                        6339521.3   1804149.7      575.6
 25                        6339568.0   1803991.8      577.0
 26                        6339634.0   1803772.5      579.0
 27                        6339685.1   1803601.7      580.6
 28                        6339732.4   1803437.3      586.3
 29                        6339776.4   1803284.2      586.6
 30                        6339806.0   1803190.2      587.0
 31                        6339845.6   1803083.2      603.8
 32                        6339888.6   1802961.6      603.2
 33                        6339928.8   1802847.1      603.2
 34                        6339938.9   1802755.1      602.9
 35                        6339942.7   1802657.4      602.3
 36                        6339815.4   1802591.7      599.5
 37                        6339770.7   1802344.7      597.2
 38                        6339735.0   1802080.3      595.0
 39                        6339766.6   1801907.1      594.9
1

 ALPHA 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
 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
 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   .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   .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   .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   .0
 7 *   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
       .0   .0   .0   .0   .0   .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   .0   .0   .0   .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

 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
 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
 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   .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   .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   .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   .0
 7 *   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
       .0   .0   .0   .0   .0   .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   .0   .0   .0   .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
 1              65.3    66.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

     1        1
            54.3
     2        1    2    3    4    5    6    7    8    9   10

    11       12   13   14
            54.8 53.2 56.2 55.9 50.6 49.0 47.2 42.9 44.6 42.4

            39.8 39.3 37.5 36.6
     3        1    2    3
            35.4 34.0 32.3
     4        1    2    3
            34.2 34.5 36.3
     5        1    2    3    4    5    6    7    8    9   10

    11       12   13
            37.1 38.9 40.0 41.3 39.4 45.7 42.6 46.9 48.3 50.1

            54.2 55.4 54.3
```

```
   6        1
          53.5
   7        1     2     3     4     5     6     7     8
          26.7  26.4  24.0  22.7  23.4  23.7  23.1  22.3
   8        1     2     3     4     5     6     7     8     9    10

          20.8  19.1  18.1  18.0  17.2  16.9  19.2  20.2  20.3  21.7

1

 RECEIVER     LEQ(H)    L10
 2             66.4    67.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1        1
          55.4
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          56.2  54.7  57.5  56.9  51.0  49.1  47.2  42.9  44.5  41.8

          39.8  39.3  37.6  36.8
   3        1     2     3
          35.9  34.6  33.0
   4        1     2     3
          35.1  35.2  36.8
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          37.6  39.1  40.1  41.4  39.4  45.8  42.6  47.0  48.6  51.1

          55.6  56.7  55.6
   6        1
          54.6
   7        1     2     3     4     5     6     7     8
          26.9  26.5  24.0  23.4  23.5  23.5  22.9  22.3
   8        1     2     3     4     5     6     7     8     9    10

          20.7  19.0  17.9  17.9  17.4  18.0  20.0  20.6  20.7  22.1

1

 RECEIVER     LEQ(H)    L10
 3             67.4    68.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1        1
          56.4
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          57.5  56.0  58.7  57.7  51.3  49.2  47.2  42.9  44.5  41.9

          39.8  39.3  37.7  37.2
   3        1     2     3
          36.5  35.4  34.1
   4        1     2     3
          35.7  35.7  37.1
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          37.7  39.1  40.1  41.4  39.4  45.8  42.7  47.1  48.8  52.0

          57.0  57.9  56.8
   6        1
          55.5
   7        1     2     3     4     5     6     7     8
          27.1  26.6  24.0  24.0  23.7  23.4  22.9  22.3
   8        1     2     3     4     5     6     7     8     9    10

          20.7  18.9  17.8  17.9  17.8  19.1  20.3  20.8  21.0  22.6

1

 RECEIVER     LEQ(H)    L10
 4             68.6    69.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1        1
          57.3
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          58.8  57.6  60.2  58.8  51.7  49.5  47.4  42.9  44.3  42.0

          39.9  39.4  37.9  37.5
   3        1     2     3
          36.9  36.3  35.1
   4        1     2     3
          36.5  36.3  37.5
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          37.9  39.2  40.3  41.6  39.7  46.1  42.9  47.4  49.4  53.4

          58.5  59.3  58.0
   6        1
          56.4
   7        1     2     3     4     5     6     7     8
          27.3  26.7  24.1  24.1  24.2  23.6  22.9  22.3
   8        1     2     3     4     5     6     7     8     9    10

          20.8  19.1  17.9  18.2  19.0  19.8  20.6  21.2  21.4  23.0

1

 RECEIVER     LEQ(H)    L10
 5             70.4    71.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1        1
          57.8
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          60.2  59.8  62.9  61.0  52.8  50.3  47.8  42.9  44.6  42.2

          40.4  40.0  38.3  37.8
   3        1     2     3
          37.4  36.9  35.9
   4        1     2     3
          37.2  36.9  37.9
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          38.2  39.7  40.8  42.2  40.2  46.7  43.6  48.2  50.5  57.2

          60.8  61.4  59.3
   6        1
          57.0
   7        1     2     3     4     5     6     7     8
          28.0  27.2  24.5  24.6  24.9  23.8  23.1  22.5
   8        1     2     3     4     5     6     7     8     9    10

          21.9  19.0  18.3  18.4  20.5  20.4  21.1  21.7  21.8  23.4

1

 RECEIVER     LEQ(H)    L10
 6             71.7    72.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1        1
          58.0
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          60.8  61.1  64.9  62.5  53.5  50.8  48.3  43.3  45.0  42.8

          41.1  40.6  38.8  38.3
   3        1     2     3
          37.6  37.2  36.3
   4        1     2     3
          37.4  37.1  38.1
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          38.7  40.3  41.4  42.8  40.9  47.4  44.3  48.6  51.4  58.6

          62.3  62.8  59.9
   6        1
          57.2
   7        1     2     3     4     5     6     7     8
          28.5  27.4  24.7  24.9  25.5  24.1  23.3  22.7
   8        1     2     3     4     5     6     7     8     9    10

          22.4  19.9  18.7  19.7  21.1  20.6  21.6  22.1  22.2  23.7

1

 RECEIVER     LEQ(H)    L10
 7             72.9    74.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1        1
          57.8
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          60.9  61.8  66.9  64.5  54.3  51.4  48.7  43.9  45.6  43.5

          41.7  41.3  39.1  38.5
   3        1     2     3
          37.9  37.4  36.5
   4        1     2     3
          37.7  37.4  38.4
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          39.0  40.5  41.6  43.1  41.4  47.8  44.5  49.2  53.1  60.2

          64.0  63.9  60.2
   6        1
          57.2
   7        1     2     3     4     5     6     7     8
          29.1  28.2  25.6  25.3  25.9  24.3  23.5  22.8
   8        1     2     3     4     5     6     7     8     9    10

          22.8  20.7  19.1  20.7  21.1  21.6  22.2  22.7  22.6  24.0

1

 RECEIVER     LEQ(H)    L10
 8             73.8    75.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1        1
          57.4
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          60.4  61.6  68.0  66.2  55.2  51.8  49.0  44.3  46.0  44.0

          41.9  41.0  39.3  38.8
   3        1     2     3
          38.2  37.7  36.7
   4        1     2     3
          38.1  37.8  38.9
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          39.4  40.8  41.9  43.3  41.4  47.9  44.9  49.8  54.4  61.4

          65.3  64.3  59.9
   6        1
          56.9
   7        1     2     3     4     5     6     7     8
          29.5  28.6  26.0  26.0  26.1  24.4  23.7  23.0
   8        1     2     3     4     5     6     7     8     9    10

          23.4  20.9  20.3  20.9  21.8  22.0  22.6  22.7  22.8  24.2

1

 RECEIVER     LEQ(H)    L10
 9             74.2    75.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1        1
          57.0
   2        1     2     3     4     5     6     7     8     9    10
```

```
 11        12   13   14
          59.9 61.0 60.3 67.4 55.9 52.4 49.7 44.8 46.5 44.5

          42.2 41.5 39.7 39.0
  3        1    2    3
          38.5 38.0 37.0
  4        1    2    3
          38.5 38.2 39.3
  5        1    2    3    4    5    6    7    8    9   10

 11        12   13
          39.9 41.2 42.3 43.7 41.8 48.3 45.4 50.4 55.4 62.2

          66.0 64.1 59.5
  6        1
          56.5
  7        1    2    3    4    5    6    7    8
          29.9 29.0 26.5 26.4 26.4 24.7 23.8 23.1
  8        1    2    3    4    5    6    7    8    9   10

          24.0 21.1 20.5 21.2 22.3 22.5 23.0 23.0 23.1 24.6

1

 RECEIVER     LEQ(H)   L10
 10            74.4   75.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           56.7
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          59.4 60.3 68.1 68.6 56.6 52.9 50.0 45.2 46.8 44.8

          42.5 41.7 39.9 39.3
   3        1    2    3
          38.6 38.1 37.2
   4        1    2    3
          38.6 38.3 39.5
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          40.0 41.4 42.5 43.9 42.1 48.6 45.8 50.8 55.9 62.9

          66.5 63.7 59.1
   6        1
          56.2
   7        1    2    3    4    5    6    7    8
          30.2 29.3 26.7 26.7 26.6 24.8 24.0 23.3
   8        1    2    3    4    5    6    7    8    9   10

          24.2 21.2 20.7 21.4 22.5 22.7 23.2 23.2 23.3 24.8

1

 RECEIVER     LEQ(H)   L10
 11            74.7   76.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           56.3
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          58.9 59.7 67.7 69.5 57.4 53.5 50.6 45.6 47.3 45.3

          43.0 42.1 40.3 39.7
   3        1    2    3
          38.9 38.4 37.4
   4        1    2    3
          38.8 38.6 39.8
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          40.3 41.7 43.0 44.4 42.5 49.1 46.2 51.3 56.7 63.8

          66.8 63.3 58.7
   6        1
          55.9
   7        1    2    3    4    5    6    7    8
          30.6 29.7 27.2 27.1 26.8 25.0 24.1 23.5
   8        1    2    3    4    5    6    7    8    9   10

          24.6 21.4 20.8 21.6 22.8 23.1 23.6 23.5 23.6 25.1

1

 RECEIVER     LEQ(H)   L10
 12            75.0   76.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           55.9
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          58.4 59.1 67.2 70.4 58.2 54.0 50.9 45.9 47.6 45.4

          43.2 42.2 40.4 39.8
   3        1    2    3
          39.1 38.4 37.4
   4        1    2    3
          38.9 38.6 39.8
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          40.3 41.9 43.1 44.5 42.7 49.3 46.5 51.7 57.1 64.7

          67.1 62.9 58.2
   6        1
          55.5
   7        1    2    3    4    5    6    7    8
          30.8 29.9 27.3 27.3 26.9 25.1 24.3 23.6
   8        1    2    3    4    5    6    7    8    9   10

          24.6 21.6 21.0 21.7 23.0 23.2 23.7 23.6 23.7 25.2

1

 RECEIVER     LEQ(H)   L10
 13            75.2   76.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           55.6
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          57.9 58.4 66.3 71.3 59.3 54.7 51.6 46.5 48.1 46.1

          44.0 42.9 40.8 40.2
   3        1    2    3
          39.5 38.8 37.7
   4        1    2    3
          39.1 38.8 40.1
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          40.8 42.4 43.6 45.0 43.2 49.9 47.1 52.4 58.0 65.5

          67.1 62.3 57.8
   6        1
          55.2
   7        1    2    3    4    5    6    7    8
          31.3 30.3 27.8 27.7 27.1 25.3 24.4 23.7
   8        1    2    3    4    5    6    7    8    9   10

          25.1 21.7 21.1 21.8 23.3 23.7 24.4 24.3 24.1 25.6

1

 RECEIVER     LEQ(H)   L10
 14            75.3   76.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           55.3
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          57.4 57.8 65.3 71.7 60.1 55.2 51.7 46.5 48.1 46.1

          44.2 43.3 41.0 40.2
   3        1    2    3
          39.5 38.8 37.7
   4        1    2    3
          39.0 38.8 40.1
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          40.7 42.4 43.6 45.3 43.8 50.5 47.3 52.7 58.2 66.3

          66.9 61.7 57.4
   6        1
          54.8
   7        1    2    3    4    5    6    7    8
          31.3 30.3 27.7 27.6 27.2 25.4 24.6 23.9
   8        1    2    3    4    5    6    7    8    9   10

          24.9 21.8 21.3 22.0 23.2 23.7 24.4 24.6 24.5 25.6

1

 RECEIVER     LEQ(H)   L10
 15            75.4   76.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           54.9
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          57.0 57.2 64.5 71.9 61.0 55.9 52.3 47.1 48.6 46.5

          44.9 44.2 42.0 41.1
   3        1    2    3
          39.8 39.2 38.0
   4        1    2    3
          39.4 39.2 40.5
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          41.2 42.8 44.8 46.5 44.7 51.4 48.7 53.3 58.9 66.8

          66.6 61.2 56.9
   6        1
          54.6
   7        1    2    3    4    5    6    7    8
          31.7 30.7 28.1 27.9 27.4 25.6 24.7 24.0
   8        1    2    3    4    5    6    7    8    9   10

          25.1 22.1 21.4 22.2 23.5 24.0 24.8 25.3 25.2 26.5

1

 RECEIVER     LEQ(H)   L10
 16            74.5   76.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
           54.0
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          55.7 55.6 62.1 70.0 64.4 57.9 53.5 47.9 49.2 46.8

          45.0 44.5 42.6 41.9
   3        1    2    3
          41.1 40.3 39.0
   4        1    2    3
          40.4 40.3 41.8
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          42.7 44.6 45.9 47.4 45.6 52.7 50.6 56.1 60.5 66.8

          64.9 59.5 55.8
   6        1
          53.7
   7        1    2    3    4    5    6    7    8
          32.2 31.1 28.4 27.8 27.9 26.0 25.2 24.5
   8        1    2    3    4    5    6    7    8    9   10

          25.1 22.3 21.6 22.5 23.3 24.2 24.9 25.5 25.7 27.2
```

```
1

 RECEIVER     LEQ(H)    L10
 17            74.4    76.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            53.2
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            53.2 52.1 57.5 67.1 69.2 60.5 55.0 49.1 50.3 47.8

            45.9 45.4 43.4 42.5
    3        1    2    3
            41.8 41.0 39.7
    4        1    2    3
            41.4 41.3 42.8
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            43.7 45.5 46.9 48.4 46.8 54.2 52.3 59.7 65.3 66.0

            60.5 55.9 52.8
    6        1
            51.3
    7        1    2    3    4    5    6    7    8
            32.8 31.7 29.0 28.0 28.4 26.5 25.7 24.9
    8        1    2    3    4    5    6    7    8    9   10

            25.3 22.9 21.2 23.0 23.5 24.9 25.5 26.2 26.4 27.9

1

 RECEIVER     LEQ(H)    L10
 18            76.5    78.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            48.3
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            49.2 48.4 53.6 62.2 73.5 65.5 57.1 50.4 51.1 48.2

            46.1 45.5 43.5 42.7
    3        1    2    3
            41.8 40.9 39.8
    4        1    2    3
            41.3 41.3 42.8
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            43.7 45.6 47.1 48.8 47.4 55.4 54.2 63.0 68.7 66.4

            56.9 52.0 49.3
    6        1
            47.8
    7        1    2    3    4    5    6    7    8
            33.5 32.0 28.8 28.5 29.1 27.3 26.3 25.5
    8        1    2    3    4    5    6    7    8    9   10

            25.2 23.3 21.8 23.4 24.1 24.5 25.6 26.2 26.5 27.9

1

 RECEIVER     LEQ(H)    L10
 19            75.8    77.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            46.6
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            47.6 46.6 51.6 59.4 71.1 70.0 58.9 51.3 51.7 48.3

            45.9 45.1 42.9 42.1
    3        1    2    3
            41.3 40.5 39.3
    4        1    2    3
            40.7 40.6 42.0
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            42.7 44.7 46.3 48.3 47.0 55.4 55.0 64.1 68.4 62.0

            55.4 51.2 47.8
    6        1
            46.2
    7        1    2    3    4    5    6    7    8
            33.9 32.4 29.4 29.2 29.6 27.8 26.8 26.0
    8        1    2    3    4    5    6    7    8    9   10

            25.6 23.4 22.2 23.4 24.8 24.4 25.4 26.0 26.1 27.5

1

 RECEIVER     LEQ(H)    L10
 20            74.0    76.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            45.9
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            46.7 45.7 50.4 57.3 65.8 70.2 60.9 52.9 52.9 49.0

            46.3 45.1 43.0 42.1
    3        1    2    3
            41.3 40.6 39.4
    4        1    2    3
            40.6 40.5 41.9
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            42.7 44.6 46.3 48.5 47.3 56.0 56.1 64.6 65.2 58.4

            53.4 50.1 47.2
    6        1
            45.6
    7        1    2    3    4    5    6    7    8
            34.4 33.1 29.9 29.7 29.9 28.2 27.3 26.5
    8        1    2    3    4    5    6    7    8    9   10

            25.9 23.5 22.5 23.0 25.1 25.1 25.5 26.1 26.2 27.6

1

 RECEIVER     LEQ(H)    L10
 21            74.0    75.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            45.3
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            46.0 44.9 49.5 55.9 62.4 70.4 63.9 54.5 54.4 50.0

            47.0 45.8 43.5 42.5
    3        1    2    3
            41.7 40.9 39.8
    4        1    2    3
            41.0 40.9 42.3
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            43.1 45.1 47.0 49.3 48.2 57 9 58.1 65.7 63.4 56.9

            52.2 49.3 46.9
    6        1
            45.7
    7        1    2    3    4    5    6    7    8
            35.3 33.8 30.6 30.4 30.4 28.6 27.8 27.0
    8        1    2    3    4    5    6    7    8    9   10

            26.2 23.5 22.9 23.1 25.4 25.5 26.1 26.5 26.7 28.0

1

 RECEIVER     LEQ(H)    L10
 22            75.6    77.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            45.8
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            46.4 45.3 50.0 55.7 61.8 72.4 66.1 55.5 55.1 50.6

            47.6 46.4 44.0 43.0
    3        1    2    3
            42.0 41.2 40.0
    4        1    2    3
            41.2 41.2 42.7
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            43.7 45.7 47.7 50.1 49.2 59.3 60.0 68.0 64.3 57.0

            52.6 49.6 47.2
    6        1
            46.0
    7        1    2    3    4    5    6    7    8
            35.7 34.2 31.0 30.7 30.7 29.0 28.0 27.2
    8        1    2    3    4    5    6    7    8    9   10

            26.6 24.2 23.3 23.8 25.7 25.8 26.3 26.9 27.0 28.4

1

 RECEIVER     LEQ(H)    L10
 23            76.7    78.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            46.1
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            46.7 45.4 50.0 55.6 61.3 73.0 68.9 56.4 55.7 51.2

            48.2 46.9 44.6 43.5
    3        1    2    3
            42.5 41.6 40.3
    4        1    2    3
            41.6 41.7 43.2
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            44.3 46.3 48.4 50.9 50.2 60.9 62.6 69.2 64.6 57.3

            53.0 50.1 47.7
    6        1
            46.6
    7        1    2    3    4    5    6    7    8
            36.2 34.5 31.3 31.0 31.1 29.3 28.2 27.4
    8        1    2    3    4    5    6    7    8    9   10

            26.9 24.4 23.6 24.1 26.2 26.1 26.5 27.3 27.4 28.8

1

 RECEIVER     LEQ(H)    L10
 24            72.4    74.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1        1
            43.9
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            44.4 43.1 47.4 51.8 55.5 63.4 68.9 59.4 56.9 51.5

            48.2 46.8 44.2 43.1
    3        1    2    3
            41.9 40.7 39.1
    4        1    2    3
```

```
          7
         40.6 40.8 42.5
  5        1    2    3    4    5    6    7    8    9   10

 11       12   13
         43.6 45.8 47.8 50.4 50.0 60.1 60.5 62.0 56.2 51.9

         48.9 46.6 44.6
  6        1
         43.6
  7        1    2    3    4    5    6    7    8
         37.2 35.6 32.3 31.8 31.5 29.9 28.8 28.0
  8        1    2    3    4    5    6    7    8    9   10

         26.7 24.4 23.5 23.9 26.1 26.3 27.0 27.3 27.2 28.4
1

RECEIVER     LEQ(H)    L10
25            73.0    75.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
         43.3
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
         43.8 42.4 46.5 50.7 53.6 59.8 69.5 64.5 60.3 53.4

         49.5 47.9 45.4 44.1
   3        1    2    3
         42.9 41.7 40.1
   4        1    2    3
         41.6 41.9 43.5
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
         44.6 46.8 48.9 51.9 51.9 63.2 61.4 60.0 54.5 50.7

         48.1 45.9 44.0
   6        1
         43.1
   7        1    2    3    4    5    6    7    8
         39.1 37.1 33.6 33.0 32.6 30.9 29.7 28.8
   8        1    2    3    4    5    6    7    8    9   10

         27.4 25.4 24.5 24.9 27.0 27.4 28.1 28.4 28.3 29.5
1

RECEIVER     LEQ(H)    L10
26            74.4    76.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
         42.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
         43.2 41.7 45.7 49.5 51.8 56.8 65.2 69.7 67.4 57.4

         51.9 49.7 46.8 45.5
   3        1    2    3
         44.3 43.1 41.6
   4        1    2    3
         43.0 43.2 44.8
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
         45.9 48.3 50.9 54.7 55.8 66.8 59.6 57.5 52.7 49.5

         47.2 45.3 43.6
   6        1
         42.8
   7        1    2    3    4    5    6    7    8
         42.5 39.8 35.8 35.0 34.3 32.2 31.0 30.0
   8        1    2    3    4    5    6    7    8    9   10

         28.7 26.8 25.9 26.5 28.4 28.9 29.6 29.9 29.8 30.9
1

RECEIVER     LEQ(H)    L10
27            75.4    77.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
         43.2
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
         43.3 41.7 45.5 48.9 50.8 54.7 61.1 65.6 72.2 61.3

         54.8 51.7 48.2 46.6
   3        1    2    3
         45.2 44.1 42.6
   4        1    2    3
         43.8 44.0 45.8
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
         47.2 50.0 53.4 58.7 60.5 68.3 57.5 56.3 52.1 49.3

         47.2 45.5 44.0
   6        1
         43.4
   7        1    2    3    4    5    6    7    8
         46.6 42.6 38.0 37.0 36.0 33.6 32.2 31.0
   8        1    2    3    4    5    6    7    8    9   10

         29.7 28.0 27.3 28.0 29.7 30.3 30.9 31.1 30.9 32.0
1

RECEIVER     LEQ(H)    L10
28            76.2    77.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
         46.3
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
         46.6 44.4 47.8 50.5 51.3 54.4 59.4 62.1 71.9 67.5

         60.5 57.4 53.0 50.4
   3        1    2    3
         48.1 46.3 44.4
   4        1    2    3
         46.4 47.2 50.0
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
         52.8 55.5 58.6 63.5 64.8 68.1 57.3 57.4 53.9 51.6

         50.0 48.4 46.8
   6        1
         46.2
   7        1    2    3    4    5    6    7    8
         53.4 47.1 42.1 41.4 38.3 35.3 33.7 32.3
   8        1    2    3    4    5    6    7    8    9   10

         30.9 29.6 29.1 30.0 31.3 33.2 33.8 33.7 34.0 34.9
1

RECEIVER     LEQ(H)    L10
29            75.9    77.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
         45.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
         46.0 44.3 47.7 50.1 50.7 53.1 57.1 58.2 68.8 70.3

         63.0 59.1 55.3 53.5
   3        1    2    3
         51.9 50.5 48.9
   4        1    2    3
         50.0 50.4 52.3
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
         53.7 56.7 60.3 65.6 65.1 65.9 55.5 56.0 52.9 51.1

         49.3 47.8 46.3
   6        1
         45.6
   7        1    2    3    4    5    6    7    8
         57.5 52.2 47.3 44.5 39.5 36.9 35.0 33.4
   8        1    2    3    4    5    6    7    8    9   10

         32.0 30.8 30.5 31.6 32.4 34.5 37.7 38.4 38.0 38.9
1

RECEIVER     LEQ(H)    L10
30            75.7    77.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
         45.6
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
         45.7 44.0 47.7 49.9 50.3 52.5 56.0 56.5 66.4 70.5

         64.7 60.2 56.1 54.1
   3        1    2    3
         52.4 51.0 47.4
   4        1    2    3
         50.4 50.8 52.8
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
         54.4 57.5 61.4 66.4 64.3 64.4 54.6 55.3 52.7 50.6

         48.9 47.4 46.0
   6        1
         45.4
   7        1    2    3    4    5    6    7    8
         58.4 57.1 49.4 45.5 41.1 38.1 35.9 34.3
   8        1    2    3    4    5    6    7    8    9   10

         32.8 31.7 31.5 32.7 33.5 35.4 36.4 36.3 38.7 39.5
1

RECEIVER     LEQ(H)    L10
31            75.6    77.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
         45.2
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
         45.3 43.6 47.2 50.3 51.5 53.7 56.7 56.5 64.1 69.8

         67.0 61.9 57.3 55.0
   3        1    2    3
         53.1 51.6 49.8
   4        1    2    3
         50.9 51.4 53.4
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
         55.2 58.5 62.8 66.9 62.7 62.8 53.6 54.4 52.1 50.1

         48.4 47.0 45.6
   6        1
         45.1
   7        1    2    3    4    5    6    7    8
         57.0 60.7 52.8 49.4 46.8 42.2 41.2 39.8
   8        1    2    3    4    5    6    7    8    9   10

         38.5 37.6 37.1 38.3 39.9 39.8 40.3 40.2 39.7 40.4
1

RECEIVER     LEQ(H)    L10
32            75.4    76.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA
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```
ROADWAY  SEGMENT

   1        1
          44.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.9 43.2 46.8 49.8 50.8 52.9 55.6 55.1 62.0 67.6

          68.6 63.9 58.6 56.0
   3        1    2    3
          53.9 52.3 50.4
   4        1    2    3
          51.5 52.1 54.2
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          56.1 59.8 64.3 66.5 60.8 61.2 52.5 53.6 51.4 49.5

          48.0 46.6 45.2
   6        1
          44.7
   7        1    2    3    4    5    6    7    8
          52.9 60.5 58.1 53.2 50.6 45.5 43.0 40.9
   8        1    2    3    4    5    6    7    8    9   10

          39.6 38.8 38.9 40.4 41.4 41.2 41.7 41.5 40.8 41.4

1

RECEIVER    LEQ(H)   L10
33           75.2   76.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
          44.5
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.6 42.8 46.3 49.3 50.2 52.2 54.7 53.9 60.2 65.1

          68.5 65.8 60.1 57.1
   3        1    2    3
          54.7 52.9 50.9
   4        1    2    3
          52.0 52.8 55.0
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.1 61.0 65.3 65.5 59.1 60.0 51.6 52.8 50.7 49.0

          47.5 46.2 44.8
   6        1
          44.4
   7        1    2    3    4    5    6    7    8
          50.1 56.3 60.5 58.7 54.0 48.3 44.4 42.1
   8        1    2    3    4    5    6    7    8    9   10

          40.8 40.0 40.2 41.9 43.0 42.9 43.3 42.9 42.0 42.4

1

RECEIVER    LEQ(H)   L10
34           74.6   76.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
          44.3
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.2 42.4 46.0 48.9 49.7 51.7 54.0 53.1 59.1 63.2

          66.9 66.4 61.0 57.8
   3        1    2    3
          55.3 53.4 51.3
   4        1    2    3
          52.4 53.2 55.6
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.8 61.7 65.1 64.0 57.8 59.0 51.0 52.3 50.3 48.6

          47.1 45.9 44.6
   6        1
          44.1
   7        1    2    3    4    5    6    7    8
          48.3 53.0 56.7 61.0 57.5 50.1 45.7 43.0
   8        1    2    3    4    5    6    7    8    9   10

          41.7 41.0 41.3 43.1 44.4 44.3 44.5 43.9 42.9 43.2

1

RECEIVER    LEQ(H)   L10
35           74.1   75.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
          44.0
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.0 42.2 45.7 48.5 49.3 51.2 53.3 52.3 58.0 61.4

          64.9 66.2 61.8 58.6
   3        1    2    3
          55.9 53.9 51.7
   4        1    2    3
          52.8 53.7 56.1
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          58.3 62.2 64.4 62.5 56.5 58.1 50.3 51.8 49.8 48.2

          46.8 45.5 44.2
   6        1
          43.8
   7        1    2    3    4    5    6    7    8
          46.7 50.4 52.6 58.7 61.6 52.7 47.2 44.3
   8        1    2    3    4    5    6    7    8    9   10

          42.8 42.2 42.7 44.6 46.0 45.8 45.8 44.9 43.8 44.0

1

RECEIVER    LEQ(H)   L10
36           71.7   72.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
          43.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          43.9 42.0 45.6 47.7 47.4 48.9 51.4 50.2 54.7 57.6

          62.0 63.1 60.2 57.7
   3        1    2    3
          55.5 53.6 51.6
   4        1    2    3
          52.6 53.3 55.6
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.4 60.5 61.9 60.5 54.6 56.0 49.8 51.4 49.5 48.0

          46.5 45.4 44.1
   6        1
          43.7
   7        1    2    3    4    5    6    7    8
          40.9 43.7 45.9 49.2 56.0 52.7 47.7 44.7
   8        1    2    3    4    5    6    7    8    9   10

          42.7 42.3 42.8 44.6 45.5 45.0 44.7 43.8 42.8 43.3

1

RECEIVER    LEQ(H)   L10
37           70.0   71.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
          43.2
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          42.8 40.4 43.4 45.3 45.5 47.0 49.3 47.5 50.9 52.5

          57.0 60.7 59.6 58.2
   3        1    2    3
          56.2 54.4 52.3
   4        1    2    3
          53.1 54.0 56.1
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.6 59.6 59.5 55.5 48.9 51.5 45.9 48.2 46.9 45.8

          45.2 44.6 43.4
   6        1
          43.0
   7        1    2    3    4    5    6    7    8
          37.1 38.7 39.4 45.5 52.7 55.0 51.7 47.8
   8        1    2    3    4    5    6    7    8    9   10

          44.8 44.8 45.4 47.1 47.3 45.9 45.1 44.1 43.3 43.9

1

RECEIVER    LEQ(H)   L10
38           68.8   69.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
          41.4
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          40.6 38.4 41.7 43.9 44.2 45.6 47.4 44.8 48.6 49.8

          55.1 58.2 58.1 57.9
   3        1    2    3
          56.6 55.1 53.0
   4        1    2    3
          53.9 54.5 56.3
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.2 58.1 57.2 54.1 46.2 49.2 43.3 46.1 45.0 43.9

          43.1 42.5 41.9
   6        1
          42.4
   7        1    2    3    4    5    6    7    8
          34.2 35.3 35.6 43.0 47.9 51.3 52.4 50.6
   8        1    2    3    4    5    6    7    8    9   10

          46.1 46.1 46.2 46.9 46.1 44.3 43.6 43.0 42.7 43.8

1

RECEIVER    LEQ(H)   L10
39           68.5   69.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
          41.2
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          40.3 38.0 41.1 43.4 43.6 44.8 46.2 43.6 47.4 48.6

          54.5 56.9 57.4 57.8
   3        1    2    3
          57.1 55.7 53.7
   4        1    2    3
          54.5 55.0 56.6
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.1 57.3 56.1 53.8 45.1 48.1 42.1 44.6 44.3 43.3

          42.6 42.1 41.3
```

```
6         1
        41.5
7         1     2     3     4     5     6     7     8
        33.0 34.1 36.7 41.5 45.8 48.8 51.1 51.6
8         1     2     3     4     5     6     7     8     9    10

        46.7 46.4 45.9 46.0 44.9 43.1 42.7 42.4 42.3 43.9
```

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Otay Ranch - Village 7: 02/2004

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM 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)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Southbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
1	6339513.3	1806920.6	600.4	0
2	6339510.5	1806467.0	598.8	0

0ROADWAY 2 Southbound SR-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
2	6339510.5	1806467.0	598.8	0
3	6339509.1	1806114.7	593.8	0
4	6339508.2	1805921.3	592.2	0
5	6339506.6	1805567.2	590.6	0
6	6339518.4	1805084.1	587.3	0
7	6339558.1	1804696.4	584.0	0
8	6339626.5	1804317.1	580.7	0
9	6339721.1	1803940.3	577.4	0
10	6339779.5	1803754.4	575.8	0
11	6339915.4	1803392.1	572.5	0
12	6340052.2	1803092.3	569.2	0
13	6340182.4	1802843.8	564.3	0
14	6340344.6	1802558.3	554.5	0
15	6340485.7	1802306.5	544.6	0
16	6340646.7	1802025.4	531.5	0

0ROADWAY 3 Southbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES X	Y	Z	GRADE
16	6340646.7	1802025.4	531.5	0
17	6340806.7	1801741.3	516.7	0
18	6340985.8	1801426.3	500.3	0
19	6341154.7	1801109.5	483.9	0

0ROADWAY 4 Northbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES X	Y	Z	GRADE
1	6341260.4	1801145.7	485.6	1
2	6341061.5	1801517.5	503.6	1
3	6340903.6	1801796.7	516.7	1
4	6340743.5	1802078.7	531.5	1

0ROADWAY 5 Northbound SR-125, Birch to RM

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
4	6340743.5	1802078.7	531.5	1
5	6340583.6	1802361.5	544.6	1
6	6340405.7	1802676.0	556.1	1
7	6340228.9	1802992.4	564.3	1
8	6340066.7	1803323.5	569.2	1
9	6339993.2	1803497.7	570.9	1
10	6339809.9	1804036.4	575.8	1
11	6339761.7	1804219.9	577.4	1
12	6339684.8	1804591.6	580.7	1
13	6339638.4	1804969.2	584.0	1
14	6339618.1	1805346.8	587.3	1
15	6339618.1	1805728.7	590.6	1
16	6339621.4	1806111.3	593.8	1
17	6339622.2	1806484.0	598.8	1

0ROADWAY 6 Northbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
17	6339622.2	1806484.0	598.8	1
18	6339626.5	1806918.9	600.4	1

0ROADWAY 7 Southbound Ramp to Rock Mountain

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	561.	45.0
VEH5	18.	45.0
VEH6	12.	45.0

0	COORDINATES X	Y	Z	GRADE
1	6339864.2	1803405.4	565.9	1
2	6339924.1	1803175.4	566.5	1
3	6339984.3	1802962.1	567.1	1
4	6340015.7	1802831.9	567.5	1
5	6340026.5	1802684.8	567.9	1
6	6340003.6	1802446.2	568.5	1
7	6339995.2	1802224.4	569.1	1
8	6340032.5	1802046.0	569.6	1
9	6340089.2	1801885.6	570.0	1

0ROADWAY 8 Ramp from wb Rock Mountain to sb-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	671.	45.0
VEH5	21.	45.0
VEH6	14.	45.0

0	COORDINATES X	Y	Z	GRADE
1	6340294.9	1801957.4	570.0	0
2	6340188.4	1802001.2	565.7	0
3	6340138.6	1802064.9	562.8	0
4	6340116.7	1802131.7	560.3	0
5	6340125.6	1802215.3	557.2	0
6	6340173.4	1802290.0	554.0	0
7	6340242.1	1802330.8	551.1	0
8	6340334.8	1802336.8	547.7	0
9	6340430.4	1802292.0	543.8	0
10	6340498.1	1802198.4	539.7	0
11	6340589.7	1802044.0	533.1	0

1

BARRIER 1 TYPE(A) R-O-W barrier 1acont'd

	COORDINATES X	Y	Z	Z0	DELZ	P
sf-16	6339241.5	1805697.6	591.7	580.7	1.0	3
6a	6339296.6	1805665.7	593.0	582.0		
6b	6339342.5	1805640.0	594.1	583.1		
6c	6339383.5	1805617.1	595.0	584.0		
7	6339406.4	1805509.8	595.0	584.0		
8	6339434.3	1805343.0	599.9	588.9		

1

BARRIER 2 TYPE(A) R-O-W barrier 1bcont'd

	COORDINATES X	Y	Z	Z0	DELZ	P
8	6339434.3	1805343.0	596.9	588.9	1.0	3
9	6339453.5	1805206.6	597.6	589.6		
10	6339469.4	1805092.9	597.9	589.9		

1

BARRIER 3 TYPE(A) R-O-W barrier 2cont'd

	COORDINATES X	Y	Z	Z0	DELZ	P
10	6339469.4	1805092.9	595.9	589.9	1.0	3
11	6339469.8	1805006.9	594.9	588.9		
12	6339469.6	1804987.8	593.3	587.3		
13	6339479.8	1804897.0	591.1	585.1		
14	6339495.0	1804777.7	590.0	584.0		
15	6339517.8	1804626.1	588.3	582.3		
16	6339550.1	1804460.9	586.8	580.8		
17	6339589.1	1804285.5	585.1	579.1		

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18        6339634.0 1804109.2      583.4      577.4
19        6339663.6 1803997.1      582.0      576.0
1

BARRIER   4   TYPE(A)      R-O-W barrier trf to top of slope barrier

          ---------COORDINATES----------
               X         Y         Z         ZO        DELZ        P
19        6339663.6 1803997.1      585.0      576.0       1.0        3
20        6339705.0 1803857.9      583.7      574.7
21        6339735.2 1803763.2      582.9      573.9
22        6339758.1 1803694.7      582.5      573.5
23        6339774.1 1803649.9      582.0      573.0
24        6339798.4 1803582.7      581.6      572.6
2-rev     6339886.3 1803152.2      580.0      571.0
3-rev     6339854.5 1803141.6      580.0      571.0
1

BARRIER   5   TYPE(A)      S-F Pad Edges

          ---------COORDINATES----------
               X         Y         Z         ZO        DELZ        P
1         6338450.5 1805660.4      576.7      570.7       1.0        3
2         6338496.9 1805688.8      576.7      570.7
3         6338586.8 1805745.8      578.3      572.3
4         6338643.8 1805781.6      578.3      572.3
5         6338703.0 1805818.1      580.7      574.7
6         6338761.4 1805846.6      580.7      574.7
7         6338765.1 1805848.1      582.8      576.8
8         6338814.8 1805859.8      582.8      576.8
9         6338819.2 1805860.5      584.2      578.2
1

BARRIER   6   TYPE(A)      S-F Pad Edges cont'd.1

          ---------COORDINATES----------
               X         Y         Z         ZO        DELZ        P
9         6338819.2 1805860.5      584.2      578.2       1.0        3
10        6338898.8 1805853.9      584.2      578.2
11        6338994.5 1805823.2      584.2      578.2
12        6338998.2 1805822.5      584.5      578.5
1

BARRIER   7   TYPE(A)      S-F Pad Edges cont'd.2

          ---------COORDINATES----------
               X         Y         Z         ZO        DELZ        P
12        6338998.2 1805822.5      585.5      578.5       1.0        3
13        6339061.0 1805801.3      585.5      578.5
14        6339065.4 1805799.9      587.7      580.7
15        6339173.6 1805762.6      587.7      580.7
16        6339241.5 1805697.6      587.7      580.7
1

BARRIER   8   TYPE(A)      Elem School Pad Edges

          ---------COORDINATES----------
               X         Y         Z         ZO        DELZ        P
40        6339064.2 1804045.1      548.0      548.0         .0        0
41        6339477.3 1804188.3      550.0      550.0
42        6339517.0 1804198.4      550.2      550.2
43        6339575.6 1804002.5      552.0      552.0
44        6339641.2 1803781.3      554.0      554.0
45        6339706.8 1803560.2      556.0      556.0
46        6339706.8 1803544.3      556.1      556.1
1

BARRIER   9   TYPE(A)      Elem to Park Pads

          ---------COORDINATES----------
               X         Y         Z         ZO        DELZ        P
46        6339706.8 1803544.3      556.1      556.1         .0        0
48        6339717.2 1803526.8      561.3      561.3
1

BARRIER   10   TYPE(A)      Park Pad Edges

          ---------COORDINATES----------
               X         Y         Z         ZO        DELZ        P
47        6339591.3 1803493.6      560.0      560.0       .0        0
48        6339717.2 1803526.8      561.3      561.3
49        6339762.7 1803371.2      561.5      561.5
50        6339808.2 1803214.7      562.0      562.0
51        6339819.6 1803172.7      562.1      562.1
1

BARRIER   11   TYPE(A)      Park to High Pads

          ---------COORDINATES----------
               X         Y         Z         ZO        DELZ        P
51        6339819.6 1803172.7      562.1      562.1         .0        0
53        6339837.0 1803137.7      579.5      579.5
52        6339709.4 1803101.9      576.9      576.9
1

BARRIER   12   TYPE(A)      High School Pad Edges

          ---------COORDINATES----------
               X         Y         Z         ZO        DELZ        P
3-rev     6339854.5 1803141.6      578.0      571.0       1.0        3
53        6339837.0 1803137.7      586.5      579.5
54        6339875.5 1803030.2      585.6      578.6
55        6339921.0 1802903.4      585.5      578.5
56        6339942.8 1802838.7      585.4      578.4
57        6339950.7 1802716.3      585.0      578.0
58        6339953.3 1802656.0      584.5      577.5
59        6339944.6 1802632.3      584.3      577.3
60a       6339822.2 1802585.1      581.6      574.6
1

BARRIER   13   TYPE(A)      High School Pad Edges cont'd.

          ---------COORDINATES----------
               X         Y         Z         ZO        DELZ        P
60a       6339822.2 1802585.1      580.6      574.6       1.0        3
60b       6339807.2 1802441.6      584.7      578.7
60c       6339785.7 1802288.4      585.1      579.1
61        6339775.0 1802195.2      586.8      580.8
62        6339763.6 1802083.2      585.7      579.7
63        6339781.1 1801897.9      576.4      570.4
64        6339783.7 1801794.7      576.4      570.4
1

First-floor Receivers (at 5 feet)

                        ------------COORDINATES-------------
                             X         Y         Z
1                      6338479.4 1805665.4      575.7
2                      6338619.2 1805753.4      577.3
3                      6338733.3 1805822.9      579.7
4                      6338855.3 1805846.9      583.2
5                      6339024.6 1805803.3      583.5
6                      6339119.0 1805771.7      585.7
7                      6339203.7 1805718.6      585.7
8                      6339251.7 1805661.2      584.7
9                      6339273.2 1805611.7      584.7
10                     6339288.6 1805561.7      583.9
11                     6339301.3 1805516.7      583.9
12                     6339316.9 1805468.2      582.6
13                     6339327.2 1805419.0      582.6
14                     6339335.0 1805369.9      581.2
15                     6339341.9 1805324.7      581.2
16                     6339363.2 1805182.2      578.4
17                     6339385.5 1805043.2      577.0
18                     6339414.0 1804855.2      573.8
19                     6339431.0 1804701.9      570.3
20                     6339425.1 1804573.3      568.7
21                     6339440.9 1804451.3      568.0
22                     6339468.2 1804409.0      568.4
23                     6339493.4 1804369.0      568.4
24                     6339521.3 1804149.7      555.6
25                     6339568.0 1803991.8      557.0
26                     6339634.0 1803772.5      559.0
27                     6339685.1 1803601.7      560.6
28                     6339732.4 1803437.3      566.3
29                     6339776.4 1803284.2      566.6
30                     6339806.0 1803190.2      567.0
31                     6339845.6 1803083.2      583.8
32                     6339888.6 1802961.6      583.2
33                     6339928.8 1802847.1      583.2
34                     6339938.9 1802755.1      582.9
35                     6339942.7 1802657.4      582.3
36                     6339815.4 1802591.7      579.5
37                     6339770.7 1802344.7      577.2
38                     6339735.0 1802080.3      575.0
39                     6339766.6 1801907.1      574.9
1

ALPHA 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
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
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  .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  .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  .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  .0
7 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
     .0  .0  .0  .0  .0  .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  .0  .0  .0  .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

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
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
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  .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  .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  .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  .0
7 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
     .0  .0  .0  .0  .0  .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  .0  .0  .0  .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
1             60.4    61.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

   1        1
          49.3
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          49.8 48.3 50.9 48.5 46.0 45.6 44.2 39.3 41.1 39.3

          37.8 37.1 34.6 33.0
   3        1    2    3
          31.6 30.3 28.7
   4        1    2    3
          30.5 30.9 32.5
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          33.9 36.1 37.7 39.2 37.2 43.9 40.4 44.4 45.1 45.4

          48.7 50.4 49.3
```

```
   6        1
          48.5
   7          1     2     3     4     5     6     7     8
          21.8 22.4 21.2 19.8 19.6 21.2 21.5 20.9
   8          1     2     3     4     5     6     7     8     9    10

          18.9 16.7 15.4 15.1 14.1 14.0 16.2 16.9 17.0 18.4

1

 RECEIVER     LEQ(H)    L10
 2             61.4     62.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
          50.3
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
          51.1 49.7 52.3 49.5 46.5 45.8 44.4 39.8 41.4 39.6

          38.0 37.4 34.9 33.5
   3          1     2     3
          32.1 30.9 29.4
   4          1     2     3
          31.2 31.4 33.0
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
          34.4 36.5 38.0 39.4 38.0 44.0 40.6 44.6 45.3 46.1

          50.0 51.6 50.5
   6        1
          49.4
   7          1     2     3     4     5     6     7     8
          22.3 22.8 21.1 21.2 20.0 21.1 21.0 21.0
   8          1     2     3     4     5     6     7     8     9    10

          18.8 16.5 15.3 14.9 14.4 15.2 16.9 17.4 17.5 18.8

1

 RECEIVER     LEQ(H)    L10
 3             62.3     63.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
          51.4
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
          52.2 50.9 53.5 50.5 46.8 46.0 44.5 40.3 41.6 39.9

          38.1 37.6 35.1 34.2
   3          1     2     3
          32.9 31.9 30.7
   4          1     2     3
          32.2 32.3 34.1
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
          35.2 37.2 38.6 40.0 38.0 44.1 40.8 44.8 45.4 47.0

          51.2 52.8 51.5
   6        1
          50.4
   7          1     2     3     4     5     6     7     8
          22.8 23.2 21.3 22.0 20.4 21.0 20.9 20.9
   8          1     2     3     4     5     6     7     8     9    10

          18.9 16.5 15.2 14.9 14.8 16.3 17.3 17.8 17.9 19.4

1

 RECEIVER     LEQ(H)    L10
 4             63.5     64.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
          52.0
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
          53.7 52.5 55.2 51.8 47.4 46.5 44.9 40.7 42.4 40.2

          38.7 38.2 36.2 35.2
   3          1     2     3
          33.9 32.9 31.4
   4          1     2     3
          32.8 32.9 34.5
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
          35.6 37.5 38.9 40.3 38.3 44.5 41.1 45.3 45.9 48.2

          52.8 54.3 52.9
   6        1
          51.1
   7          1     2     3     4     5     6     7     8
          23.5 23.7 21.8 22.1 21.6 21.1 21.2 21.0
   8          1     2     3     4     5     6     7     8     9    10

          19.3 16.7 15.3 15.2 16.5 17.1 18.0 18.7 19.1 20.5

1

 RECEIVER     LEQ(H)    L10
 5             64.5     65.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
          50.7
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
          53.5 53.7 57.3 53.8 48.3 47.4 45.6 41.3 43.1 40.9

          39.1 38.4 36.1 35.4
   3          1     2     3
          34.4 33.4 31.9
   4          1     2     3
          33.2 33.2 34.8
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
          35.5 37.6 39.0 40.4 38.5 44.9 41.6 45.7 46.6 49.7

          54.5 55.7 52.7
   6        1
          49.9
   7          1     2     3     4     5     6     7     8
          24.9 24.7 22.5 22.7 22.6 21.3 21.2 21.1
   8          1     2     3     4     5     6     7     8     9    10

          20.5 16.8 15.7 15.5 18.1 18.2 19.3 19.6 19.5 20.8

1

 RECEIVER     LEQ(H)    L10
 6             65.7     66.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
          50.6
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
          53.7 54.5 59.4 55.6 49.1 48.0 46.0 41.7 43.4 41.2

          39.3 38.6 36.6 35.8
   3          1     2     3
          34.6 33.8 32.3
   4          1     2     3
          33.0 33.4 34.9
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
          35.9 37.9 39.1 40.7 38.8 45.2 42.1 45.9 47.4 51.0

          56.5 57.0 52.9
   6        1
          49.9
   7          1     2     3     4     5     6     7     8
          26.9 25.4 23.0 23.3 23.2 21.4 21.3 21.3
   8          1     2     3     4     5     6     7     8     9    10

          21.0 18.1 16.2 17.2 19.0 18.8 19.8 20.0 19.8 21.2

1

 RECEIVER     LEQ(H)    L10
 7             66.4     67.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
          50.9
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
          53.8 54.9 60.6 57.1 49.9 48.5 46.4 41.9 43.6 41.2

          39.2 38.6 36.1 35.1
   3          1     2     3
          34.1 33.2 31.9
   4          1     2     3
          32.6 32.5 33.9
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
          35.3 37.1 38.5 40.3 38.6 45.1 41.7 45.8 48.1 52.1

          57.2 57.4 53.1
   6        1
          50.2
   7          1     2     3     4     5     6     7     8
          27.2 26.3 23.7 23.5 23.7 21.7 21.6 21.4
   8          1     2     3     4     5     6     7     8     9    10

          20.9 19.4 16.6 18.7 19.3 19.3 19.9 20.0 19.5 20.6

1

 RECEIVER     LEQ(H)    L10
 8             64.1     65.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
          45.2
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
          48.0 49.1 57.1 57.8 50.4 48.8 46.6 42.0 43.6 41.1

          38.8 37.7 35.7 34.8
   3          1     2     3
          33.3 32.5 31.2
   4          1     2     3
          32.5 32.5 33.8
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
          34.6 36.3 38.1 39.8 38.0 44.6 41.5 45.8 48.4 52.4

          55.4 52.4 47.4
   6        1
          44.5
   7          1     2     3     4     5     6     7     8
          27.2 26.3 23.6 23.7 24.0 21.8 21.7 21.6
   8          1     2     3     4     5     6     7     8     9    10

          21.0 19.5 18.9 19.2 19.7 19.2 19.7 19.2 19.0 20.3

1

 RECEIVER     LEQ(H)    L10
 9             65.2     66.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
          47.4
   2          1     2     3     4     5     6     7     8     9    10
```

```
 11        12   13   14
          49.9 50.8 58.9 58.5 50.9 49.1 47.0 42.2 43.8 41.4

          38.8 37.8 35.7 34.6
  3         1    2    3
          33.4 32.6 31.3
  4         1    2    3
          32.6 32.5 33.9
  5         1    2    3    4    5    6    7    8    9   10

 11        12   13
          34.6 36.3 38.0 39.9 38.1 44.8 41.8 46.1 48.7 52.7

          56.3 54.0 49.3
  6         1
          46.6
  7         1    2    3    4    5    6    7    8
          27.4 26.4 23.7 23.7 24.2 22.0 21.9 21.7
  8         1    2    3    4    5    6    7    8    9   10

          21.1 19.6 19.1 19.5 19.9 19.3 19.7 19.2 19.0 20.4

1

 RECEIVER    LEQ(H)   L10
 10           65.2   66.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1         1
          47.8
  2         1    2    3    4    5    6    7    8    9   10

 11        12   13   14
          50.1 50.8 58.6 58.9 51.3 49.4 47.2 42.4 43.9 41.4

          38.8 37.8 35.7 34.8
  3         1    2    3
          33.2 32.4 31.2
  4         1    2    3
          32.4 32.3 33.7
  5         1    2    3    4    5    6    7    8    9   10

 11        12   13
          34.4 36.2 38.2 39.9 38.1 44.8 41.8 46.2 48.8 52.5

          56.2 53.8 49.4
  6         1
          47.0
  7         1    2    3    4    5    6    7    8
          27.4 26.5 23.7 23.8 24.4 22.1 21.9 21.8
  8         1    2    3    4    5    6    7    8    9   10

          21.1 19.6 19.1 19.6 19.9 19.3 19.7 19.1 19.0 20.3

1

 RECEIVER    LEQ(H)   L10
 11           65.3   67.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1         1
          48.2
  2         1    2    3    4    5    6    7    8    9   10

 11        12   13   14
          50.4 50.9 58.2 59.3 51.8 49.8 47.5 42.6 44.1 41.6

          39.0 37.8 35.8 34.9
  3         1    2    3
          33.8 32.4 31.2
  4         1    2    3
          32.4 32.3 33.7
  5         1    2    3    4    5    6    7    8    9   10

 11        12   13
          34.5 36.4 38.4 40.0 38.2 45.0 42.1 46.5 49.0 52.7

          56.2 53.7 49.7
  6         1
          47.4
  7         1    2    3    4    5    6    7    8
          27.6 26.6 23.9 23.9 24.5 22.3 22.1 22.0
  8         1    2    3    4    5    6    7    8    9   10

          21.2 19.8 19.3 19.8 20.1 19.4 19.8 19.2 19.1 20.4

1

 RECEIVER    LEQ(H)   L10
 12           64.7   66.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1         1
          47.7
  2         1    2    3    4    5    6    7    8    9   10

 11        12   13   14
          49.8 50.2 57.1 58.8 52.1 50.0 47.6 42.6 44.0 41.4

          38.8 37.5 35.5 34.6
  3         1    2    3
          33.7 32.3 30.8
  4         1    2    3
          32.0 31.9 33.3
  5         1    2    3    4    5    6    7    8    9   10

 11        12   13
          34.1 36.5 38.1 39.7 38.0 44.8 41.9 46.5 48.9 52.2

          55.1 52.6 49.2
  6         1
          46.9
  7         1    2    3    4    5    6    7    8
          27.6 26.5 23.8 23.8 24.5 22.4 22.2 22.1
  8         1    2    3    4    5    6    7    8    9   10

          21.1 19.8 19.3 19.8 19.9 19.2 19.6 19.0 18.8 20.1

1

 RECEIVER    LEQ(H)   L10
 13           64.6   66.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1         1
          47.9
  2         1    2    3    4    5    6    7    8    9   10

 11        12   13   14
          49.8 49.9 56.4 58.7 52.7 50.5 47.9 42.9 44.3 41.6

          39.2 37.9 35.6 34.7
  3         1    2    3
          33.8 32.9 31.6
  4         1    2    3
          32.0 32.0 34.1
  5         1    2    3    4    5    6    7    8    9   10

 11        12   13
          34.9 36.7 38.2 39.9 38.2 45.0 42.2 46.9 49.2 52.5

          54.3 52.3 49.0
  6         1
          47.1
  7         1    2    3    4    5    6    7    8
          27.8 26.8 24.0 24.0 24.7 22.6 22.3 22.3
  8         1    2    3    4    5    6    7    8    9   10

          21.2 19.9 19.5 19.9 20.1 19.4 20.0 19.4 18.9 20.2

1

 RECEIVER    LEQ(H)   L10
 14           64.0   65.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1         1
          47.5
  2         1    2    3    4    5    6    7    8    9   10

 11        12   13   14
          49.2 48.9 55.0 58.2 53.1 50.8 48.0 43.0 44.3 41.5

          39.2 38.0 35.6 34.4
  3         1    2    3
          33.5 32.6 31.1
  4         1    2    3
          32.4 32.4 33.8
  5         1    2    3    4    5    6    7    8    9   10

 11        12   13
          34.6 36.4 37.9 40.0 38.6 45.4 42.3 46.8 49.2 52.6

          52.8 51.0 48.2
  6         1
          46.4
  7         1    2    3    4    5    6    7    8
          27.8 26.7 23.9 24.0 24.8 22.7 22.4 22.3
  8         1    2    3    4    5    6    7    8    9   10

          21.2 19.8 19.6 20.0 19.9 19.2 19.8 19.5 19.2 20.0

1

 RECEIVER    LEQ(H)   L10
 15           64.0   65.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1         1
          47.5
  2         1    2    3    4    5    6    7    8    9   10

 11        12   13   14
          48.9 48.6 54.2 58.4 53.8 51.3 48.3 43.3 44.6 41.9

          39.4 38.6 36.1 35.2
  3         1    2    3
          33.7 32.7 31.4
  4         1    2    3
          32.5 32.5 33.9
  5         1    2    3    4    5    6    7    8    9   10

 11        12   13
          34.7 36.5 38.7 40.5 38.9 45.8 43.0 47.3 49.6 53.2

          52.3 50.2 47.9
  6         1
          46.3
  7         1    2    3    4    5    6    7    8
          28.0 27.0 24.2 24.2 25.0 22.8 22.6 22.5
  8         1    2    3    4    5    6    7    8    9   10

          21.4 20.2 19.7 20.1 20.2 19.5 20.0 20.0 19.5 20.6

1

 RECEIVER    LEQ(H)   L10
 16           63.5   65.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

  1         1
          46.2
  2         1    2    3    4    5    6    7    8    9   10

 11        12   13   14
          47.2 46.1 50.5 57.5 55.8 52.3 49.1 43.8 45.0 41.9

          39.5 38.5 36.2 35.3
  3         1    2    3
          34.2 33.3 31.9
  4         1    2    3
          32.8 32.8 34.3
  5         1    2    3    4    5    6    7    8    9   10

 11        12   13
          35.3 37.2 38.7 40.8 39.2 46.2 43.7 48.3 50.7 52.6

          50.9 47.0 45.0
  6         1
          44.2
  7         1    2    3    4    5    6    7    8
          28.3 27.2 24.4 24.5 25.4 23.2 23.0 22.8
  8         1    2    3    4    5    6    7    8    9   10

          21.6 20.6 19.7 20.4 20.1 19.4 19.8 19.9 19.5 20.8
```

```
1
 RECEIVER     LEQ(H)   L10
 17            63.9    65.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             44.4
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             45.0 43.7 49.2 56.1 58.4 53.8 50.1 44.7 45.6 42.5

             39.9 38.9 36.5 35.3
    3          1    2    3
             34.4 33.4 32.1
    4          1    2    3
             33.1 33.1 34.6
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             35.5 37.4 39.0 41.1 39.6 46.7 44.3 49.6 52.4 52.7

             49.1 46.3 44.1
    6          1
             42.0
    7          1    2    3    4    5    6    7    8
             28.9 27.8 25.0 25.1 26.0 23.6 23.4 23.2
    8          1    2    3    4    5    6    7    8    9   10

             22.1 21.3 18.2 20.6 20.7 19.8 20.4 20.2 19.8 21.0

1
 RECEIVER     LEQ(H)   L10
 18            64.4    66.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             42.8
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             43.4 42.4 47.0 53.5 60.1 56.1 51.4 45.8 46.6 43.1

             40.4 39.1 36.6 35.5
    3          1    2    3
             34.4 33.2 31.9
    4          1    2    3
             32.9 33.0 34.5
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             35.4 37.4 39.2 41.3 39.9 47.1 44.9 50.5 53.8 51.9

             47.5 44.0 42.0
    6          1
             41.0
    7          1    2    3    4    5    6    7    8
             29.9 28.8 26.1 26.2 26.5 24.3 23.9 23.7
    8          1    2    3    4    5    6    7    8    9   10

             23.1 21.3 19.1 20.7 21.4 20.3 20.6 20.4 19.9 21.1

1
 RECEIVER     LEQ(H)   L10
 19            64.3    66.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             41.4
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             42.0 40.8 45.4 52.1 58.6 58.3 52.8 46.9 47.6 43.8

             41.0 39.6 36.9 35.7
    3          1    2    3
             34.5 33.4 31.9
    4          1    2    3
             32.9 32.9 34.5
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             35.4 37.6 39.5 41.7 40.4 47.7 45.7 51.4 53.4 50.1

             46.6 43.7 41.3
    6          1
             40.0
    7          1    2    3    4    5    6    7    8
             30.2 29.2 26.6 26.7 26.8 24.6 24.3 24.0
    8          1    2    3    4    5    6    7    8    9   10

             23.7 21.0 19.5 20.3 21.6 20.9 21.1 20.8 20.2 21.3

1
 RECEIVER     LEQ(H)   L10
 20            64.9    66.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             41.4
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             41.8 40.6 44.9 51.6 56.9 60.0 54.8 48.5 49.1 45.7

             42.6 40.9 38.2 36.9
    3          1    2    3
             35.6 34.5 32.9
    4          1    2    3
             33.9 34.0 35.7
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             36.8 39.0 41.0 43.2 41.9 49.3 47.5 53.1 53.4 49.6

             46.5 44.0 41.8

    6          1
             40.2
    7          1    2    3    4    5    6    7    8
             30.0 29.4 27.0 27.0 26.9 25.2 24.7 24.4
    8          1    2    3    4    5    6    7    8    9   10

             23.8 20.4 19.1 19.4 21.6 21.3 21.4 21.8 21.3 22.5

1
 RECEIVER     LEQ(H)   L10
 21            65.1    67.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             40.9
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             41.2 40.1 45.6 51.0 55.2 60.4 56.7 49.8 48.8 45.6

             42.6 40.8 38.2 37.3
    3          1    2    3
             36.4 35.2 33.6
    4          1    2    3
             34.5 34.7 36.4
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             37.6 39.9 41.9 44.2 43.0 50.5 48.9 54.2 52.7 49.0

             46.0 43.7 41.7
    6          1
             40.7
    7          1    2    3    4    5    6    7    8
             30.5 29.9 27.4 27.5 27.4 25.6 25.1 24.8
    8          1    2    3    4    5    6    7    8    9   10

             24.0 20.3 19.5 19.4 22.0 21.5 22.0 21.7 21.3 22.4

1
 RECEIVER     LEQ(H)   L10
 22            65.3    67.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             41.4
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             42.0 40.9 45.5 50.4 54.6 60.7 57.6 50.3 49.2 45.7

             42.7 40.8 39.1 37.8
    3          1    2    3
             36.4 35.2 33.6
    4          1    2    3
             34.6 34.7 36.4
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             37.6 39.8 41.9 44.2 43.1 50.8 49.3 54.4 52.2 48.4

             45.5 43.2 41.2
    6          1
             40.2
    7          1    2    3    4    5    6    7    8
             31.0 30.3 27.8 27.8 27.7 25.8 25.3 25.0
    8          1    2    3    4    5    6    7    8    9   10

             24.3 20.9 19.7 20.0 22.2 21.8 22.1 21.9 21.4 22.4

1
 RECEIVER     LEQ(H)   L10
 23            65.3    67.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             40.7
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             41.3 40.2 44.8 49.9 53.8 60.5 58.4 50.7 49.7 45.7

             42.6 41.4 39.1 37.7
    3          1    2    3
             36.3 35.1 33.5
    4          1    2    3
             34.4 34.6 36.3
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             37.4 39.5 41.7 44.0 43.0 50.8 49.5 54.4 51.5 47.7

             44.9 42.6 40.5
    6          1
             39.6
    7          1    2    3    4    5    6    7    8
             31.4 30.7 28.0 28.1 28.0 26.0 25.5 25.1
    8          1    2    3    4    5    6    7    8    9   10

             24.6 21.1 19.9 20.3 22.5 22.0 22.2 21.8 21.6 23.3

1
 RECEIVER     LEQ(H)   L10
 24            62.7    64.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1         1
             37.5
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             38.1 36.8 41.6 46.3 49.5 54.6 58.5 50.1 49.7 45.7

             42.4 40.3 37.0 35.5
    3          1    2    3
             34.2 32.9 31.3
    4          1    2    3
```

```
          32.1 32.3 34.0
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          35.2 37.5 39.6 42.0 41.1 49.8 48.6 50.5 46.9 43.8

          41.3 39.1 37.2
   6        1
          36.3
   7        1    2    3    4    5    6    7    8
          31.3 30.5 27.7 27.8 27.8 26.2 25.5 24.9
   8        1    2    3    4    5    6    7    8    9   10

          23.2 20.5 19.6 19.8 21.5 20.9 21.2 21.0 20.5 21.3
1

 RECEIVER    LEQ(H)   L10
 25           63.1   65.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          37.3
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          37.8 36.5 41.0 45.9 48.6 53.0 58.8 52.9 51.9 47.3

          43.6 41.3 38.3 36.7
   3        1    2    3
          35.2 33.9 32.2
   4        1    2    3
          33.1 33.4 35.1
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          36.4 38.7 40.9 43.5 42.7 51.1 49.5 49.8 46.3 43.4

          41.1 39.0 37.1
   6        1
          36.2
   7        1    2    3    4    5    6    7    8
          32.7 31.6 28.8 28.8 28.6 27.1 26.2 25.6
   8        1    2    3    4    5    6    7    8    9   10

          23.6 21.3 20.4 20.6 22.1 21.7 22.0 21.8 21.2 22.2
1

 RECEIVER    LEQ(H)   L10
 26           63.2   65.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          37.4
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          37.8 36.4 40.8 45.2 47.7 51.3 55.6 56.0 55.8 49.3

          45.0 42.5 39.4 37.7
   3        1    2    3
          36.1 34.8 33.1
   4        1    2    3
          34.1 34.4 36.3
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          37.6 40.2 42.8 45.9 45.5 53.2 47.3 48.2 45.9 43.4

          41.2 39.1 37.3
   6        1
          36.5
   7        1    2    3    4    5    6    7    8
          35.0 33.5 30.5 30.2 29.9 28.3 27.3 26.5
   8        1    2    3    4    5    6    7    8    9   10

          24.4 22.3 21.5 21.8 23.3 22.9 23.2 22.9 22.2 23.2
1

 RECEIVER    LEQ(H)   L10
 27           63.5   65.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          37.5
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          38.2 36.7 40.9 44.9 47.2 50.4 53.4 54.2 58.4 51.2

          46.3 43.8 40.3 38.6
   3        1    2    3
          36.9 35.5 33.8
   4        1    2    3
          34.8 35.2 37.1
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          38.5 41.1 43.9 47.4 47.8 54.2 46.8 47.4 44.7 42.4

          40.4 38.5 36.8
   6        1
          36.0
   7        1    2    3    4    5    6    7    8
          37.3 35.3 32.0 31.4 31.0 29.4 28.2 27.2
   8        1    2    3    4    5    6    7    8    9   10

          24.9 23.2 22.4 22.8 24.2 23.7 24.3 23.8 23.2 24.1
1

 RECEIVER    LEQ(H)   L10
 28           64.7   66.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          38.5
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          38.8 37.2 41.3 45.1 47.5 50.2 52.6 53.0 59.6 55.0

          49.2 46.4 42.7 40.8
   3        1    2    3
          39.1 37.6 35.8
   4        1    2    3
          37.0 37.4 39.3
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          40.9 43.6 46.6 50.6 51.1 55.7 47.7 48.6 46.1 43.9

          42.0 40.3 38.7
   6        1
          38.1
   7        1    2    3    4    5    6    7    8
          41.1 38.3 34.6 34.0 32.4 31.0 29.7 28.7
   8        1    2    3    4    5    6    7    8    9   10

          25.9 24.8 24.0 24.4 25.0 26.1 26.2 26.1 25.4 26.3
1

 RECEIVER    LEQ(H)   L10
 29           64.2   65.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          38.7
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          38.9 37.3 41.2 44.6 46.1 48.4 51.3 51.1 57.4 56.8

          50.6 47.3 43.3 41.2
   3        1    2    3
          39.3 37.7 35.9
   4        1    2    3
          37.2 37.7 39.8
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          41.4 44.3 47.5 51.8 51.3 54.4 47.0 48.1 45.8 43.8

          42.0 40.4 38.8
   6        1
          38.1
   7        1    2    3    4    5    6    7    8
          43.8 40.8 36.2 33.9 33.1 31.7 29.8 28.2
   8        1    2    3    4    5    6    7    8    9   10

          26.4 25.2 25.0 25.3 25.2 24.7 26.5 26.2 25.7 26.5
1

 RECEIVER    LEQ(H)   L10
 30           63.8   65.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          38.8
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          38.8 37.2 41.1 44.5 45.8 48.0 50.7 50.2 56.1 56.9

          51.3 47.1 41.8 39.0
   3        1    2    3
          36.8 35.0 32.9
   4        1    2    3
          34.8 35.8 38.4
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          41.0 43.9 47.8 52.5 50.7 53.5 46.6 47.8 45.6 43.6

          42.0 40.4 39.0
   6        1
          38.4
   7        1    2    3    4    5    6    7    8
          44.0 42.6 33.7 31.6 32.5 29.8 27.1 25.4
   8        1    2    3    4    5    6    7    8    9   10

          23.9 22.8 22.7 23.9 24.5 24.2 22.9 22.7 22.9 23.7
1

 RECEIVER    LEQ(H)   L10
 31           67.1   68.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          39.2
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          39.3 37.6 41.3 44.6 46.6 48.7 51.1 50.0 56.4 60.4

          57.8 53.8 49.8 47.7
   3        1    2    3
          45.9 44.4 42.6
   4        1    2    3
          43.6 44.1 46.1
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          47.7 50.7 54.1 57.7 54.0 55.1 46.9 48.0 45.9 44.0

          42.3 40.9 39.5
   6        1
          38.9
   7        1    2    3    4    5    6    7    8
          48.2 49.8 44.1 42.0 39.7 36.9 35.2 33.9
   8        1    2    3    4    5    6    7    8    9   10

          32.4 30.8 30.3 31.1 31.9 32.8 33.3 33.1 32.5 33.2
1

 RECEIVER    LEQ(H)   L10
 32           66.8   68.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA
```

```
ROADWAY  SEGMENT

   1         1
           39.1
   2         1     2     3     4     5     6     7     8     9    10

  11        12    13    14
           39.2  37.4  41.1  44.1  45.2  47.2  49.7  49.0  54.9  58.7

           58.9  54.9  50.5  48.2
   3         1     2     3
           46.2  44.6  42.7
   4         1     2     3
           43.8  44.3  46.4
   5         1     2     3     4     5     6     7     8     9    10

  11        12    13
           48.2  51.4  55.0  57.3  52.5  54.0  46.3  47.5  45.5  43.7

           42.1  40.7  39.3
   6         1
           38.8
   7         1     2     3     4     5     6     7     8
           44.3  49.6  47.4  44.3  42.1  38.7  36.5  35.0
   8         1     2     3     4     5     6     7     8     9    10

           33.5  32.2  31.7  32.8  33.5  33.5  34.1  33.8  33.0  33.6

1

 RECEIVER     LEQ(H)    L10
 33             66.7    67.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1         1
           38.9
   2         1     2     3     4     5     6     7     8     9    10

  11        12    13    14
           38.9  37.2  40.8  43.8  44.7  46.6  49.0  48.1  53.6  57.1

           59.1  56.6  51.6  49.0
   3         1     2     3
           46.8  45.1  43.1
   4         1     2     3
           44.2  44.8  47.0
   5         1     2     3     4     5     6     7     8     9    10

  11        12    13
           49.0  52.5  56.2  56.6  51.5  53.0  45.6  46.9  45.0  43.3

           41.8  40.4  39.1
   6         1
           38.6
   7         1     2     3     4     5     6     7     8
           42.2  46.9  49.3  48.2  45.7  41.2  38.1  36.2
   8         1     2     3     4     5     6     7     8     9    10

           34.5  33.6  33.5  34.7  35.4  35.1  35.4  34.8  33.9  34.4

1

 RECEIVER     LEQ(H)    L10
 34             66.2    67.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1         1
           39.1
   2         1     2     3     4     5     6     7     8     9    10

  11        12    13    14
           39.0  37.2  40.8  43.7  44.5  46.4  48.6  47.5  52.9  55.7

           57.8  56.8  51.8  49.1
   3         1     2     3
           46.8  45.0  43.1
   4         1     2     3
           44.1  44.8  47.0
   5         1     2     3     4     5     6     7     8     9    10

  11        12    13
           48.9  52.4  56.0  55.6  50.8  52.7  45.3  46.8  44.9  43.2

           41.8  40.6  39.3
   6         1
           38.9
   7         1     2     3     4     5     6     7     8
           40.4  44.2  46.6  49.9  48.2  43.0  39.4  37.2
   8         1     2     3     4     5     6     7     8     9    10

           35.1  34.3  34.4  35.7  36.3  36.0  36.0  35.2  34.2  34.6

1

 RECEIVER     LEQ(H)    L10
 35             65.7    66.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1         1
           38.9
   2         1     2     3     4     5     6     7     8     9    10

  11        12    13    14
           38.8  37.0  40.6  43.4  44.1  45.9  47.9  46.6  51.7  54.4

           56.3  57.0  52.5  49.5
   3         1     2     3
           47.1  45.2  43.1
   4         1     2     3
           44.1  44.9  47.2
   5         1     2     3     4     5     6     7     8     9    10

  11        12    13
           49.4  53.1  55.5  54.5  49.7  51.9  44.7  46.2  44.5  42.9

           41.6  40.4  39.0
   6         1
           38.7
   7         1     2     3     4     5     6     7     8
           38.5  42.0  43.6  48.3  51.1  44.6  40.2  37.4
   8         1     2     3     4     5     6     7     8     9    10

           35.3  34.7  34.9  36.4  37.2  37.1  36.7  35.8  34.7  35.0

1

 RECEIVER     LEQ(H)    L10
 36             63.8    64.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1         1
           39.0
   2         1     2     3     4     5     6     7     8     9    10

  11        12    13    14
           38.9  37.0  40.6  43.4  44.2  45.9  47.2  45.6  50.4  51.3

           52.1  53.7  51.8  49.1
   3         1     2     3
           46.7  45.1  44.8
   4         1     2     3
           44.2  44.5  46.9
   5         1     2     3     4     5     6     7     8     9    10

  11        12    13
           49.0  52.4  52.6  51.6  47.4  50.7  44.6  46.2  44.5  43.0

           41.6  40.4  39.1
   6         1
           38.8
   7         1     2     3     4     5     6     7     8
           35.1  36.6  36.8  39.5  47.4  45.8  41.5  38.6
   8         1     2     3     4     5     6     7     8     9    10

           36.5  36.0  36.3  37.9  38.0  36.0  35.8  35.0  34.1  34.5

1

 RECEIVER     LEQ(H)    L10
 37             59.8    60.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1         1
           38.3
   2         1     2     3     4     5     6     7     8     9    10

  11        12    13    14
           38.2  36.4  39.8  42.6  43.2  44.6  45.7  43.6  48.1  48.1

           47.9  47.3  45.2  43.4
   3         1     2     3
           41.4  39.7  37.8
   4         1     2     3
           38.7  39.3  41.4
   5         1     2     3     4     5     6     7     8     9    10

  11        12    13
           43.0  45.4  46.6  47.6  44.9  48.8  43.0  44.8  43.3  42.0

           40.8  39.6  38.4
   6         1
           38.1
   7         1     2     3     4     5     6     7     8
           32.0  32.8  32.9  35.3  39.2  40.3  37.5  34.6
   8         1     2     3     4     5     6     7     8     9    10

           31.0  30.7  30.9  32.1  32.4  30.8  30.0  29.2  28.4  29.0

1

 RECEIVER     LEQ(H)    L10
 38             57.7    58.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1         1
           37.6
   2         1     2     3     4     5     6     7     8     9    10

  11        12    13    14
           37.5  35.6  39.0  41.7  42.1  43.4  44.3  41.9  46.2  45.6

           43.6  43.7  42.4  41.5
   3         1     2     3
           40.3  39.3  37.7
   4         1     2     3
           38.4  38.6  40.1
   5         1     2     3     4     5     6     7     8     9    10

  11        12    13
           41.0  42.6  43.1  43.8  42.5  47.1  41.5  43.5  42.2  41.0

           39.9  38.9  37.7
   6         1
           37.4
   7         1     2     3     4     5     6     7     8
           29.6  30.1  30.2  30.8  34.4  36.2  36.3  35.3
   8         1     2     3     4     5     6     7     8     9    10

           30.5  30.1  29.8  30.5  29.8  28.1  27.5  26.9  26.4  27.3

1

 RECEIVER     LEQ(H)    L10
 39             61.1    62.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1         1
           37.3
   2         1     2     3     4     5     6     7     8     9    10

  11        12    13    14
           37.1  35.1  38.5  41.1  41.5  42.7  43.5  39.5  44.1  45.1

           46.8  48.8  49.0  49.5
   3         1     2     3
           48.8  47.7  46.0
   4         1     2     3
           46.7  47.0  48.5
   5         1     2     3     4     5     6     7     8     9    10

  11        12    13
           48.8  49.1  48.1  46.5  42.0  45.0  37.9  41.4  41.6  40.5

           39.4  38.3  37.3
```

```
6         1
         37.0
7          1     2     3     4     5     6     7     8
         28.6  29.3  30.3  33.7  38.0  41.0  43.4  44.1
8          1     2     3     4     5     6     7     8     9    10

         39.1  38.4  37.9  37.7  36.5  34.6  34.2  34.0  33.9  35.5
```

```
                    *************************
                           OPTIMA-VU1
                    *************************
                 BARRIER OPTIMIZATION PROGRAM USING
              PARTIAL SOUND ENERGIES COMPUTED BY THE
                       STAMINA 2.0 PROGRAM
            MODIFIED FROM THE FHWA VAX VERSON -- MARCH 1983

       MODIFIED TO:
          1.  PLACE BARRIER COST DATA IN A DATA FILE CALLED
              OPTCOST.DTA TO ALLOW USER TO USE COSTS OTHER THAN
              THE FHWA NATIONAL AVERAGES.
                    *************************
          MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
                         IN JUNE 1991 BY
          VANDERBILT ENGINEERING CENTER FOR TRANSPORTATION
                   OPERATIONS AND RESEARCH (VECTOR)
       BOX 96-B, VANDERBILT UNIVERSITY, NASHVILLE, TENNESSEE 37235
                          (615) 322-3683
                    *************************

    PROBLEM TITLE
    *************
 Otay Ranch - Village 7: 02/2004

                 EFFECTIVENESS/COST RATIO AND BARRIER HEIGHT MATRICES
                 ****************************************************
BARRIER SECTION          EFFECTIVENESS/COST                    CORRESPONDING
  NO   IDENT                   RATIO                            BARRIER HEIGHTS(IN
FT)

 HEIGHT INDEX  1   2    3    4    5    6    7    8  1  2  3  4  5  6  7  8
   1   9f-16       *    36.   33.   30.   28.   27.   26.   25.   0.  8.
9.10.11.12.13.14.
   2   6a           *    35.   34.   33.   31.   30.   29.   28.   0.  8.
9.10.11.12.13.14.
   3   6b           *    35.   35.   33.   32.   31.   30.   30.   0.  8.
9.10.11.12.13.14.
   4   6c           *    37.   36.   34.   33.   32.   31.   31.   0.  8.
9.10.11.12.13.14.
   5   7            *    36.   34.   32.   31.   30.   29.   29.   0.  8.
9.10.11.12.13.14.
   6   8         *  34.  32.  31.  30.  30.  28.  27.  0. 5. 6. 7. 8.
9.10.11.
   7   9         *  32   30.  29.  29.  28.  26.  25.  0. 5. 6. 7. 8.
9.10.11.
   8  10       * 33. 33. 31. 30. 30. 29. 29. 0. 3. 4. 5. 6. 7. 8.
9.
   9  11       * 33. 32. 31. 30. 29. 28. 28. 0. 3. 4. 5. 6. 7. 8.
9.
  10  12       * 33. 32. 31. 30. 29. 29. 28. 0. 3. 4. 5. 6. 7. 8.
9.
  11  13       * 34. 33. 32. 31. 30. 29. 29. 0. 3. 4. 5. 6. 7. 8.
9.
  12  14       * 34. 33. 32. 31. 30. 29. 28. 0. 3. 4. 5. 6. 7. 8.
9.
  13  15       * 35. 34. 33. 31. 30. 29. 29. 0. 3. 4. 5. 6. 7. 8.
9.
  14  16       * 35. 34. 33. 32. 31. 30. 29. 0. 3. 4. 5. 6. 7. 8.
9.
  15  17       * 32. 31. 30. 29. 28  27. 27. 0. 3. 4. 5. 6. 7. 8.
9.
  16  18       * 32. 31. 30. 29. 28. 27. 27. 0. 3. 4. 5. 6. 7. 8.
9.
  17  19          *  30.  28.  28.  27.  26.  24.  24.  0. 6. 7. 8.
9.10.11.12.
  18  20          *  31.  29.  28.  28.  26   24.  24.  0. 6. 7. 8.
9.10.11.12.
  19  21          *  31.  29.  29.  28.  26.  25.  24.  0. 6. 7. 8.
9.10.11.12.
  20  22          *  32.  30.  29.  28.  27.  25.  25.  0. 6. 7. 8.
9.10.11.12.
  21  23          *  32.  30.  29.  29.  27.  25.  25.  0  6  7. 8.
9.10.11.12.
  22  24          *  32.  30.  29.  28.  26.  24   24.  0  6. 7. 8.
9.10.11.12.
  23   2-rev     *  30.  27.  27.  26.  24.  22.  22.  0. 6. 7. 8.
9.10.11.12.
  24   1       *  0.   0    0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  25   2       * 19. 15. 11.   9. 12. 14. 15. 0. 3. 4. 5. 6. 7  8.
9.
  26   3       * 19. 16. 11.   9. 11. 13. 13. 0. 3. 4. 5. 6. 7. 8.
9.
  27   4       * 19. 14. 12. 15. 17. 18. 18. 0. 3. 4. 5. 6. 7. 8.
9.
  28   5       * 28. 25. 19. 17. 20. 22. 22. 0. 3. 4. 5. 6. 7. 8.
9.
  29   6       * 18. 16. 17. 19. 21. 22. 22. 0. 3. 4. 5. 6. 7. 8.
9.
  30   7       * 23  18. 17. 20  21  22  22  0  3  4. 5. 6. 7. 8
9.
  31   8       * 13. 12. 15. 16. 17  18. 18  0. 3  4. 5. 6. 7. 8.
9.
  32   9       * 34. 32. 26. 26. 28  28. 28. 0. 3. 4. 5. 6. 7. 8.
9.
  33  10       * 28. 24. 20. 18. 20. 22. 22. 0. 3. 4. 5. 6. 7. 8.
9.
  34  11       * 15. 12.  9.   9. 10. 12. 12. 0. 3. 4. 5. 6. 7. 8.
9.
  35  12         *  35.  31.  30.  32.  32.  30.  30.  0. 4. 5. 6. 7. 8.
9.10.
  36  13         *  23.  17.  16.  20.  22.  23.  24.  0. 4. 5. 6. 7. 8.
9.10.
  37  14         *  35.  30.  30.  32.  31.  30.  29.  0. 4. 5. 6. 7. 8.
9.10.
  38  15         *  38.  34.  33.  35.  35.  33.  32.  0. 4. 5. 6. 7. 8.
9.10.
   39  40      *  0.                                  0. 0.
   40  41      *  0.                                  0. 0.
   41  42      *  0.                                  0. 0.
   42  43      *  0.                                  0. 0.
   43  44      *  0.                                  0. 0.
   44  45      *  0.                                  0. 0.
   45  46      *  0.                                  0. 0.
   46  47      *  0.                                  0. 0.
   47  48      *  0.                                  0. 0.
   48  49      *  0.                                  0. 0.
   49  50      *  0.                                  0. 0.
   50  51      *  0.                                  0. 0.
   51  53      *  0.                                  0. 0.
   52  3-rev     *  27.  25.  24.  23.  23.  22.  21.  0. 4. 5. 6. 7. 8.
9.10.
   53  53        *  39.  37.  38.  37.  35.  33.  32.  0. 4. 5. 6. 7. 8.
9.10.
   54  54        *  39.  37.  37.  36.  34.  32.  32.  0. 4. 5. 6. 7. 8.
9.10.
   55  55        *  41.  39.  39.  38.  36.  34.  33.  0. 4. 5. 6. 7. 8.
9.10.
   56  56        *  39.  37.  37.  36.  34.  32.  31.  0. 4. 5. 6. 7. 8.
9.10.
   57  57        *  38.  36.  37.  36.  34.  32.  31   0. 4. 5. 6. 7. 8.
9.10.
   58  58        *  39.  38.  38.  37.  35.  33.  31.  0. 4. 5. 6. 7. 8.
9.10.
   59  59        *  30.  29.  29.  28.  27.  25.  24   0. 4. 5  6. 7. 8.
9.10.
   60  60a      *  23.  20.  18.  19.  18.  16.  15.  0. 3. 4. 5. 6. 7. 8.
9.
   61  60b      *  27.  25.  24.  22.  20.  19.  19.  0. 3. 4. 5. 6. 7. 8.
9.
   62  60c      *  12.  12.  11.   9.   9.   8.   8.  0. 3. 4. 5  6  7  8
9.
   63  61       *  23.  21.  19.  18.  17.  16.  16.  0. 3. 4. 5  6. 7. 8
9.
   64  62       *  30.  28.  29.  28.  26.  24.  23   0. 3. 4. 5. 6. 7. 8.
9.
   65  63       *   0.   0.   0    0.   0.   0.   0   0. 3. 4. 5. 6. 7. 8.
9.

 HEIGHT INDEX  1   2    3    4    5    6    7    8   1  2  3  4  5  6  7  8

 Otay Ranch - Village 7: 02/2004

 first floor receivers with barriers

 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   5  7  8  8  7  8  7  8  7  7  7  7  8  8  8  8  5  5  5  5  6  8  2  1  1
   1  1  1  1  2  2  4  4  4  6  6  7  8  1  1  1  1  1  1  1  1  1  1  1  1
   1  1  8  8  8  7  7  6  5  3  3  3  3  3  3
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
 11.13.14.14.13.11.10. 9. 8. 8. 8. 8. 9. 9. 9. 9. 9. 9. 9. 9.10.12. 6. 0. 0.
  0. 0. 0. 0. 3. 3. 5. 5. 5. 8. 8. 9.10. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
  0. 0.10.10.10. 9. 9. 8. 7. 4. 4. 4. 4. 4. 4.

     R E S U L T S
     *************

 REC     REC ID          LEQ        LEQ(Z(0))       IL
   1      1              60.7        63.1           2.4
   2      2              61.7        63.9           2.2
   3      3              63.2        65.3           2.1
   4      4              63.3        67.9           4.6
   5      5              63.2        69.5           6.3
   6      6              63.5        71.2           7.7
   7      7              62.8        72.4           9.6
   8      8              63.0        72.5           9.5
   9      9              63.5        71.4           7.9
  10     10              63.4        71.1           7.7
  11     11              63.5        71.2           7.6
  12     12              63.0        70.8           7.8
  13     13              63.0        70.6           7.6
  14     14              62.6        69.9           7.3
  15     15              62.6        69.6           7.0
  16     16              62.2        68.6           6.3
  17     17              62.6        68.4           5.9
  18     18              63.0        69.0           6.0
  19     19              62.8        68.8           6.0
  20     20              63.1        69.1           6.0
  21     21              63.3        69.4           6.1
  22     22              63.4        69.7           6.3
  23     23              63.3        69.8           6.5
  24     24              61.3        67.3           6.0
  25     25              61.9        68.3           6.4
  26     26              62.7        69.6           7.0
  27     27              62.8        70.3           7.5
  28     28              63.5        71.0           7.5
  29     29              63.1        70.2           7.1
  30     30              63.4        69.8           6.3
  31     31              63.0        75.6          12.6
  32     32              62.5        75.3          12.8
  33     33              62.6        75.1          12.5
  34     34              63.3        74.3          11.1
  35     35              63.3        73.6          10.3
  36     36              63.4        69.2           5.7
  37     37              60.4        64.4           4.0
  38     38              58.1        61.2           3.1
  39     39              63.4        68.2           4.9

 BARRIER TYPE            COST                   AREA (SQ. FT.)
 FH-BERM                     0.                     0.
 FH-MASON               216800.                 40318.
 FH-WOOD                     0.                     0.
 FH-CONC                     0.                     0.
 FH-STEEL                    0.                     0.
*********************************************************************
  TOTALS:          $    216800.                 40318.

 END OF ALL CASES
```

```
**************************
STAM2VU1
Version 1.20
**************************
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
   1.  ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
   2.  CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY
       USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
   3.  PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A
       DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE
       LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.
**************************
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE
HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK
CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE
*.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH )
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Otay Ranch - Village 7: 02/2004

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM 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)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Southbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0

	X	Y	Z	GRADE
1	6339513.3	1806920.6	600.4	0
2	6339510.5	1806467.0	598.8	0

0ROADWAY 2 Southbound SR-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0

	X	Y	Z	GRADE
2	6339510.5	1806467.0	598.8	0
3	6339509.1	1806114.7	593.8	0
4	6339508.2	1805921.3	592.2	0
5	6339506.6	1805567.2	590.6	0
6	6339518.4	1805084.1	587.3	0
7	6339558.1	1804696.4	584.0	0
8	6339626.5	1804317.1	580.7	0
9	6339721.1	1803940.3	577.4	0
10	6339779.5	1803754.4	575.8	0
11	6339915.4	1803392.1	572.5	0
12	6340052.2	1803092.3	569.2	0
13	6340182.4	1802843.8	564.3	0
14	6340344.6	1802558.3	554.5	0
15	6340485.7	1802306.5	544.6	0
16	6340646.7	1802025.4	531.5	0

0ROADWAY 3 Southbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0

	X	Y	Z	GRADE
16	6340646.7	1802025.4	531.5	0
17	6340806.7	1801741.3	516.7	0
18	6340985.8	1801426.3	500.3	0
19	6341154.7	1801109.5	483.9	0

0ROADWAY 4 Northbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0

	X	Y	Z	GRADE
1	6341260.4	1801145.7	485.6	1
2	6341061.5	1801517.5	503.6	1
3	6340903.6	1801796.7	516.7	1
4	6340743.5	1802078.7	531.5	1

0ROADWAY 5 Northbound SR-125, Birch to RM

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0

	X	Y	Z	GRADE
4	6340743.5	1802078.7	531.5	1
5	6340583.6	1802361.5	544.6	1
6	6340405.7	1802676.0	556.1	1
7	6340228.9	1802992.4	564.3	1
8	6340066.7	1803323.5	569.2	1
9	6339993.2	1803497.7	570.9	1
10	6339809.9	1804036.4	575.8	1
11	6339761.7	1804219.9	577.4	1
12	6339684.8	1804591.6	580.7	1
13	6339638.4	1804969.2	584.0	1
14	6339618.1	1805346.8	587.3	1
15	6339618.1	1805728.7	590.6	1
16	6339621.4	1806111.3	593.8	1
17	6339622.2	1806484.0	598.8	1

0ROADWAY 6 Northbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0

	X	Y	Z	GRADE
17	6339622.2	1806484.0	598.8	1
18	6339626.5	1806918.9	600.4	1

0ROADWAY 7 Southbound Ramp to Rock Mountain

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	561.	45.0
VEH5	18.	45.0
VEH6	12.	45.0

0

	X	Y	Z	GRADE
1	6339864.2	1803405.4	565.9	1
2	6339924.1	1803175.4	566.5	1
3	6339984.3	1802962.1	567.1	1
4	6340015.7	1802831.9	567.5	1
5	6340026.5	1802684.8	567.9	1
6	6340003.6	1802446.2	568.5	1
7	6339995.2	1802224.4	569.1	1
8	6340032.5	1802046.0	569.6	1
9	6340089.2	1801885.6	570.0	1

0ROADWAY 8 Ramp from wb Rock Mountain to sb-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	671.	45.0
VEH5	21.	45.0
VEH6	14.	45.0

0

	X	Y	Z	GRADE
1	6340294.9	1801957.4	570.0	0
2	6340188.4	1802001.2	565.7	0
3	6340138.6	1802064.9	562.8	0
4	6340116.7	1802131.7	560.3	0
5	6340125.6	1802215.3	557.2	0
6	6340173.4	1802290.0	554.0	0
7	6340242.1	1802330.8	551.1	0
8	6340334.8	1802336.8	547.7	0
9	6340430.4	1802292.0	543.8	0
10	6340498.1	1802198.4	539.7	0
11	6340589.7	1802044.0	533.1	0

1

BARRIER 1 TYPE(A) R-O-W barrier 1acont'd

	X	Y	Z	Z0	DELZ	P
sf-16	6339241.5	1805697.6	591.7	580.7	1.0	3
6a	6339296.6	1805665.7	593.0	582.0		
6b	6339342.5	1805640.0	594.1	583.1		
6c	6339383.5	1805617.1	595.0	584.0		
7	6339406.4	1805509.8	595.0	584.0		
8	6339434.3	1805343.0	599.9	588.9		

1

BARRIER 2 TYPE(A) R-O-W barrier 1bcont'd

	X	Y	Z	Z0	DELZ	P
8	6339434.3	1805343.0	596.9	588.9	1.0	3
9	6339453.5	1805206.6	597.6	589.6		
10	6339469.4	1805092.9	597.9	589.9		

1

BARRIER 3 TYPE(A) R-O-W barrier 2cont'd

	X	Y	Z	Z0	DELZ	P
10	6339469.4	1805092.9	595.9	589.9	1.0	3
11	6339469.8	1805006.9	594.9	588.9		
12	6339469.6	1804987.8	593.3	587.3		
13	6339479.8	1804897.0	591.1	585.1		
14	6339495.0	1804777.7	590.0	584.0		
15	6339517.8	1804626.1	588.3	582.3		
16	6339550.1	1804460.9	586.8	580.8		
17	6339589.1	1804285.5	585.1	579.1		

18	6339634.0	1804109.2	583.4	577.4		
19	6339663.6	1803997.1	582.0	576.0		

1

BARRIER 4 TYPE(A) R-O-W barrier trf to top of slope barrier

	X	Y	Z	Z0	DELZ	P
	---------COORDINATES---------					
19	6339663.6	1803997.1	585.0	576.0	1.0	3
20	6339705.0	1803857.9	583.7	574.7		
21	6339735.2	1803763.2	582.9	573.9		
22	6339758.3	1803694.7	582.5	573.5		
23	6339774.3	1803649.9	582.0	573.0		
24	6339798.4	1803582.7	581.6	572.6		
2-rev	6339886.3	1803152.2	580.0	571.0		
3-rev	6339854.5	1803141.6	580.0	571.0		

1

BARRIER 5 TYPE(A) S-F Pad Edges

	X	Y	Z	Z0	DELZ	P
	---------COORDINATES---------					
1	6338450.5	1805660.4	576.7	570.7	1.0	3
2	6338496.9	1805688.8	576.7	570.7		
3	6338586.8	1805745.8	578.3	572.3		
4	6338643.8	1805781.6	578.3	572.3		
5	6338703.0	1805818.1	580.7	574.7		
6	6338761.4	1805846.6	580.7	574.7		
7	6338765.1	1805848.1	582.8	576.8		
8	6338814.8	1805859.8	582.8	576.8		
9	6338819.2	1805860.5	584.2	578.2		

1

BARRIER 6 TYPE(A) S-F Pad Edges cont'd.1

	X	Y	Z	Z0	DELZ	P
	---------COORDINATES---------					
9	6338819.2	1805860.5	584.2	578.2	1.0	3
10	6338898.8	1805853.9	584.2	578.2		
11	6338994.5	1805823.2	584.2	578.2		
12	6338998.2	1805822.5	584.5	578.5		

1

BARRIER 7 TYPE(A) S-F Pad Edges cont'd.2

	X	Y	Z	Z0	DELZ	P
	---------COORDINATES---------					
12	6338998.2	1805822.5	585.5	578.5	1.0	3
13	6339061.0	1805801.3	585.5	578.5		
14	6339065.4	1805799.9	587.7	580.7		
15	6339173.6	1805762.6	587.7	580.7		
16	6339241.5	1805697.6	587.7	580.7		

1

BARRIER 8 TYPE(A) Elem School Pad Edges

	X	Y	Z	Z0	DELZ	P
	---------COORDINATES---------					
40	6339064.2	1804045.1	548.0	548.0	.0	0
41	6339477.3	1804188.3	550.0	550.0		
42	6339517.0	1804198.4	550.2	550.2		
43	6339575.6	1804002.5	552.0	552.0		
44	6339641.2	1803781.3	554.0	554.0		
45	6339706.8	1803560.2	556.0	556.0		
46	6339706.8	1803544.3	556.1	556.1		

1

BARRIER 9 TYPE(A) Elem to Park Pads

	X	Y	Z	Z0	DELZ	P
	---------COORDINATES---------					
46	6339706.8	1803544.3	556.1	556.1	.0	0
48	6339717.2	1803526.8	561.3	561.3		

1

BARRIER 10 TYPE(A) Park Pad Edges

	X	Y	Z	Z0	DELZ	P
	---------COORDINATES---------					
47	6339591.3	1803493.6	560.0	560.0	.0	0
48	6339717.2	1803526.8	561.3	561.3		
49	6339762.7	1803371.2	561.5	561.5		
50	6339808.2	1803214.7	562.0	562.0		
51	6339819.6	1803172.7	562.1	562.1		

1

BARRIER 11 TYPE(A) Park to High Pads

	X	Y	Z	Z0	DELZ	P
	---------COORDINATES---------					
51	6339819.6	1803172.7	562.1	562.1	.0	0
53	6339837.0	1803137.7	579.5	579.5		
52	6339709.4	1803101.9	576.9	576.9		

1

BARRIER 12 TYPE(A) High School Pad Edges

	X	Y	Z	Z0	DELZ	P
	---------COORDINATES---------					
3-rev	6339854.5	1803141.6	578.0	571.0	1.0	3
53	6339837.0	1803137.7	586.5	579.5		
54	6339875.5	1803030.2	585.6	578.6		
55	6339921.0	1802903.4	585.5	578.5		
56	6339942.8	1802838.7	585.4	578.4		
57	6339950.7	1802716.3	585.0	578.0		
58	6339953.3	1802656.0	584.5	577.5		
59	6339944.6	1802632.3	584.3	577.3		
60a	6339822.2	1802585.1	581.6	574.6		

1

BARRIER 13 TYPE(A) High School Pad Edges cont'd.

	X	Y	Z	Z0	DELZ	P
	---------COORDINATES---------					
60a	6339822.2	1802585.1	580.6	574.6	1.0	3
60b	6339807.2	1802441.6	584.7	578.7		
60c	6339785.7	1802288.4	585.1	579.1		
61	6339775.0	1802195.2	586.8	580.8		
62	6339763.6	1802083.2	585.7	579.7		
63	6339781.1	1801897.9	576.4	570.4		
64	6339783.7	1801794.7	576.4	570.4		

1

Second-floor Receivers (at 15 feet)

	X	Y	Z
	------------COORDINATES------------		
1	6338479.4	1805665.4	585.7
2	6338619.2	1805753.4	587.3
3	6338733.3	1805822.9	589.7
4	6338855.3	1805846.9	593.2
5	6339024.6	1805803.3	593.5
6	6339119.0	1805771.7	595.7
7	6339203.7	1805718.6	595.7
8	6339251.7	1805661.2	594.7
9	6339273.2	1805611.7	594.7
10	6339288.6	1805561.7	593.9
11	6339301.3	1805516.7	593.9
12	6339316.9	1805468.2	592.6
13	6339327.2	1805419.0	592.6
14	6339335.0	1805369.9	591.2
15	6339341.9	1805324.7	591.2
16	6339363.2	1805182.2	588.4
17	6339385.5	1805043.2	587.0
18	6339414.0	1804855.2	583.8
19	6339431.0	1804701.9	580.3
20	6339425.1	1804573.3	578.7
21	6339440.9	1804451.3	578.0
22	6339468.2	1804409.0	578.4
23	6339493.4	1804369.0	578.4
24	6339521.3	1804149.7	565.6
25	6339568.0	1803991.8	567.0
26	6339634.0	1803772.5	569.0
27	6339685.1	1803601.7	570.6
28	6339732.4	1803437.3	576.3
29	6339776.4	1803284.2	576.6
30	6339806.0	1803190.2	577.0
31	6339845.6	1803083.2	593.8
32	6339888.6	1802961.6	593.2
33	6339928.8	1802847.1	593.2
34	6339938.9	1802755.1	592.9
35	6339942.7	1802657.4	592.3
36	6339815.4	1802591.7	589.5
37	6339770.7	1802344.7	587.2
38	6339735.0	1802080.3	585.0
39	6339766.6	1801907.1	584.9

1

ALPHA 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
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
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  .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  .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  .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  .0
7 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
     .0  .0  .0  .0  .0  .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  .0  .0  .0  .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

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
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
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  .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  .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  .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  .0
7 *  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
     .0  .0  .0  .0  .0  .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  .0  .0  .0  .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
1	62.2	63.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

```
ROADWAY  SEGMENT

   1       1
          54.3
   2       1    2    3    4    5    6    7    8    9   10

  11      12   13   14
          52.2 49.3 51.5 49.0 46.4 45.9 44.5 39.6 41.4 39.7

          38.2 37.7 35.3 33.8
   3       1    2    3
          32.4 31.1 29.5
   4       1    2    3
          31.4 31.8 33.4
   5       1    2    3    4    5    6    7    8    9   10

  11      12   13
          34.7 36.9 38.4 39.8 37.8 44.4 41.0 45.0 45.8 46.2

          49.4 51.0 50.8
```

```
   6        1
           53.5
   7          1     2     3     4     5     6     7     8
           22.0  22.7  21.5  20.2  19.9  21.5  21.8  21.2
   8          1     2     3     4     5     6     7     8     9    10

           19.4  17.1  15.9  15.5  14.5  14.4  16.8  17.5  17.7  19.1
1

 RECEIVER     LEQ(H)    L10
 2             63.5    64.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           55.4
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           54.4  51.2  53.0  50.2  46.9  46.2  44.7  40.1  41.7  39.9

           38.4  37.9  35.7  34.4
   3          1     2     3
           33.3  31.8  30.3
   4          1     2     3
           32.3  32.4  34.3
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           35.4  37.4  38.7  40.0  38.5  44.6  41.2  45.3  46.1  47.0

           50.8  52.6  53.0
   6        1
           54.6
   7          1     2     3     4     5     6     7     8
           22.5  23.1  21.4  21.5  20.3  21.4  21.3  21.3
   8          1     2     3     4     5     6     7     8     9    10

           19.3  17.0  15.7  15.3  14.8  15.7  17.5  18.1  18.3  19.6
1

 RECEIVER     LEQ(H)    L10
 3             65.3    66.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           56.4
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           57.2  54.3  55.2  51.2  47.2  46.5  44.9  40.6  42.0  40.3

           38.6  38.2  36.0  35.1
   3          1     2     3
           34.0  33.0  31.9
   4          1     2     3
           33.4  33.5  35.2
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           36.2  38.0  39.3  40.6  38.6  44.8  41.4  45.5  46.3  48.0

           52.1  55.2  56.4
   6        1
           55.3
   7          1     2     3     4     5     6     7     8
           23.1  23.4  21.6  22.3  20.7  21.3  21.2  21.2
   8          1     2     3     4     5     6     7     8     9    10

           19.3  16.9  15.6  15.3  15.3  16.8  18.0  18.6  18.8  20.3
1

 RECEIVER     LEQ(H)    L10
 4             67.5    68.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.3
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           58.8  57.6  59.3  52.7  47.8  47.0  45.3  41.1  42.8  40.7

           39.2  38.8  37.0  36.3
   3          1     2     3
           35.1  34.2  32.8
   4          1     2     3
           34.3  34.3  35.8
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           36.7  38.4  39.6  40.9  38.9  45.2  41.8  46.1  46.9  49.4

           55.0  59.3  58.0
   6        1
           56.4
   7          1     2     3     4     5     6     7     8
           23.8  24.1  22.1  22.4  21.9  21.4  21.5  21.3
   8          1     2     3     4     5     6     7     8     9    10

           19.6  17.2  15.7  15.7  17.0  17.7  18.7  19.6  20.1  21.6
1

 RECEIVER     LEQ(H)    L10
 5             69.4    70.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.8
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.2  59.8  62.4  54.9  49.0  47.9  46.0  41.7  43.6  41.5

           39.7  39.3  37.5  36.7
   3          1     2     3
           35.9  35.0  33.6
   4          1     2     3
           35.0  35.0  36.4
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           37.0  38.8  40.0  41.4  39.4  45.7  42.5  46.7  47.8  51.3

           58.4  61.3  59.3
   6        1
           57.0
   7          1     2     3     4     5     6     7     8
           25.4  25.1  22.9  23.1  22.9  21.6  21.5  21.4
   8          1     2     3     4     5     6     7     8     9    10

           20.8  17.2  16.2  16.0  18.6  18.9  20.2  20.7  20.8  22.2
1

 RECEIVER     LEQ(H)    L10
 6             70.9    72.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           58.0
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.8  61.1  64.9  57.6  49.9  48.6  46.6  42.1  43.9  41.8

           40.0  39.6  37.9  37.3
   3          1     2     3
           36.4  35.7  34.3
   4          1     2     3
           35.1  35.4  36.8
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           37.6  39.2  40.3  41.7  39.8  46.2  43.1  47.1  48.9  52.9

           61.3  62.8  59.9
   6        1
           57.2
   7          1     2     3     4     5     6     7     8
           27.6  25.8  23.4  23.7  23.5  21.7  21.7  21.6
   8          1     2     3     4     5     6     7     8     9    10

           21.2  18.6  16.7  17.7  19.7  19.7  20.8  21.3  21.2  22.7
1

 RECEIVER     LEQ(H)    L10
 7             72.1    73.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.8
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.9  61.8  66.9  59.6  50.9  49.3  47.1  42.6  44.3  42.1

           40.2  39.9  37.9  37.1
   3          1     2     3
           36.3  35.5  34.2
   4          1     2     3
           35.1  34.9  36.3
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           37.5  39.1  40.3  41.8  40.0  46.5  43.2  47.4  50.0  54.4

           63.0  63.9  60.2
   6        1
           57.2
   7          1     2     3     4     5     6     7     8
           28.2  27.2  24.4  24.0  24.1  22.0  21.9  21.7
   8          1     2     3     4     5     6     7     8     9    10

           21.2  19.8  17.1  19.2  20.0  20.6  21.2  21.5  21.4  22.6
1

 RECEIVER     LEQ(H)    L10
 8             69.5    70.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           55.4
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           57.9  58.5  63.4  60.4  51.7  49.7  47.5  42.9  44.6  42.3

           40.3  39.6  37.8  37.1
   3          1     2     3
           35.8  35.1  33.9
   4          1     2     3
           35.3  35.2  36.5
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           37.1  38.7  40.2  41.8  39.9  46.4  43.3  47.7  50.7  55.3

           60.3  59.9  57.1
   6        1
           54.6
   7          1     2     3     4     5     6     7     8
           28.4  27.4  24.6  24.5  24.4  22.1  22.0  21.9
   8          1     2     3     4     5     6     7     8     9    10

           21.6  19.9  19.4  19.8  20.7  20.7  21.3  21.2  21.2  22.6
1

 RECEIVER     LEQ(H)    L10
 9             69.1    70.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           52.8
   2          1     2     3     4     5     6     7     8     9    10
```

```
   11        12    13    14
            55.4  56.3  63.1  61.6  52.3  50.1  47.8  43.2  44.8  42.6

            40.4  39.9  38.0  37.1
    3         1     2     3
            36.0  35.4  34.2
    4         1     2     3
            35.6  35.5  36.7
    5         1     2     3     4     5     6     7     8     9    10

   11        12    13
            37.4  38.9  40.3  42.0  40.1  46.7  43.7  48.1  51.3  56.1

            60.7  59.2  54.9
    6         1
            52.2
    7         1     2     3     4     5     6     7     8
            28.7  27.6  24.8  24.7  24.7  22.3  22.2  22.0
    8         1     2     3     4     5     6     7     8     9    10

            21.9  20.1  19.6  20.1  21.0  20.9  21.5  21.4  21.4  22.8

1

 RECEIVER     LEQ(H)    L10
 10            68.9     70.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
            51.8
    2         1     2     3     4     5     6     7     8     9    10

   11        12    13    14
            54.4  55.4  62.6  62.3  52.8  50.5  48.1  43.5  45.0  42.8

            40.6  40.0  38.1  37.4
    3         1     2     3
            36.0  35.3  34.1
    4         1     2     3
            35.5  35.4  36.7
    5         1     2     3     4     5     6     7     8     9    10

   11        12    13
            37.3  38.9  40.6  42.1  40.3  46.9  43.9  48.4  51.5  56.3

            60.9  58.5  54.1
    6         1
            51.3
    7         1     2     3     4     5     6     7     8
            28.9  27.8  25.0  24.9  24.9  22.5  22.3  22.2
    8         1     2     3     4     5     6     7     8     9    10

            22.0  20.3  19.7  20.2  21.2  21.1  21.6  21.5  21.5  22.9

1

 RECEIVER     LEQ(H)    L10
 11            69.0     70.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
            51.4
    2         1     2     3     4     5     6     7     8     9    10

   11        12    13    14
            53.9  54.7  62.1  62.9  53.4  51.0  48.5  43.7  45.3  43.0

            40.9  40.1  38.3  37.6
    3         1     2     3
            36.7  35.4  34.3
    4         1     2     3
            35.7  35.5  36.8
    5         1     2     3     4     5     6     7     8     9    10

   11        12    13
            37.4  39.2  40.9  42.3  40.5  47.2  44.3  48.8  51.9  56.7

            61.2  58.1  53.7
    6         1
            50.9
    7         1     2     3     4     5     6     7     8
            29.1  28.0  25.2  25.1  25.1  22.6  22.4  22.4
    8         1     2     3     4     5     6     7     8     9    10

            22.1  20.4  19.9  20.4  21.4  21.3  21.8  21.7  21.7  23.1

1

 RECEIVER     LEQ(H)    L10
 12            68.5     70.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
            50.9
    2         1     2     3     4     5     6     7     8     9    10

   11        12    13    14
            53.3  53.7  61.0  62.8  53.9  51.4  48.8  43.9  45.5  43.1

            40.9  40.1  38.2  37.5
    3         1     2     3
            36.7  35.5  34.0
    4         1     2     3
            35.4  35.2  36.5
    5         1     2     3     4     5     6     7     8     9    10

   11        12    13
            37.2  39.4  40.8  42.3  40.5  47.2  44.4  49.0  52.0  56.5

            60.3  57.2  53.0
    6         1
            50.5
    7         1     2     3     4     5     6     7     8
            29.2  28.1  25.3  25.2  25.2  22.8  22.6  22.5
    8         1     2     3     4     5     6     7     8     9    10

            22.3  20.6  20.0  20.6  21.5  21.3  21.8  21.6  21.6  23.0

1

 RECEIVER     LEQ(H)    L10
 13            68.2     69.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
            50.6
    2         1     2     3     4     5     6     7     8     9    10

   11        12    13    14
            52.8  53.1  60.2  62.7  54.7  51.9  49.1  44.3  45.8  43.4

            41.2  40.4  38.5  37.8
    3         1     2     3
            36.9  36.2  34.9
    4         1     2     3
            35.5  35.4  37.4
    5         1     2     3     4     5     6     7     8     9    10

   11        12    13
            38.1  39.8  41.1  42.6  40.8  47.5  44.8  49.6  52.5  57.0

            59.5  56.7  52.6
    6         1
            50.1
    7         1     2     3     4     5     6     7     8
            29.5  28.4  25.5  25.4  25.4  22.9  22.7  22.6
    8         1     2     3     4     5     6     7     8     9    10

            22.4  20.7  20.1  20.7  21.7  21.5  22.2  22.0  21.8  23.2

1

 RECEIVER     LEQ(H)    L10
 14            67.5     69.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
            50.1
    2         1     2     3     4     5     6     7     8     9    10

   11        12    13    14
            52.1  52.2  58.8  62.0  55.2  52.3  49.4  44.4  45.9  43.4

            41.4  40.6  38.5  37.6
    3         1     2     3
            36.8  36.0  34.7
    4         1     2     3
            35.9  35.8  37.2
    5         1     2     3     4     5     6     7     8     9    10

   11        12    13
            38.0  39.6  41.0  42.7  41.2  47.9  44.9  49.7  52.5  57.1

            57.7  55.3  51.9
    6         1
            49.6
    7         1     2     3     4     5     6     7     8
            29.6  28.5  25.6  25.5  25.5  23.1  22.8  22.7
    8         1     2     3     4     5     6     7     8     9    10

            22.5  20.8  20.3  20.8  21.7  21.6  22.1  22.3  22.1  23.1

1

 RECEIVER     LEQ(H)    L10
 15            67.5     69.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
            49.8
    2         1     2     3     4     5     6     7     8     9    10

   11        12    13    14
            51.7  51.7  57.7  62.2  56.0  52.9  49.7  44.8  46.2  43.7

            41.6  41.1  39.1  38.3
    3         1     2     3
            37.0  36.2  35.0
    4         1     2     3
            36.2  36.1  37.5
    5         1     2     3     4     5     6     7     8     9    10

   11        12    13
            38.2  39.8  41.6  43.2  41.6  48.4  45.7  50.2  53.0  58.0

            57.0  54.4  51.5
    6         1
            49.4
    7         1     2     3     4     5     6     7     8
            29.9  28.7  25.9  25.7  25.7  23.2  23.0  22.9
    8         1     2     3     4     5     6     7     8     9    10

            22.6  21.1  20.4  20.9  21.9  21.7  22.3  22.7  22.5  23.8

1

 RECEIVER     LEQ(H)    L10
 16            66.7     68.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
            48.6
    2         1     2     3     4     5     6     7     8     9    10

   11        12    13    14
            50.0  49.0  53.6  60.9  58.4  54.3  50.7  45.5  46.8  44.1

            42.0  41.4  39.4  38.7
    3         1     2     3
            37.8  37.0  35.7
    4         1     2     3
            36.7  36.7  38.1
    5         1     2     3     4     5     6     7     8     9    10

   11        12    13
            38.9  40.7  42.0  43.8  42.1  49.2  46.7  51.5  54.4  56.8

            55.3  50.8  48.6
    6         1
            47.5
    7         1     2     3     4     5     6     7     8
            30.3  29.2  26.3  26.0  26.0  23.6  23.4  23.2
    8         1     2     3     4     5     6     7     8     9    10

            23.0  21.2  20.4  21.2  21.8  22.0  22.5  22.8  22.8  24.1
```

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1

 RECEIVER     LEQ(H)    L10
 17            67.3    69.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1        1
            47.0
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            47.6 46.4 52.1 59.2 61.9 56.1 51.9 46.5 47.6 44.9

            42.6 41.9 39.8 38.9
    3        1    2    3
            38.1 37.1 36.0
    4        1    2    3
            37.2 37.2 38.6
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            39.3 41.1 42.5 44.3 42.8 49.9 47.8 53.4 56.9 57.1

            52.9 50.0 47.5
    6        1
            45.2
    7        1    2    3    4    5    6    7    8
            31.0 29.8 26.9 26.5 26.5 24.0 23.8 23.7
    8        1    2    3    4    5    6    7    8    9   10

            23.3 21.9 18.9 21.4 22.0 22.4 23.0 23.3 23.1 24.5

1

 RECEIVER     LEQ(H)    L10
 18            68.4    70.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1        1
            45.5
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            46.1 45.1 49.7 56.5 64.4 59.1 53.6 47.7 48.6 45.6

            43.2 42.3 40.1 39.2
    3        1    2    3
            38.2 37.2 36.0
    4        1    2    3
            37.1 37.1 38.6
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            39.4 41.3 42.9 44.8 43.4 50.8 48.9 54.9 59.2 57.0

            51.4 47.3 45.1
    6        1
            44.2
    7        1    2    3    4    5    6    7    8
            31.8 30.3 27.2 27.0 27.1 24.7 24.4 24.2
    8        1    2    3    4    5    6    7    8    9   10

            23.8 22.0 19.3 21.5 22.4 22.6 23.3 23.5 23.4 24.7

1

 RECEIVER     LEQ(H)    L10
 19            68.0    70.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1        1
            43.9
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            44.4 43.3 47.7 55.0 62.5 61.8 54.9 48.8 49.5 46.1

            43.6 42.6 40.2 39.1
    3        1    2    3
            38.0 37.0 35.6
    4        1    2    3
            36.7 36.8 38.3
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            39.2 41.3 43.0 45.1 43.8 51.3 49.6 56.0 58.3 54.4

            50.6 47.4 44.6
    6        1
            42.9
    7        1    2    3    4    5    6    7    8
            31.6 29.9 27.5 27.5 27.4 25.1 24.8 24.6
    8        1    2    3    4    5    6    7    8    9   10

            24.4 21.8 19.7 21.1 22.7 22.5 23.6 23.7 23.4 24.6

1

 RECEIVER     LEQ(H)    L10
 20            67.8    69.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1        1
            43.6
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            43.9 42.7 46.9 53.8 59.6 63.0 56.6 50.0 50.5 47.2

            44.6 43.2 40.9 39.7
    3        1    2    3
            38.5 37.4 35.9
    4        1    2    3
            37.1 37.2 38.9
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            39.9 42.0 43.9 46.0 44.8 52.4 50.9 57.3 57.6 53.2

            49.7 47.1 44.7
    6        1
            43.0
    7        1    2    3    4    5    6    7    8
            30.8 30.3 27.8 27.8 27.5 25.7 25.3 25.0
    8        1    2    3    4    5    6    7    8    9   10

            24.6 21.2 19.9 20.2 22.7 22.7 23.1 24.1 23.9 25.1

1

 RECEIVER     LEQ(H)    L10
 21            67.9    69.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1        1
            42.9
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            43.3 42.1 47.5 53.0 57.6 63.3 58.7 51.2 50.4 47.2

            44.6 43.3 40.7 40.0
    3        1    2    3
            39.1 38.0 36.4
    4        1    2    3
            37.6 37.8 39.5
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            40.6 42.7 44.7 46.9 45.7 53.6 52.5 58.4 56.7 52.3

            49.1 46.6 44.5
    6        1
            43.5
    7        1    2    3    4    5    6    7    8
            31.3 30.8 28.3 28.3 28.0 26.1 25.7 25.4
    8        1    2    3    4    5    6    7    8    9   10

            24.8 21.2 20.3 20.2 23.0 23.0 23.5 23.8 23.7 24.8

1

 RECEIVER     LEQ(H)    L10
 22            68.5    70.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1        1
            43.9
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            44.5 43.3 47.8 52.7 57.1 63.9 60.0 52.0 51.0 47.6

            44.8 43.6 41.8 40.7
    3        1    2    3
            39.4 38.3 36.7
    4        1    2    3
            37.9 38.1 39.8
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            40.9 43.0 45.0 47.2 46.1 54.2 53.4 59.1 56.5 52.2

            49.0 46.5 44.3
    6        1
            43.3
    7        1    2    3    4    5    6    7    8
            31.9 31.2 28.7 28.7 28.3 26.4 25.9 25.6
    8        1    2    3    4    5    6    7    8    9   10

            25.2 21.8 20.5 20.9 23.3 23.4 23.8 24.2 24 0 25.1

1

 RECEIVER     LEQ(H)    L10
 23            68.8    71.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1        1
            43.6
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            44.2 43.0 47.5 52.4 56.6 64.3 61.4 52.7 51.8 47.9

            45.0 44.2 42.1 40.9
    3        1    2    3
            39.6 38.5 36.9
    4        1    2    3
            38.1 38.3 39.9
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
            41.0 43.0 45.1 47.4 46.4 54.7 54.1 59.5 56.1 51.7

            48.7 46.2 44.1
    6        1
            43.1
    7        1    2    3    4    5    6    7    8
            32.3 31.7 29.1 29.0 28.7 26.6 26.1 25.8
    8        1    2    3    4    5    6    7    8    9   10

            25.5 22.0 20.8 21.1 23.8 23.7 24.1 24.5 24.5 26.3

1

 RECEIVER     LEQ(H)    L10
 24            65.4    67.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1        1
            40.2
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
            40.7 39.4 43.9 48.5 51.6 57.1 61.3 52.1 51.6 47.5

            44.4 42.4 39.2 37.9
    3        1    2    3
            36.4 35.1 33.5
    4        1    2    3
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          34.5 34.7 36.5
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          37.7 40.0 42.2 44.6 43.6 52.9 51.8 53.7 49.9 46.7

          44.2 42.0 40.1
   6        1
          39.2
   7        1    2    3    4    5    6    7    8
          32.3 31.6 28.9 28.9 28.6 26.9 26.2 25.7
   8        1    2    3    4    5    6    7    8    9   10

          24.6 21.5 20.5 20.7 22.8 22.4 23.0 22.9 22.5 23.4
1

 RECEIVER    LEQ(H)   L10
 25           65.8   68.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          40.1
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          40.6 39.2 43.5 48.1 50.7 55.1 61.7 55.4 53.9 49.2

          45.7 43.8 40.6 39.1
   3        1    2    3
          37.5 36.2 34.5
   4        1    2    3
          35.6 35.9 37.7
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          39.0 41.4 43.6 46.3 45.6 54.3 53.2 53.3 49.5 46.5

          44.1 42.1 40.2
   6        1
          39.4
   7        1    2    3    4    5    6    7    8
          33.8 32.8 30.0 30.0 29.6 27.8 27.1 26.5
   8        1    2    3    4    5    6    7    8    9   10

          25.2 22.3 21.3 21.6 23.6 23.4 23.9 23.8 23.4 24.4
1

 RECEIVER    LEQ(H)   L10
 26           66.0   68.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          40.4
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          40.7 39.3 43.5 47.4 49.6 53.2 57.9 58.9 58.4 51.6

          47.6 45.4 42.1 40.4
   3        1    2    3
          38.8 37.4 35.7
   4        1    2    3
          36.9 37.3 39.2
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          40.6 43.3 45.9 49.1 48.8 56.8 50.8 51.6 49.2 46.5

          44.3 42.4 40.6
   6        1
          39.9
   7        1    2    3    4    5    6    7    8
          36.3 35.0 31.9 31.7 31.1 29.1 28.3 27.7
   8        1    2    3    4    5    6    7    8    9   10

          26.2 23.6 22.6 23.0 25.0 24.8 25.4 25.3 24.8 25.8
1

 RECEIVER    LEQ(H)   L10
 27           66.4   68.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          40.4
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          41.0 39.4 43.4 47.0 48.9 52.0 55.4 56.7 61.4 54.2

          49.4 46.9 43.4 41.7
   3        1    2    3
          40.0 38.5 36.8
   4        1    2    3
          38.0 38.4 40.4
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          41.9 44.6 47.4 51.0 51.5 58.1 50.2 50.6 47.8 45.4

          43.5 41.7 40.0
   6        1
          39.4
   7        1    2    3    4    5    6    7    8
          39.0 37.1 33.8 33.3 32.6 30.3 29.4 28.6
   8        1    2    3    4    5    6    7    8    9   10

          27.0 24.6 23.7 24.1 26.2 26.1 26.6 26.5 26.1 27.0
1

 RECEIVER    LEQ(H)   L10
 28           68.1   70.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          40.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          41.2 39.5 43.3 46.7 48.5 51.2 54.2 54.8 62.8 59.0

          53.0 50.2 46.5 44.6
   3        1    2    3
          42.9 41.3 39.5
   4        1    2    3
          40.9 41.4 43.4
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          45.0 48.0 51.1 55.3 56.1 60.0 50.8 51.3 48.6 46.3

          44.5 42.9 41.4
   6        1
          40.8
   7        1    2    3    4    5    6    7    8
          43.3 40.6 36.9 36.6 34.4 32.1 31.1 30.3
   8        1    2    3    4    5    6    7    8    9   10

          28.3 26.5 25.6 26.1 27.6 29.2 29.4 29.4 29.0 29.9
1

 RECEIVER    LEQ(H)   L10
 29           68.1   69.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          40.7
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          40.8 39.1 42.9 46.0 47.3 49.6 52.6 52.5 60.6 61.6

          55.3 51.7 47.9 45.8
   3        1    2    3
          44.0 42.5 40.7
   4        1    2    3
          41.9 42.4 44.5
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          46.1 49.3 52.8 57.4 56.9 58.5 49.6 50.3 47.8 45.8

          44.1 42.5 41.1
   6        1
          40.4
   7        1    2    3    4    5    6    7    8
          46.5 43.9 39.9 38.0 34.9 33.5 32.2 31.3
   8        1    2    3    4    5    6    7    8    9   10

          29.1 27.6 26.6 27.3 27.5 28.7 30.9 30.9 30.4 31.2
1

 RECEIVER    LEQ(H)   L10
 30           68.2   69.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          40.5
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          40.6 38.9 42.6 45.7 46.9 49.0 51.8 51.5 59.1 62.2

          57.0 53.8 48.1 44.9
   3        1    2    3
          42.5 40.5 38.3
   4        1    2    3
          40.9 41.8 44.6
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          47.6 50.7 54.0 58.7 56.6 57.6 48.9 49.8 47.4 45.4

          43.8 42.2 40.9
   6        1
          40.3
   7        1    2    3    4    5    6    7    8
          47.2 47.2 38.9 35.4 36.1 34.5 33.0 31.9
   8        1    2    3    4    5    6    7    8    9   10

          29.8 28.3 27.4 28.2 28.4 27.7 27.3 27.9 28.4 29.3
1

 RECEIVER    LEQ(H)   L10
 31           75.3   76.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          44.6
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.1 41.9 45.1 47.2 47.4 49.1 51.9 51.7 61.6 69.9

          67.0 61.9 57.3 55.0
   3        1    2    3
          53.1 51.6 49.8
   4        1    2    3
          50.9 51.4 53.4
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          55.2 58.5 62.8 66.9 62.8 62.8 51.1 51.2 48.9 47.5

          46.8 46.1 45.6
   6        1
          45.1
   7        1    2    3    4    5    6    7    8
          54.1 60.9 52.9 48.2 42.1 38.2 36.4 34.9
   8        1    2    3    4    5    6    7    8    9   10

          33.6 32.5 32.3 33.5 34.6 36.5 39.5 40.2 39.7 40.4
1

 RECEIVER    LEQ(H)   L10
 32           75.2   76.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA
```

```
ROADWAY  SEGMENT

   1        1
           44.9
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           44.5 42.0 44.4 46.7 46.9 48.4 50.8 50.3 60.5 67.7

           68.6 63.9 58.6 56.0
   3         1    2    3
           53.9 52.3 50.4
   4         1    2    3
           51.5 52.1 54.2
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           56.1 59.8 64.3 66.5 60.8 61.2 51.2 51.6 48.7 47.5

           47.2 46.6 45.2
   6         1
           44.7
   7         1    2    3    4    5    6    7    8
           52.4 60.7 58.3 52.9 45.4 40.6 37.9 36.0
   8         1    2    3    4    5    6    7    8    9   10

           35.2 33.9 33.9 35.4 36.5 38.2 40.6 41.5 40.8 41.4

1

RECEIVER     LEQ(H)   L10
33            75.1   76.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           44.5
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           44.6 42.8 46.0 46.6 46.4 47.7 49.9 49.3 59.9 65.1

           68.5 65.8 60.1 57.1
   3         1    2    3
           54.8 52.9 50.9
   4         1    2    3
           52.0 52.8 55.0
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.1 61.0 65.3 65.5 59.1 60.0 51.6 52.8 50.7 49.0

           47.5 46.2 44.8
   6         1
           44.4
   7         1    2    3    4    5    6    7    8
           50.1 56.4 60.8 58.9 54.0 43.6 39.7 37.9
   8         1    2    3    4    5    6    7    8    9   10

           40.8 40.0 39.1 41.5 43.0 43.0 43.3 42.9 42.0 42.4

1

RECEIVER     LEQ(H)   L10
34            74.4   75.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           44.3
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           43.6 41.4 44.2 45.5 45.7 47.0 49.2 48.3 55.8 62.7

           66.9 66.5 61.0 57.8
   3         1    2    3
           55.3 53.4 51.3
   4         1    2    3
           52.4 53.2 55.6
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.8 61.7 65.1 64.1 57.8 58.2 48.6 49.9 48.1 46.9

           46.1 45.4 44.6
   6         1
           44.1
   7         1    2    3    4    5    6    7    8
           43.6 50.1 56.9 61.3 57.5 47.3 42.7 41.6
   8         1    2    3    4    5    6    7    8    9   10

           41.7 41.0 41.3 43.1 44.4 44.3 44.5 43.9 42.9 43.2

1

RECEIVER     LEQ(H)   L10
35            73.7   75.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           41.0
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           40.7 38.8 42.2 44.8 45.0 46.4 48.5 47.3 53.2 60.1

           65.0 66.2 61.8 58.6
   3         1    2    3
           55.9 53.9 51.8
   4         1    2    3
           52.8 53.7 56.1
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           58.4 62.2 64.5 62.5 56.5 54.6 46.0 47.5 45.8 44.4

           43.3 42.3 41.3
   6         1
           41.1
   7         1    2    3    4    5    6    7    8
           41.3 46.5 52.7 58.9 61.8 52.7 47.2 44.3
   8         1    2    3    4    5    6    7    8    9   10

           42.8 42.2 42.7 44.7 46.0 45.9 45.8 45.0 43.8 44.0

1

RECEIVER     LEQ(H)   L10
36            69.7   70.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           39.8
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           39.5 37.6 41.0 43.8 44.5 46.1 47.7 46.1 51.7 53.5

           55.8 60.2 60.2 57.8
   3         1    2    3
           55.5 53.6 51.6
   4         1    2    3
           52.6 53.3 55.6
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.5 60.5 58.6 54.9 49.8 52.1 45.0 46.5 44.7 43.3

           42.1 41.1 40.0
   6         1
           39.9
   7         1    2    3    4    5    6    7    8
           37.0 38.5 39.0 42.3 55.9 52.7 47.8 44.7
   8         1    2    3    4    5    6    7    8    9   10

           42.7 42.3 42.8 44.6 45.5 45.0 44.7 43.8 42.8 43.3

1

RECEIVER     LEQ(H)   L10
37            65.7   66.7

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           38.7
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           38.7 36.8 40.2 42.7 43.3 44.9 46.1 44.0 49.0 49.8

           52.7 56.0 55.0 53.5
   3         1    2    3
           51.5 49.6 47.5
   4         1    2    3
           48.5 49.3 51.5
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           53.1 55.0 54.9 51.8 46.6 49.8 43.4 45.1 43.5 42.2

           41.0 39.9 38.9
   6         1
           38.7
   7         1    2    3    4    5    6    7    8
           33.3 34.0 34.3 40.6 47.8 50.2 46.9 43.2
   8         1    2    3    4    5    6    7    8    9   10

           40.3 40.1 40.6 42.2 42.5 41.0 40.2 39.3 38.5 39.2

1

RECEIVER     LEQ(H)   L10
38            63.4   64.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           38.1
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           37.8 35.8 39.2 41.8 42.3 43.6 44.6 42.3 46.9 47.1

           49.7 52.0 51.9 51.6
   3         1    2    3
           50.5 49.2 47.3
   4         1    2    3
           48.2 48.6 50.3
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           51.1 52.0 51.3 49.3 44.2 47.9 41.9 43.8 42.5 41.2

           40.1 39.0 38.0
   6         1
           37.8
   7         1    2    3    4    5    6    7    8
           30.4 30.9 31.3 37.0 41.7 44.9 46.2 44.8
   8         1    2    3    4    5    6    7    8    9   10

           40.5 40.1 39.7 40.4 39.4 37.5 37.0 36.6 36.3 37.4

1

RECEIVER     LEQ(H)   L10
39            68.4   69.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           37.9
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           37.4 35.4 38.7 41.2 41.7 42.9 43.8 41.4 45.8 46.2

           54.5 56.9 57.4 57.8
   3         1    2    3
           57.1 55.7 53.7
   4         1    2    3
           54.5 55.0 56.7
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.1 57.3 56.1 53.7 43.3 46.9 41.1 43.1 41.8 40.6

           39.5 38.5 37.6
```

```
6         1
        37.4
7         1     2     3     4     5     6     7     8
        29.4 30.0 35.7 41.5 45.8 48.8 51.1 51.7
8         1     2     3     4     5     6     7     8     9    10

        46.7 46.4 45.9 46.0 44.9 43.1 42.7 42.4 42.1 43.9
```

```
                    ***************************
                           OPTIMA-VU1
                    ***************************
               BARRIER OPTIMIZATION PROGRAM USING
              PARTIAL SOUND ENERGIES COMPUTED BY THE
                      STAMINA 2.0 PROGRAM
          MODIFIED FROM THE FHWA VAX VERSON -- MARCH 1983

     MODIFIED TO:
       1.   PLACE BARRIER COST DATA IN A DATA FILE CALLED
            OPTCOST.DTA TO ALLOW USER TO USE COSTS OTHER THAN
            THE FHWA NATIONAL AVERAGES.
                    ***************************
        MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
                        IN JUNE 1991 BY
        VANDERBILT ENGINEERING CENTER FOR TRANSPORTATION
                OPERATIONS AND RESEARCH (VECTOR)
     BOX 96-B, VANDERBILT UNIVERSITY, NASHVILLE, TENNESSEE 37235
                        (615) 322-3683
                    ***************************

  PROBLEM TITLE
  *************
Otay Ranch - Village 7: 02/2004

             EFFECTIVENESS/COST RATIO AND BARRIER HEIGHT MATRICES
             ****************************************************
BARRIER SECTION         EFFECTIVENESS/COST                  CORRESPONDING
  NO   IDENT                   RATIO                         BARRIER HEIGHTS(IN
FT)

 HEIGHT INDEX  1   2    3    4    5    6    7    8  1  2  3  4  5  6  7  8
    1    sf-16      *   31.   40.   39.   37.   33.   30.   29.    0.  8.
9.10.11.12.13.14.
    2    6a          *   39.   39.   35.   31.   30.   31.   32.    0.  8.
9.10.11.12.13.14.
    3    6b          *   37.   33.   32.   32.   32.   33.   33.    0.  8.
9.10.11.12.13.14.
    4    6c          *   38.   36.   35.   35.   35.   35.   35.    0.  8.
9.10.11.12.13.14.
    5    7           *   39.   37.   36.   34.   34.   33.   33.    0.  8.
9.10.11.12.13.14.
    6    8        *  36.  35.  35.  34.  34.  32.  31.  0. 5. 6. 7. 8.
9.10.11.
    7    9        *  35.  33.  33.  32.  31.  30.  28.  0. 5. 6. 7. 8.
9.10.11.
    8    10     *  36.  35.  34.  33.  33.  32.  32.  0. 3. 4. 5. 6. 7. 8.
9.
    9    11     *  35.  35.  34.  33.  32.  32.  31.  0. 3. 4. 5. 6. 7. 8.
9.
   10    12     *  35   35.  34.  33.  33.  32.  32.  0. 3. 4. 5. 6. 7. 8.
9.
   11    13     *  37   36.  35.  34.  34.  33.  33.  0. 3. 4. 5. 6. 7. 8.
9.
   12    14     *  37.  36.  35.  34.  33.  33.  32.  0. 3. 4. 5. 6. 7. 8.
9.
   13    15     *  37.  37.  35.  34.  34.  33.  33.  0. 3. 4. 5. 6. 7. 8.
9.
   14    16     *  38.  38.  36.  35.  34.  34.  33.  0. 3. 4. 5. 6. 7. 8.
9.
   15    17     *  34.  34.  33.  32.  31.  30.  30.  0. 3. 4. 5. 6. 7. 8.
9.
   16    18     *  35.  33.  32.  31.  31.  30.  30.  0. 3. 4. 5. 6. 7. 8.
9.
   17    19         *   32.   31.   30.   30.   28.   26.   26.   0. 6. 7. 8.
9.10.11.12.
   18    20         *   34.   32.   31.   30.   29.   27.   27.   0. 6. 7. 8.
9.10.11.12.
   19    21         *   34.   32.   31.   31.   29.   28.   27.   0. 6. 7. 8.
9.10.11.12.
   20    22         *   34.   33.   32.   31.   30.   28.   28.   0. 6. 7. 8.
9.10.11.12.
   21    23         *   35.   33.   33.   32.   30.   29.   28.   0. 6. 7. 8.
9.10.11.12.
   22    24         *   35.   34.   34.   34.   32.   30.   29.   0. 6. 7. 8.
9.10.11.12.
   23    2-rev     *   33.   32.   32.   32.   31.   29.   29.   0. 6. 7. 8.
9.10.11.12.
   24    1      *   0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
   25    2      *   0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
   26    3      *   0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
   27    4      *  12.  12.  11.   9.   8.   7.   6.  0. 3. 4. 5. 6. 7. 8.
9.
   28    5      *   0.  15.  17.  15.  14.  12.  11.  0. 3. 4. 5. 6. 7. 8.
9.
   29    6      *  19.  29.  29.  28.  26.  25.  24.  0. 3. 4. 5. 6. 7. 8.
9.
   30    7      *  20.  24.  24.  22.  20.  18.  18.  0. 3. 4. 5. 6. 7. 8.
9.
   31    8      *  26.  26.  23.  21.  20.  19.  18.  0. 3. 4. 5. 6. 7. 8.
9.
   32    9      *  25.  26.  27.  27.  26.  24.  23.  0. 3. 4. 5. 6. 7. 8.
9.
   33    10     *  25.  27.  26.  24.  23.  21.  20.  0. 3. 4. 5. 6. 7. 8.
9.
   34    11     *  22.  22.  20.  18.  17.  15.  14.  0. 3. 4. 5. 6. 7. 8.
9.
   35    12       *  24.  23.  22.  20.  19.  17.  16.  0. 4. 5. 6. 7. 8.
9.10.
   36    13       *  15.  21.  30.  31.  29.  28.  27.  0. 4. 5. 6. 7. 8.
9.10.
   37    14       *  23.  22.  20.  18.  16.  14.  13.  0. 4. 5. 6. 7. 8.
9.10.
   38    15       *  26.  27.  29.  27.  25.  24.  23.  0. 4. 5. 6. 7. 8.
9.10.
   39   40      *   0.                                  0. 0.
   40   41      *   0.                                  0. 0.
   41   42      *   0.                                  0. 0.
   42   43      *   0.                                  0. 0.
   43   44      *   0.                                  0. 0.
   44   45      *   0.                                  0. 0.
   45   46      *   0.                                  0. 0.
   46   47      *   0.                                  0. 0.
   47   48      *   0.                                  0. 0.
   48   49      *   0.                                  0. 0.
   49   50      *   0.                                  0. 0.
   50   51      *   0.                                  0. 0.
   51   53      *   0.                                  0. 0.
   52   3-rev     *  31.  30.  30.  30.  30.  29.  29.  0. 4. 5. 6. 7. 8.
9.10.
   53   53        *  17.  17.  17.  17.  17.  17.  17.  0. 4. 5. 6. 7. 8.
9.10.
   54   54        *  25.  26.  26.  25.  23.  22.  22.  0. 4. 5. 6. 7. 8.
9.10.
   55   55        *  29.  31.  32.  32.  31.  28.  27.  0. 4. 5. 6. 7. 8.
9.10.
   56   56        *  25.  27.  28.  28.  27.  25.  24.  0. 4. 5. 6. 7. 8.
9.10.
   57   57        *  25.  25.  26.  26.  25.  25.  24.  0. 4. 5. 6. 7. 8.
9.10.
   58   58        *  26.  26.  26.  26.  25.  24.  24.  0  4. 5. 6. 7. 8.
9.10.
   59   59        *  18.  19.  20.  20.  18.  16.  16.  0. 4. 5. 6. 7. 8.
9.10.
   60   60a     * -17. -16. -17. -17. -17. -16. -16.  0. 3. 4. 5. 6. 7. 8.
9.
   61   60b     *  28.  37.  35.  29.  26.  27.  29.  0. 3. 4. 5. 6. 7. 8.
9.
   62   60c     *   0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
   63   61      *  27.  23.  26.  27.  27.  26.  26.  0. 3. 4. 5. 6. 7. 8.
9.
   64   62      *  25.  20.  21.  23.  23.  22.  22.  0. 3. 4. 5. 6. 7. 8.
9.
   65   63      *   0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.

 HEIGHT INDEX  1   2    3    4    5    6    7    8  1  2  3  4  5  6  7  8

 Otay Ranch - Village 7: 02/2004

 2nd floor receivers with barriers

 BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
   5  7  8  8  7  8  7  8  7  7  7  7  8  8  8  8  5  5  5  5  6  8  2  1  1
   1  1  1  1  2  2  4  4  4  6  6  7  8  1  1  1  1  1  1  1  1  1  1  1  1
   1  1  8  8  8  7  7  6  5  3  3  3  3  3  3
 CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
 11.13.14.14.13.11.10. 9. 8. 8. 8. 8. 9. 9. 9. 9. 9. 9. 9. 9.10.12. 6. 0. 0.
  0. 0. 0. 0. 3. 3. 5. 5. 5. 8. 8. 9.10. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
  0. 0.10.10.10. 9. 9. 8. 7. 4. 4. 4. 4. 4. 4.

    R E S U L T S
    *************

 REC     REC ID          LEQ       LEQ(Z(0))       IL
   1      1              62.1       64.8           2.7
   2      2              63.5       66.0           2.5
   3      3              65.4       67.1           1.7
   4      4              67.3       68.3           1.0
   5      5              69.2       70.2           1.0
   6      6              70.8       71.5            .7
   7      7              72.0       72.8            .8
   8      8              69.0       73.6           4.5
   9      9              68.1       73.9           5.9
  10      10             67.6       74.1           6.6
  11      11             67.6       74.3           6.8
  12      12             66.9       74.4           7.5
  13      13             66.7       74.2           7.6
  14      14             65.9       73.3           7.3
  15      15             65.9       72.7           6.8
  16      16             65.2       71.4           6.3
  17      17             65.7       71.5           5.8
  18      18             66.7       72.6           5.9
  19      19             66.2       72.4           6.2
  20      20             65.9       71.8           5.9
  21      21             66.0       71.8           5.8
  22      22             66.4       72.4           6.0
  23      23             66.6       72.9           6.3
  24      24             63.6       70.1           6.5
  25      25             64.4       71.4           7.0
  26      26             65.4       72.2           6.8
  27      27             65.6       72.3           6.7
  28      28             66.5       73.1           6.6
  29      29             66.4       73.0           6.7
  30      30             67.5       73.5           6.0
  31      31             75.2       75.7            .4
  32      32             75.2       75.4            .2
  33      33             75.1       75.2            .1
  34      34             74.3       74.7            .4
  35      35             73.7       74.1            .4
  36      36             69.5       70.4            .9
  37      37             68.5       69.9           1.4
  38      38             64.1       68.4           4.3
  39      39             68.3       68.5            .1

 BARRIER TYPE            COST                  AREA (SQ. FT.)
 FH-BERM                     0.                     0.
 FH-MASON               216800.                 40318.
 FH-WOOD                     0                      0.
 FH-CONC                     0.                     0.
 FH-STEEL                    0.                     0.
*******************************************************************
  TOTALS:          $    216800.                 40318.

 END OF ALL CASES
```

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Otay Ranch - Village 7: 02/2004

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM 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)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPES VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Southbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
1	6339513.3	1806920.6	600.4	0
2	6339510.5	1806467.0	598.8	0

0ROADWAY 2 Southbound SR-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
2	6339510.5	1806467.0	598.8	0
3	6339509.1	1806114.7	593.8	0
4	6339508.2	1805921.3	592.2	0
5	6339506.6	1805567.2	590.6	0
6	6339510.4	1805084.1	587.3	0
7	6339558.1	1804696.4	584.0	0
8	6339626.5	1804317.1	580.7	0
9	6339721.1	1803940.3	577.4	0
10	6339779.5	1803754.4	575.8	0
11	6339915.4	1803392.1	572.5	0
12	6340052.2	1803092.3	569.2	0
13	6340182.4	1802843.8	564.3	0
14	6340344.6	1802558.3	554.5	0
15	6340485.7	1802306.5	544.6	0
16	6340646.7	1802025.4	531.5	0

0ROADWAY 3 Southbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES X	Y	Z	GRADE
16	6340646.7	1802025.4	531.5	0
17	6340806.7	1801741.3	516.7	0
18	6340985.8	1801426.3	500.3	0
19	6341154.7	1801109.5	483.9	0

0ROADWAY 4 Northbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES X	Y	Z	GRADE
1	6341260.4	1801145.7	485.6	1
2	6341061.5	1801517.5	503.6	1
3	6340903.6	1801796.7	516.7	1
4	6340743.5	1802078.7	531.5	1

0ROADWAY 5 Northbound SR-125, Birch to RM

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
4	6340743.5	1802078.7	531.5	1
5	6340583.6	1802361.5	544.6	1
6	6340405.7	1802676.0	556.1	1
7	6340228.9	1802992.4	564.3	1
8	6340066.7	1803323.5	569.2	1
9	6339993.2	1803497.7	570.9	1
10	6339809.9	1804036.4	575.8	1
11	6339761.7	1804219.9	577.4	1
12	6339684.8	1804591.6	580.7	1
13	6339638.4	1804969.2	584.0	1
14	6339618.1	1805346.8	587.3	1
15	6339618.1	1805728.7	590.6	1
16	6339621.4	1806111.3	593.8	1
17	6339622.2	1806484.0	598.8	1

0ROADWAY 6 Northbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
17	6339622.2	1806484.0	598.8	1
18	6339626.5	1806918.9	600.4	1

0ROADWAY 7 Southbound Ramp to Rock Mountain

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	561.	45.0
VEH5	18.	45.0
VEH6	12.	45.0

0	COORDINATES X	Y	Z	GRADE
1	6339864.2	1803405.4	565.9	1
2	6339924.1	1803175.4	566.5	1
3	6339984.3	1802962.1	567.1	1
4	6340015.7	1802831.9	567.5	1
5	6340026.5	1802684.8	567.9	1
6	6340003.6	1802446.2	568.5	1
7	6339995.2	1802224.4	569.1	1
8	6340032.5	1802046.0	569.6	1
9	6340089.2	1801885.6	570.0	1

0ROADWAY 8 Ramp from wb Rock Mountain to sb-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	671.	45.0
VEH5	21.	45.0
VEH6	14.	45.0

0	COORDINATES X	Y	Z	GRADE
1	6340294.9	1801957.4	570.0	0
2	6340188.4	1802001.2	565.7	0
3	6340138.6	1802064.9	562.8	0
4	6340116.7	1802131.7	560.3	0
5	6340125.6	1802215.3	557.2	0
6	6340173.4	1802290.0	554.0	0
7	6340242.1	1802330.8	551.1	0
8	6340334.8	1802336.8	547.7	0
9	6340430.4	1802292.0	543.8	0
10	6340498.1	1802198.4	539.7	0
11	6340589.7	1802044.0	533.1	0

1

BARRIER 1 TYPE(A) R-O-W barrier 1acont'd

	COORDINATES X	Y	Z	ZO	DELZ	P
sf-16	6339241.5	1805697.6	591.7	580.7	1.0	3
6a	6339296.6	1805665.7	593.0	582.0		
6b	6339342.5	1805640.0	594.1	583.1		
6c	6339383.5	1805617.1	595.0	584.0		
7	6339406.4	1805509.8	595.0	584.0		
8	6339434.3	1805343.0	599.9	588.9		

1

BARRIER 2 TYPE(A) R-O-W barrier 1bcont'd

	COORDINATES X	Y	Z	ZO	DELZ	P
8	6339434.3	1805343.0	596.9	588.9	1.0	3
9	6339453.5	1805206.6	597.6	589.6		
10	6339469.4	1805092.9	597.9	589.9		

1

BARRIER 3 TYPE(A) R-O-W barrier 2cont'd

	COORDINATES X	Y	Z	ZO	DELZ	P
10	6339469.4	1805092.9	595.9	589.9	1.0	3
11	6339469.0	1805006.9	594.9	588.9		
12	6339469.6	1804987.8	593.3	587.3		
13	6339479.8	1804897.0	591.1	585.1		
14	6339495.0	1804777.7	590.0	584.0		
15	6339517.8	1804626.1	588.3	582.3		
16	6339550.1	1804460.9	586.8	580.8		
17	6339589.1	1804285.5	585.1	579.1		

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 18          6339634.0 1804109.2     583.4     577.4
 19          6339663.6 1803997.1     582.0     576.0
1

 BARRIER   4   TYPE(A)     R-O-W barrier trf to top of slope barrier

             ---------COORDINATES----------
                  X          Y          Z         Z0        DELZ        P
 19          6339663.6 1803997.1     585.0     576.0        1.0         3
 20          6339705.0 1803857.9     583.7     574.7
 21          6339735.2 1803763.2     582.9     573.9
 22          6339758.3 1803694.7     582.5     573.5
 23          6339774.3 1803649.9     582.0     573.0
 24          6339798.4 1803582.7     581.6     572.6
 2-rev       6339886.3 1803152.2     580.0     571.0
 3-rev       6339854.5 1803141.6     580.0     571.0
1

 BARRIER   5   TYPE(A)     S-F Pad Edges

             ---------COORDINATES----------
                  X          Y          Z         Z0        DELZ        P
 1           6338450.5 1805660.4     576.7     570.7        1.0         3
 2           6338496.9 1805688.8     576.7     570.7
 3           6338586.8 1805745.8     578.3     572.3
 4           6338643.8 1805781.6     578.3     572.3
 5           6338703.0 1805818.1     580.7     574.7
 6           6338761.4 1805846.6     580.7     574.7
 7           6338765.1 1805848.1     582.8     576.8
 8           6338814.8 1805859.8     582.8     576.8
 9           6338819.2 1805860.5     584.2     578.2
1

 BARRIER   6   TYPE(A)     S-F Pad Edges cont'd.1

             ---------COORDINATES----------
                  X          Y          Z         Z0        DELZ        P
 9           6338819.2 1805860.5     584.2     578.2        1.0         3
 10          6338898.8 1805853.9     584.2     578.2
 11          6338994.5 1805823.2     584.2     578.2
 12          6338998.2 1805822.5     584.5     578.5
1

 BARRIER   7   TYPE(A)     S-F Pad Edges cont'd.2

             ---------COORDINATES----------
                  X          Y          Z         Z0        DELZ        P
 12          6338998.2 1805822.5     585.5     578.5        1.0         3
 13          6339061.0 1805801.3     585.5     578.5
 14          6339065.4 1805799.9     587.7     580.7
 15          6339173.6 1805762.6     587.7     580.7
 16          6339241.5 1805697.6     587.7     580.7
1

 BARRIER   8   TYPE(A)     Elem School Pad Edges

             ---------COORDINATES----------
                  X          Y          Z         Z0        DELZ        P
 40          6339064.2 1804045.1     548.0     548.0         .0         0
 41          6339477.3 1804188.3     550.0     550.0
 42          6339517.0 1804198.4     550.2     550.2
 43          6339575.6 1804002.5     552.0     552.0
 44          6339641.2 1803781.3     554.0     554.0
 45          6339706.8 1803560.2     556.0     556.0
 46          6339706.8 1803544.3     556.1     556.1
1

 BARRIER   9   TYPE(A)     Elem to Park Pads

             ---------COORDINATES----------
                  X          Y          Z         Z0        DELZ        P
 46          6339706.8 1803544.3     556.1     556.1         .0         0
 48          6339717.2 1803526.8     561.3     561.3
1

 BARRIER  10   TYPE(A)     Park Pad Edges

             ---------COORDINATES----------
                  X          Y          Z         Z0        DELZ        P
 47          6339591.3 1803493.6     560.0     560.0         .0         0
 48          6339717.2 1803526.8     561.3     561.3
 49          6339762.7 1803371.2     561.5     561.5
 50          6339808.2 1803214.7     562.0     562.0
 51          6339819.6 1803172.7     562.1     562.1
1

 BARRIER  11   TYPE(A)     Park to High Pads

             ---------COORDINATES----------
                  X          Y          Z         Z0        DELZ        P
 51          6339819.6 1803172.7     562.1     562.1         .0         0
 53          6339837.0 1803137.7     579.5     579.5
 52          6339709.4 1803101.9     576.9     576.9
1

 BARRIER  12   TYPE(A)     High School Pad Edges

             ---------COORDINATES----------
                  X          Y          Z         Z0        DELZ        P
 3-rev       6339854.5 1803141.6     578.0     571.0        1.0         3
 53          6339837.0 1803137.7     586.5     579.5
 54          6339875.5 1803030.2     585.6     578.6
 55          6339921.0 1802903.4     585.5     578.5
 56          6339942.8 1802838.7     585.4     578.4
 57          6339950.7 1802716.3     585.0     578.0
 58          6339953.3 1802656.0     584.5     577.5
 59          6339944.6 1802632.3     584.3     577.3
 60a         6339822.2 1802585.1     581.6     574.6
1

 BARRIER  13   TYPE(A)     High School Pad Edges cont'd.

             ---------COORDINATES----------
                  X          Y          Z         Z0        DELZ        P
 60a         6339822.2 1802585.1     580.6     574.6        1.0         3
 60b         6339807.2 1802441.6     584.7     578.7
 60c         6339785.7 1802288.4     585.1     579.1
 61          6339775.0 1802195.2     586.8     580.8
 62          6339763.6 1802083.2     585.7     579.7
 63          6339781.1 1801897.9     576.4     570.4
 64          6339783.7 1801794.7     576.4     570.4
1

 Third-floor Receivers (at 25 feet)

                            ------------COORDINATES-------------
                                  X             Y              Z
 1                          6338479.4     1805665.4        595.7
 2                          6338619.2     1805753.4        597.3
 3                          6338733.3     1805822.9        599.7
 4                          6338855.3     1805846.9        603.2
 5                          6339024.6     1805803.3        603.5
 6                          6339119.0     1805771.7        605.7
 7                          6339203.7     1805718.6        605.7
 8                          6339251.7     1805661.2        604.7
 9                          6339273.2     1805611.7        604.7
 10                         6339288.6     1805561.7        603.9
 11                         6339301.3     1805516.7        603.9
 12                         6339316.9     1805468.2        602.6
 13                         6339327.2     1805419.0        602.6
 14                         6339335.0     1805369.9        601.2
 15                         6339341.9     1805324.7        601.2
 16                         6339363.2     1805182.2        598.4
 17                         6339385.5     1805043.2        597.0
 18                         6339414.0     1804855.2        593.8
 19                         6339431.0     1804701.9        590.3
 20                         6339425.1     1804573.3        588.7
 21                         6339440.9     1804451.3        588.0
 22                         6339468.2     1804409.0        588.4
 23                         6339493.4     1804369.0        588.4
 24                         6339521.3     1804149.7        575.6
 25                         6339568.0     1803991.8        577.0
 26                         6339634.0     1803772.5        579.0
 27                         6339685.1     1803601.7        580.6
 28                         6339732.4     1803437.3        586.3
 29                         6339776.4     1803284.2        586.6
 30                         6339806.0     1803190.2        587.0
 31                         6339845.6     1803083.2        603.8
 32                         6339888.6     1802961.6        603.2
 33                         6339928.8     1802847.1        603.2
 34                         6339938.9     1802755.1        602.9
 35                         6339942.7     1802657.4        602.3
 36                         6339815.4     1802591.7        599.5
 37                         6339770.7     1802344.7        597.2
 38                         6339735.0     1802080.3        595.0
 39                         6339766.6     1801907.1        594.9
1

 ALPHA 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
 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
 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   .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   .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   .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   .0
 7 *   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
       .0   .0   .0   .0   .0   .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   .0   .0   .0   .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

 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
 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
 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   .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   .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   .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   .0
 7 *   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
       .0   .0   .0   .0   .0   .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   .0   .0   .0   .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
 1              63.4    64.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
            54.3
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            54.8 52.2 52.5 49.5 46.8 46.3 44.8 39.8 41.6 40.0

            38.5 38.1 35.9 34.8
    3         1    2    3
            33.2 31.9 30.5
    4         1    2    3
            32.4 32.7 34.6
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            35.5 37.6 39.0 40.3 38.3 44.8 41.4 45.5 46.4 46.9

            50.1 53.1 54.2
```

```
   6        1
           53.5
   7          1     2     3     4     5     6     7     8
           22.2  22.9  21.8  20.5  20.1  21.7  22.0  21.5
   8          1     2     3     4     5     6     7     8     9    10

           19.8  17.5  16.3  15.9  14.9  14.9  17.3  18.2  18.4  19.8
1

 RECEIVER     LEQ(H)    L10
 2             64.9    66.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           55.4
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           56.2  54.7  54.9  50.8  47.3  46.6  45.0  40.4  42.0  40.3

           38.8  38.4  36.3  35.2
   3          1     2     3
           34.2  32.8  31.3
   4          1     2     3
           33.4  33.5  35.3
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           36.3  38.1  39.3  40.6  38.9  45.1  41.7  45.8  46.8  48.0

           51.8  55.7  55.6
   6        1
           54.6
   7          1     2     3     4     5     6     7     8
           22.8  23.4  21.7  22.0  20.5  21.6  21.6  21.5
   8          1     2     3     4     5     6     7     8     9    10

           19.6  17.4  16.1  15.7  15.2  16.4  18.1  18.8  19.1  20.4
1

 RECEIVER     LEQ(H)    L10
 3             66.3    67.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           56.4
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           57.5  56.0  57.7  51.9  47.6  46.9  45.2  40.9  42.3  40.6

           39.0  38.7  36.7  36.0
   3          1     2     3
           35.0  34.1  33.0
   4          1     2     3
           34.6  34.7  36.3
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           37.1  38.7  39.8  41.0  39.0  45.2  41.9  46.1  47.0  49.0

           53.8  57.8  56.8
   6        1
           55.5
   7          1     2     3     4     5     6     7     8
           23.3  23.7  21.9  22.5  21.0  21.5  21.5  21.4
   8          1     2     3     4     5     6     7     8     9    10

           19.7  17.4  16.1  15.7  15.7  17.4  18.6  19.3  19.6  21.2
1

 RECEIVER     LEQ(H)    L10
 4             67.8    68.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.3
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           58.8  57.6  60.1  53.4  48.3  47.4  45.6  41.4  43.1  41.0

           39.5  39.2  37.6  37.0
   3          1     2     3
           36.2  35.4  34.1
   4          1     2     3
           35.6  35.5  36.9
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           37.6  39.0  40.1  41.3  39.3  45.6  42.3  46.7  47.7  50.4

           56.8  59.3  58.0
   6        1
           56.4
   7          1     2     3     4     5     6     7     8
           24.1  24.4  22.4  22.7  22.2  21.6  21.7  21.5
   8          1     2     3     4     5     6     7     8     9    10

           20.0  17.6  16.2  16.1  17.5  18.3  19.3  20.4  20.9  22.4
1

 RECEIVER     LEQ(H)    L10
 5             69.7    70.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.8
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.2  59.8  62.9  55.9  49.6  48.4  46.4  42.0  43.9  41.7

           40.0  39.6  38.1  37.6
   3          1     2     3
           37.0  36.3  35.1
   4          1     2     3
           36.5  36.3  37.6
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           38.0  39.5  40.5  41.7  39.8  46.3  43.0  47.5  49.0  52.5

           59.6  61.4  59.3
   6        1
           57.0
   7          1     2     3     4     5     6     7     8
           25.8  25.2  23.3  23.4  23.1  21.9  21.8  21.7
   8          1     2     3     4     5     6     7     8     9    10

           21.0  17.7  16.6  16.4  19.2  19.6  20.9  21.4  21.6  23.1
1

 RECEIVER     LEQ(H)    L10
 6             71.0    72.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           58.0
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.8  61.1  64.9  58.5  50.7  49.1  47.0  42.5  44.2  42.0

           40.3  39.9  38.4  38.0
   3          1     2     3
           37.4  37.0  35.8
   4          1     2     3
           36.8  36.8  37.9
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           38.4  39.7  40.7  42.0  40.1  46.7  43.6  48.0  50.1  54.0

           61.4  62.8  59.9
   6        1
           57.2
   7          1     2     3     4     5     6     7     8
           28.0  26.2  23.8  24.0  23.8  22.0  22.0  21.9
   8          1     2     3     4     5     6     7     8     9    10

           21.4  18.9  17.0  18.2  20.2  20.2  21.3  21.9  21.9  23.5
1

 RECEIVER     LEQ(H)    L10
 7             72.2    73.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.8
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.9  61.8  66.9  60.9  51.8  49.8  47.5  42.9  44.6  42.4

           40.6  40.3  38.5  38.2
   3          1     2     3
           37.7  37.1  36.1
   4          1     2     3
           37.1  36.9  38.0
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           38.6  39.9  41.0  42.2  40.4  47.0  43.9  48.5  51.4  55.8

           63.3  63.9  60.2
   6        1
           57.2
   7          1     2     3     4     5     6     7     8
           28.6  27.5  24.7  24.3  24.3  22.3  22.2  22.0
   8          1     2     3     4     5     6     7     8     9    10

           21.6  20.1  17.6  19.7  20.5  21.0  21.6  22.1  22.2  23.7
1

 RECEIVER     LEQ(H)    L10
 8             72.9    74.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.4
   2          1     2     3     4     5     6     7     8     9    10

  11         12    13    14
           60.4  61.6  67.9  62.4  52.8  50.4  47.9  43.2  44.9  42.7

           40.8  40.3  38.8  38.4
   3          1     2     3
           37.7  37.2  36.2
   4          1     2     3
           37.5  37.2  38.3
   5          1     2     3     4     5     6     7     8     9    10

  11         12    13
           38.7  40.1  41.1  42.5  40.7  47.3  44.4  49.0  52.2  57.2

           64.4  64.3  59.9
   6        1
           56.9
   7          1     2     3     4     5     6     7     8
           28.9  27.7  24.9  24.8  24.7  22.4  22.3  22.2
   8          1     2     3     4     5     6     7     8     9    10

           22.0  20.2  19.7  20.2  21.2  21.2  21.8  22.2  22.4  23.9
1

 RECEIVER     LEQ(H)    L10
 9             73.0    74.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1        1
           57.0
   2          1     2     3     4     5     6     7     8     9    10
```

```
  11        12   13   14
           59.9 61.0 67.8 63.9 53.5 50.8 48.3 43.5 45.2 43.0

           40.9 40.6 39.0 38.5
   3         1    2    3
           37.9 37.4 36.4
   4         1    2    3
           37.8 37.5 38.5
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           39.0 40.3 41.3 42.8 40.9 47.6 44.7 49.5 52.8 58.6

           64.7 64.1 59.5
   6         1
           56.5
   7         1    2    3    4    5    6    7    8
           29.1 28.0 25.2 25.1 25.0 22.6 22.5 22.3
   8         1    2    3    4    5    6    7    8    9   10

           22.4 20.3 20.0 20.5 21.5 21.4 22.1 22.4 22.6 24.1

1

 RECEIVER     LEQ(H)    L10
 10            72.6    74.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
            56.7
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            59.4 60.3 66.8 64.9 54.2 51.3 48.6 43.8 45.4 43.2

            41.1 40.7 39.1 38.7
    3         1    2    3
            38.0 37.5 36.5
    4         1    2    3
            37.9 37.6 38.7
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            39.1 40.5 41.6 43.0 41.1 47.9 45.0 49.9 53.3 58.7

            64.3 63.3 59.1
    6         1
            56.2
    7         1    2    3    4    5    6    7    8
            29.4 28.2 25.4 25.3 25.2 22.8 22.6 22.5
    8         1    2    3    4    5    6    7    8    9   10

            22.5 20.5 20.1 20.7 21.6 21.6 22.2 22.6 22.7 24.2

1

 RECEIVER     LEQ(H)    L10
 11            72.4    74.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
            56.3
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            58.9 59.7 65.7 65.7 54.9 51.7 48.9 44.1 45.7 43.5

            41.4 40.9 39.3 38.9
    3         1    2    3
            38.3 37.7 36.7
    4         1    2    3
            38.0 37.7 38.8
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            39.2 40.6 41.8 43.2 41.4 48.2 45.4 50.3 53.9 59.2

            64.6 62.3 58.7
    6         1
            55.9
    7         1    2    3    4    5    6    7    8
            29.6 28.4 25.6 25.5 25.4 23.0 22.8 22.7
    8         1    2    3    4    5    6    7    8    9   10

            22.7 20.7 20.3 20.9 21.8 21.8 22.4 22.7 22.9 24.4

1

 RECEIVER     LEQ(H)    L10
 12            71.5    73.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
            55.9
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            56.6 56.4 63.9 66.0 55.5 52.2 49.3 44.4 45.9 43.6

            41.6 41.1 39.5 39.0
    3         1    2    3
            38.5 37.8 36.7
    4         1    2    3
            38.1 37.8 38.9
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            39.3 40.8 41.9 43.4 41.6 48.4 45.7 50.7 54.4 59.8

            63.5 60.7 56.3
    6         1
            55.1
    7         1    2    3    4    5    6    7    8
            29.8 28.6 25.8 25.7 25.5 23.1 22.9 22.8
    8         1    2    3    4    5    6    7    8    9   10

            22.8 20.9 20.4 21.1 22.0 21.9 22.5 22.9 23.0 24.5

1

 RECEIVER     LEQ(H)    L10
 13            71.1    72.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
            54.2
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            55.1 55.3 62.9 65.8 56.4 52.7 49.6 44.7 46.2 43.9

            41.9 41.3 39.6 39.2
    3         1    2    3
            38.7 38.2 37.2
    4         1    2    3
            38.2 37.9 39.2
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            39.6 41.0 42.2 43.6 41.8 48.7 46.1 51.3 55.0 60.5

            62.6 60.0 55.7
    6         1
            53.5
    7         1    2    3    4    5    6    7    8
            30.1 28.9 26.0 25.9 25.7 23.3 23.1 23.0
    8         1    2    3    4    5    6    7    8    9   10

            23.0 21.0 20.5 21.2 22.2 22.2 22.9 23.1 23.2 24.7

1

 RECEIVER     LEQ(H)    L10
 14            70.3    71.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
            52.1
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            53.7 53.8 60.9 65.5 57.0 53.2 50.0 44.9 46.4 44.1

            42.1 41.5 39.8 39.3
    3         1    2    3
            38.8 38.3 37.2
    4         1    2    3
            38.5 38.2 39.3
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            39.7 41.2 42.3 43.8 42.1 49.0 46.4 51.6 55.4 61.1

            61.3 57.7 54.0
    6         1
            51.8
    7         1    2    3    4    5    6    7    8
            30.2 29.0 26.2 26.0 25.8 23.4 23.2 23.1
    8         1    2    3    4    5    6    7    8    9   10

            23.1 21.1 20.7 21.3 22.2 22.3 22.9 23.3 23.4 24.8

1

 RECEIVER     LEQ(H)    L10
 15            70.3    71.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
            51.4
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            53.1 53.1 59.7 65.7 57.9 53.8 50.3 45.3 46.7 44.4

            42.4 41.9 40.1 39.5
    3         1    2    3
            38.9 38.4 37.4
    4         1    2    3
            38.6 38.4 39.4
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            39.9 41.3 42.6 44.2 42.5 49.4 46.8 52.1 56.1 61.9

            60.8 56.4 53.4
    6         1
            51.4
    7         1    2    3    4    5    6    7    8
            30.5 29.2 26.4 26.2 26.0 23.6 23.4 23.2
    8         1    2    3    4    5    6    7    8    9   10

            23.2 21.3 20.8 21.5 22.4 22.4 23.1 23.6 23.6 25.0

1

 RECEIVER     LEQ(H)    L10
 16            69.8    71.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
            49.6
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            51.0 50.7 55.9 64.4 60.8 55.5 51.5 46.1 47.4 44.9

            42.8 42.3 40.6 40.0
    3         1    2    3
            39.4 38.9 37.8
    4         1    2    3
            39.0 38.8 39.9
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            40.4 42.0 43.2 44.8 43.2 50.3 47.9 53.7 58.0 62.0

            59.3 54.0 50.8
    6         1
            48.8
    7         1    2    3    4    5    6    7    8
            31.1 29.8 26.8 26.5 26.4 23.9 23.8 23.6
    8         1    2    3    4    5    6    7    8    9   10

            23.4 21.6 20.9 21.7 22.4 22.9 23.5 23.9 24.0 25.5
```

```
1

 RECEIVER     LEQ(H)    L10
 17            70.4    72.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            48.2
    2        1     2     3     4     5     6     7     8     9    10

   11       12    13    14
            49.5  48.8  54.5  62.5  65.0  57.7  52.8  47.2  48.3  45.6

            43.5  42.9  41.1  40.4
    3        1     2     3
            39.8  39.2  38.2
    4        1     2     3
            39.4  39.2  40.4
    5        1     2     3     4     5     6     7     8     9    10

   11       12    13
            41.0  42.5  43.8  45.5  43.9  51.2  49.2  55.4  60.9  62.3

            57.0  52.9  49.8
    6        1
            47.7
    7        1     2     3     4     5     6     7     8
            31.8  30.4  27.5  26.9  26.9  24.4  24.2  24.1
    8        1     2     3     4     5     6     7     8     9    10

            23.7  22.3  19.6  22.1  22.7  23.4  24.0  24.4  24.5  26.0

1

 RECEIVER     LEQ(H)    L10
 18            72.0    74.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            47.1
    2        1     2     3     4     5     6     7     8     9    10

   11       12    13    14
            48.1  47.2  52.0  59.4  60.5  61.5  54.8  48.6  49.5  46.5

            44.2  43.5  41.6  41.0
    3        1     2     3
            40.3  39.7  38.7
    4        1     2     3
            39.9  39.7  40.9
    5        1     2     3     4     5     6     7     8     9    10

   11       12    13
            41.5  43.1  44.5  46.3  44.9  52.5  51.0  58.0  63.9  61.5

            55.1  50.5  48.0
    6        1
            46.6
    7        1     2     3     4     5     6     7     8
            32.8  31.1  27.8  27.5  27.5  25.1  24.8  24.7
    8        1     2     3     4     5     6     7     8     9    10

            24.1  22.5  20.0  22.2  23.3  23.7  24.6  25.0  25.1  26.5

1

 RECEIVER     LEQ(H)    L10
 19            71.5    73.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            45.9
    2        1     2     3     4     5     6     7     8     9    10

   11       12    13    14
            46.6  45.5  49.9  57.3  66.2  65.2  56.6  49.9  50.5  47.2

            44.8  44.1  42.1  41.4
    3        1     2     3
            40.7  40.0  38.8
    4        1     2     3
            40.0  39.9  41.2
    5        1     2     3     4     5     6     7     8     9    10

   11       12    13
            41.8  43.6  45.0  47.0  45.7  53.7  52.6  60.3  63.7  58.6

            53.6  50.1  47.2
    6        1
            45.5
    7        1     2     3     4     5     6     7     8
            32.6  30.7  28.2  28.2  27.9  25.6  25.3  25.1
    8        1     2     3     4     5     6     7     8     9    10

            24.8  22.4  20.3  21.9  23.7  23.8  25.0  25.5  25.5  26.9

1

 RECEIVER     LEQ(H)    L10
 20            70.7    72.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            45.2
    2        1     2     3     4     5     6     7     8     9    10

   11       12    13    14
            45.8  44.5  48.8  55.5  62.1  66.0  58.3  51.0  51.4  48.0

            45.5  44.5  42.5  41.7
    3        1     2     3
            40.9  40.0  38.7
    4        1     2     3
            40.0  40.0  41.4
    5        1     2     3     4     5     6     7     8     9    10

   11       12    13
            42.2  44.0  45.5  47.6  46.4  54.6  53.9  61.4  61.9  56.4

            52.2  49.2  46.7

    6        1
            45.2
    7        1     2     3     4     5     6     7     8
            31.6  31.1  28.5  28.5  28.1  26.1  25.8  25.5
    8        1     2     3     4     5     6     7     8     9    10

            25.1  22.0  20.7  21.0  23.6  24.0  24.6  25.7  25.8  27.2

1

 RECEIVER     LEQ(H)    L10
 21            70.6    72.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            44.6
    2        1     2     3     4     5     6     7     8     9    10

   11       12    13    14
            45.0  43.9  48.9  54.3  59.5  66.1  60.7  52.4  51.7  48.5

            45.9  44.9  42.7  42.0
    3        1     2     3
            41.3  40.4  39.0
    4        1     2     3
            40.3  40.4  41.8
    5        1     2     3     4     5     6     7     8     9    10

   11       12    13
            42.7  44.5  46.2  48.3  47.2  55.9  55.6  62.4  60.3  55.0

            51.2  48.4  46.1
    6        1
            44.9
    7        1     2     3     4     5     6     7     8
            32.1  31.6  29.1  29.0  28.5  26.7  26.3  26.0
    8        1     2     3     4     5     6     7     8     9    10

            25.4  22.0  21.1  21.0  24.0  24.2  24.9  25.6  25.8  27.1

1

 RECEIVER     LEQ(H)    L10
 22            71.4    73.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            45.0
    2        1     2     3     4     5     6     7     8     9    10

   11       12    13    14
            45.7  44.6  49.1  54.1  59.1  67.2  62.4  53.3  52.4  48.9

            46.3  45.3  43.3  42.5
    3        1     2     3
            41.6  40.8  39.4
    4        1     2     3
            40.7  40.8  42.1
    5        1     2     3     4     5     6     7     8     9    10

   11       12    13
            42.9  44.8  46.4  48.7  47.7  56.7  56.7  63.5  60.3  54.6

            51.0  48.2  46.0
    6        1
            44.7
    7        1     2     3     4     5     6     7     8
            32.7  32.1  29.5  29.4  28.9  26.9  26.5  26.2
    8        1     2     3     4     5     6     7     8     9    10

            25.7  22.7  21.3  21.7  24.4  24.7  25.3  26.1  26.2  27.5

1

 RECEIVER     LEQ(H)    L10
 23            72.2    74.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            44.9
    2        1     2     3     4     5     6     7     8     9    10

   11       12    13    14
            45.6  44.4  48.8  53.8  58.5  68.1  64.3  54.1  53.2  49.3

            46.6  45.6  43.6  42.8
    3        1     2     3
            41.9  41.1  39.8
    4        1     2     3
            41.1  41.0  42.4
    5        1     2     3     4     5     6     7     8     9    10

   11       12    13
            43.2  44.9  46.7  49.0  48.1  57.4  57.9  64.3  59.9  54.3

            50.7  48.0  45.8
    6        1
            44.6
    7        1     2     3     4     5     6     7     8
            33.2  32.5  29.9  29.7  29.3  27.1  26.7  26.4
    8        1     2     3     4     5     6     7     8     9    10

            26.0  22.9  21.7  22.0  24.8  25.1  25.7  26.5  26.6  28.2

1

 RECEIVER     LEQ(H)    L10
 24            68.3    70.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            42.8
    2        1     2     3     4     5     6     7     8     9    10

   11       12    13    14
            43.2  41.9  46.2  50.6  53.6  59.5  64.0  54.3  53.4  49.3

            46.3  44.8  41.7  40.5
    3        1     2     3
            39.1  37.8  36.1
    4        1     2     3
```

```
          37.4  37.7  39.5
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          40.7  43.1  45.2  47.7  46.8  56.7  56.3  58.0  53.3  49.9

          47.3  45.1  43.2
   6        1
          42.3
   7        1     2     3     4     5     6     7     8
          33.3  32.6  29.9  29.8  29.4  27.5  27.0  26.5
   8        1     2     3     4     5     6     7     8     9    10

          25.7  22.5  21.4  21.6  24.1  23.9  24.7  24.9  24.7  25.8
1

 RECEIVER     LEQ(H)    L10
 25            68.8    70.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          42.7
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          43.1  41.6  45.8  49.9  52.4  57.2  64.4  58.0  56.0  51.1

          47.8  46.1  43.2  41.7
   3        1     2     3
          40.2  38.9  37.2
   4        1     2     3
          38.6  38.9  40.8
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          42.1  44.5  46.7  49.6  49.0  58.5  58.2  57.4  52.8  49.6

          47.1  45.0  43.2
   6        1
          42.4
   7        1     2     3     4     5     6     7     8
          34.9  34.0  31.2  31.1  30.5  28.5  27.8  27.4
   8        1     2     3     4     5     6     7     8     9    10

          26.4  23.4  22.4  22.6  25.2  25.1  25.8  26.0  25.8  27.0
1

 RECEIVER     LEQ(H)    L10
 26            69.0    71.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          42.4
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          42.7  41.2  45.2  48.9  50.9  54.7  60.1  61.9  61.0  53.9

          50.1  48.1  45.0  43.4
   3        1     2     3
          41.9  40.5  38.8
   4        1     2     3
          40.3  40.6  42.6
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          44.0  46.6  49.2  52.5  52.7  61.6  55.1  55.0  51.8  48.8

          46.6  44.7  43.0
   6        1
          42.2
   7        1     2     3     4     5     6     7     8
          37.8  36.4  33.3  33.0  32.2  30.0  29.2  28.6
   8        1     2     3     4     5     6     7     8     9    10

          27.6  24.8  23.8  24.2  26.7  26.8  27.5  27.8  27.6  28.7
1

 RECEIVER     LEQ(H)    L10
 27            69.5    71.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          41.9
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          42.2  40.6  44.5  48.0  49.8  53.0  57.0  58.9  64.1  57.1

          52.3  49.9  46.7  45.0
   3        1     2     3
          43.4  42.0  40.2
   4        1     2     3
          41.7  42.1  44.1
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          45.6  48.3  51.1  55.1  55.9  62.8  53.8  53.6  50.2  47.7

          45.7  44.0  42.3
   6        1
          41.6
   7        1     2     3     4     5     6     7     8
          40.8  38.8  35.5  35.0  33.9  31.3  30.4  29.8
   8        1     2     3     4     5     6     7     8     9    10

          28.5  26.1  24.9  25.5  28.2  28.5  29.0  29.3  29.2  30.2
1

 RECEIVER     LEQ(H)    L10
 28            70.9    72.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          41.8
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          41.9  40.2  44.0  47.3  49.0  51.8  55.4  56.4  65.9  62.0

          55.5  52.4  49.0  47.4
   3        1     2     3
          45.9  44.5  42.9
   4        1     2     3
          44.2  44.6  46.4
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          47.8  50.5  53.7  58.7  59.9  63.2  52.4  52.5  49.5  47.1

          45.3  43.8  42.3
   6        1
          41.7
   7        1     2     3     4     5     6     7     8
          45.8  42.7  38.6  38.0  36.0  33.2  32.2  31.4
   8        1     2     3     4     5     6     7     8     9    10

          30.1  28.1  27.0  27.7  30.0  31.3  31.8  31.9  31.7  32.7
1

 RECEIVER     LEQ(H)    L10
 29            71.1    72.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          41.6
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          41.6  39.8  43.5  46.5  47.8  50.2  53.6  53.8  63.9  65.4

          58.2  54.2  50.4  48.5
   3        1     2     3
          46.9  45.6  43.9
   4        1     2     3
          45.0  45.4  47.3
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          48.7  51.9  55.7  61.1  60.6  61.2  50.7  51.2  48.5  46.4

          44.8  43.3  42.0
   6        1
          41.4
   7        1     2     3     4     5     6     7     8
          49.9  46.7  42.3  40.5  37.2  34.8  33.6  32.6
   8        1     2     3     4     5     6     7     8     9    10

          31.0  29.4  28.5  29.3  30.4  32.5  33.3  33.5  33.1  33.9
1

 RECEIVER     LEQ(H)    L10
 30            71.7    73.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          41.5
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          41.4  39.6  43.2  46.2  47.2  49.6  52.6  52.5  61.7  66.2

          60.8  59.6  52.7  49.6
   3        1     2     3
          47.5  46.0  44.3
   4        1     2     3
          45.7  46.3  49.2
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          52.7  56.1  57.6  62.8  60.6  60.1  49.7  50.4  48.0  46.0

          44.5  43.2  41.9
   6        1
          41.5
   7        1     2     3     4     5     6     7     8
          51.1  51.6  44.5  41.4  38.6  36.0  34.5  33.4
   8        1     2     3     4     5     6     7     8     9    10

          32.0  30.4  29.6  30.5  31.3  33.0  33.7  34.0  33.8  34.6
1

 RECEIVER     LEQ(H)    L10
 31            75.5    76.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          45.2
   2        1     2     3     4     5     6     7     8     9    10

  11       12    13    14
          45.3  43.6  47.2  50.3  51.5  50.7  53.0  52.6  64.1  69.8

          67.0  61.9  57.3  55.0
   3        1     2     3
          53.1  51.6  49.8
   4        1     2     3
          50.9  51.4  53.4
   5        1     2     3     4     5     6     7     8     9    10

  11       12    13
          55.2  58.5  62.8  66.9  62.7  62.8  53.6  54.4  52.1  50.1

          48.4  47.0  45.6
   6        1
          45.1
   7        1     2     3     4     5     6     7     8
          55.5  60.7  52.8  49.4  43.7  39.3  37.1  36.2
   8        1     2     3     4     5     6     7     8     9    10

          38.5  31.6  33.1  34.4  35.9  39.7  40.3  40.2  39.7  40.4
1

 RECEIVER     LEQ(H)    L10
 32            75.3    76.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA
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```
ROADWAY  SEGMENT

   1        1
           44.9
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           44.9 43.2 46.8 49.8 49.6 50.1 51.7 51.0 62.0 67.6

           68.6 63.9 58.6 56.0
   3         1    2    3
           53.9 52.3 50.4
   4         1    2    3
           51.5 52.1 54.2
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           56.1 59.8 64.3 66.5 60.8 61.2 52.5 53.6 51.4 49.5

           48.0 46.6 45.2
   6         1
           44.7
   7         1    2    3    4    5    6    7    8
           52.5 60.5 58.1 53.2 48.7 41.7 39.4 39.2
   8         1    2    3    4    5    6    7    8    9   10

           39.6 38.8 37.2 39.1 41.4 41.2 41.7 41.5 40.8 41.4

1

RECEIVER     LEQ(H)    L10
33            75.1     76.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

   1        1
           44.5
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           44.6 42.8 46.3 49.3 49.3 49.3 50.8 50.5 60.2 65.1

           68.5 65.8 60.1 57.1
   3         1    2    3
           54.7 52.9 50.9
   4         1    2    3
           52.0 52.8 55.0
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.1 61.0 65.3 65.5 59.1 60.0 51.6 52.8 50.7 49.0

           47.5 46.2 44.8
   6         1
           44.4
   7         1    2    3    4    5    6    7    8
           50.1 56.3 60.5 58.7 54.0 48.1 44.4 42.1
   8         1    2    3    4    5    6    7    8    9   10

           40.8 40.0 40.2 41.9 43.0 42.9 43.3 42.9 42.0 42.4

1

RECEIVER     LEQ(H)    L10
34            74.6     75.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

   1        1
           44.3
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           44.2 42.4 46.0 48.9 48.1 48.1 49.8 49.0 58.8 63.2

           66.9 66.4 61.0 57.8
   3         1    2    3
           55.3 53.4 51.3
   4         1    2    3
           52.4 53.2 55.6
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.8 61.7 65.1 64.0 57.8 59.0 51.0 52.3 50.3 48.6

           47.1 45.9 44.6
   6         1
           44.1
   7         1    2    3    4    5    6    7    8
           48.3 51.0 56.7 61.0 57.5 50.1 45.7 43.0
   8         1    2    3    4    5    6    7    8    9   10

           41.7 41.0 41.3 43.1 44.4 44.3 44.5 43.9 42.9 43.2

1

RECEIVER     LEQ(H)    L10
35            74.0     75.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

   1        1
           44.0
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           44.0 42.2 45.7 47.7 46.7 47.1 48.8 47.7 57.3 61.4

           64.9 66.2 61.8 58.6
   3         1    2    3
           55.9 53.9 51.7
   4         1    2    3
           52.8 53.7 56.1
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           58.3 62.2 64.4 62.5 56.5 58.1 50.3 51.8 49.8 48.2

           46.8 45.5 44.2
   6         1
           43.8
   7         1    2    3    4    5    6    7    8
           43.0 49.8 52.6 58.7 61.6 52.7 47.2 44.3
   8         1    2    3    4    5    6    7    8    9   10

           42.8 42.2 42.7 44.6 46.0 45.8 45.8 44.9 43.8 44.0

1

RECEIVER     LEQ(H)    L10
36            70.2     71.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

   1        1
           42.4
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           41.4 39.2 42.2 44.8 45.0 46.5 48.1 46.6 52.4 55.0

           57.5 61.5 60.2 57.7
   3         1    2    3
           55.5 53.6 51.6
   4         1    2    3
           52.6 53.3 55.6
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.4 60.5 59.8 56.4 50.7 52.8 45.4 47.0 45.5 44.4

           43.8 43.1 42.7
   6         1
           42.8
   7         1    2    3    4    5    6    7    8
           38.3 40.3 41.2 44.9 55.9 52.7 47.7 44.7
   8         1    2    3    4    5    6    7    8    9   10

           42.7 42.3 42.8 44.6 45.5 45.0 44.7 43.8 42.8 43.3

1

RECEIVER     LEQ(H)    L10
37            69.7     70.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

   1        1
           40.0
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           40.0 38.0 41.1 43.2 43.6 45.1 46.4 44.5 49.8 51.1

           56.5 60.7 59.6 58.2
   3         1    2    3
           56.2 54.4 52.3
   4         1    2    3
           53.3 54.0 56.1
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.6 59.6 59.5 54.5 47.8 50.5 43.6 45.3 43.9 42.6

           41.7 41.0 40.2
   6         1
           40.4
   7         1    2    3    4    5    6    7    8
           34.2 35.2 35.8 45.0 52.7 55.0 51.7 47.8
   8         1    2    3    4    5    6    7    8    9   10

           44.8 44.8 45.4 47.1 47.3 45.9 45.1 44.1 43.3 43.9

1

RECEIVER     LEQ(H)    L10
38            68.7     69.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

   1        1
           39.2
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           38.6 36.5 39.8 42.1 42.4 43.8 44.9 42.6 47.5 48.2

           55.0 58.2 58.1 57.9
   3         1    2    3
           56.6 55.1 53.0
   4         1    2    3
           53.9 54.5 56.3
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.2 58.1 57.2 53.9 45.3 48.5 42.1 44.0 42.7 41.4

           40.5 39.6 38.8
   6         1
           38.8
   7         1    2    3    4    5    6    7    8
           31.3 31.8 32.4 42.4 47.9 51.3 52.4 50.6
   8         1    2    3    4    5    6    7    8    9   10

           46.1 46.1 46.2 46.9 46.1 44.3 43.6 43.0 42.7 43.8

1

RECEIVER     LEQ(H)    L10
39            68.4     69.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

ROADWAY  SEGMENT

   1        1
           39.0
   2         1    2    3    4    5    6    7    8    9   10

  11        12   13   14
           38.2 36.1 39.2 41.6 41.8 43.1 44.1 41.7 46.4 47.2

           54.5 56.9 57.4 57.8
   3         1    2    3
           57.1 55.7 53.7
   4         1    2    3
           54.5 55.0 56.6
   5         1    2    3    4    5    6    7    8    9   10

  11        12   13
           57.1 57.3 56.1 53.8 44.3 47.5 41.4 43.3 42.0 40.8

           39.9 39.2 38.3
```

```
6         1
        38.4
7         1     2     3     4     5     6     7     8
        30.2 30.9 35.9 41.5 45.8 48.8 51.1 51.6
8         1     2     3     4     5     6     7     8     9    10

        46.7 46.4 45.9 46.0 44.9 43.1 42.7 42.4 42.3 43.9
```

```
**************************
OPTIMA-VU1
**************************
BARRIER OPTIMIZATION PROGRAM USING
PARTIAL SOUND ENERGIES COMPUTED BY THE
STAMINA 2.0 PROGRAM
MODIFIED FROM THE FHWA VAX VERSON -- MARCH 1983

MODIFIED TO:
1. PLACE BARRIER COST DATA IN A DATA FILE CALLED
OPTCOST.DTA TO ALLOW USER TO USE COSTS OTHER THAN
THE FHWA NATIONAL AVERAGES.
**************************
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
IN JUNE 1991 BY
VANDERBILT ENGINEERING CENTER FOR TRANSPORTATION
OPERATIONS AND RESEARCH (VECTOR)
BOX 96-B, VANDERBILT UNIVERSITY, NASHVILLE, TENNESSEE 37235
(615) 322-3683
**************************

PROBLEM TITLE
*************
Otay Ranch - Village 7: 02/2004

EFFECTIVENESS/COST RATIO AND BARRIER HEIGHT MATRICES
*****************************************************
BARRIER SECTION        EFFECTIVENESS/COST          CORRESPONDING
NO  IDENT                  RATIO                BARRIER HEIGHTS(IN FT)

HEIGHT INDEX  1  2  3  4  5  6  7  8  1  2  3  4  5  6  7  8
 1  sf-16     *  21. 21. 19. 16. 15. 13. 13. 0. 8. 9.10.11.12.13.14.
 2  6a        *  19. 17. 15. 13. 12. 11. 11. 0. 8. 9.10.11.12.13.14.
 3  6b        *  31. 35. 36. 35. 33. 31. 30. 0. 8. 9.10.11.12.13.14.
 4  6c        *  37. 43. 43. 40. 37. 35. 33. 0. 8. 9.10.11.12.13.14.
 5  7         *  41. 41. 39. 36. 35. 35. 35. 0. 8. 9.10.11.12.13.14.
 6  8       *  39. 37. 36. 35. 35. 34. 33. 0. 5. 6. 7. 8. 9.10.11.
 7  9       *  36. 35. 35. 34. 34. 33. 32. 0. 5. 6. 7. 8. 9.10.11.
 8  10    *  37. 37. 36. 35. 35. 34. 34. 0. 3. 4. 5. 6. 7. 8. 9.
 9  11    *  37. 35. 35. 34. 34. 34. 34. 0. 3. 4. 5. 6. 7. 8. 9.
10  12    *  38. 36. 35. 35. 34. 34. 34. 0. 3. 4. 5. 6. 7. 8. 9.
11  13    *  40. 37. 37. 36. 36. 35. 35. 0. 3. 4. 5. 6. 7. 8. 9.
12  14    *  39. 37. 38. 37. 36. 35. 35. 0. 3. 4. 5. 6. 7. 8. 9.
13  15    *  38. 37. 38. 37. 36. 36. 35. 0. 3. 4. 5. 6. 7. 8. 9.
14  16    *  40. 37. 38. 38. 37. 37. 36. 0. 3. 4. 5. 6. 7. 8. 9.
15  17    *  36. 36. 35. 33. 33. 32. 32. 0. 3. 4. 5. 6. 7. 8. 9.
16  18    *  36. 37. 35. 34. 33. 32. 32. 0. 3. 4. 5. 6. 7. 8. 9.
17  19      *  34. 33. 32. 32. 30. 29. 29. 0. 6. 7. 8. 9.10.11.12.
18  20      *  36. 35. 34. 33. 32. 30. 30. 0. 6. 7. 8. 9.10.11.12.
19  21      *  37. 35. 34. 33. 32. 30. 30. 0. 6. 7. 8. 9.10.11.12.
20  22      *  38. 36. 35. 34. 32. 31. 30. 0. 6. 7. 8. 9.10.11.12.
21  23      *  38. 36. 35. 34. 32. 31. 30. 0. 6. 7. 8. 9.10.11.12.
22  24      *  38. 37. 36. 35. 33. 31. 31. 0. 6. 7. 8. 9.10.11.12.
23  2-rev     *  36. 38. 38. 36. 32. 29. 28. 0. 6. 7. 8. 9.10.11.12.
24  1       *  0. 0. 0. 0. 0. 0. 0. 0. 3. 4. 5. 6. 7. 8. 9.
25  2       *  0. 0. 0. 0. 0. 0. 0. 0. 3. 4. 5. 6. 7. 8. 9.
26  3       *  0. 0. 0. 0. 0. 0. 0. 0. 3. 4. 5. 6. 7. 8. 9.
27  4       *  0. 0. 0. 0. 0. 0. 0. 0. 3. 4. 5. 6. 7. 8. 9.
28  5       *  0. 0. 0. 0. 0. 0. 0. 0. 3. 4. 5. 6. 7. 8. 9.
29  6       *  15. 14. 13. 12. 11. 11. 10. 0. 3. 4. 5. 6. 7. 8. 9.
30  7       *  0. 0. 0. 0. 0. 0. 0. 0. 3. 4. 5. 6. 7. 8. 9.
31  8       *  0. 18. 17. 15. 14. 13. 12. 0. 3. 4. 5. 6. 7. 8. 9.
32  9       *  0. 0. 0. 0. 0. 0. 0. 0. 3. 4. 5. 6. 7. 8. 9.
33  10      *  0. 0. 0. 20. 19. 18. 17. 0. 3. 4. 5. 6. 7. 8. 9.
34  11      *  7. 10. 16. 17. 15. 14. 13. 0. 3. 4. 5. 6. 7. 8. 9.
35  12        *  0. 19. 22. 23. 21. 20. 20. 0. 4. 5. 6. 7. 8. 9.10.
36  13        *  20. 18. 16. 15. 14. 13. 13. 0. 4. 5. 6. 7. 8. 9.10.
37  14        *  20. 21. 21. 21. 21. 19. 19. 0. 4. 5. 6. 7. 8. 9.10.
38  15        *  22. 25. 24. 23. 22. 21. 20. 0. 4. 5. 6. 7. 8. 9.10.
39  40      *  0.                          0. 0.
40  41      *  0.                          0. 0.
41  42      *  0.                          0. 0.
42  43      *  0.                          0. 0.
43  44      *  0.                          0. 0.
44  45      *  0.                          0. 0.
45  46      *  0.                          0. 0.
46  47      *  0.                          0. 0.
47  48      *  0.                          0. 0.
48  49      *  0.                          0. 0.
49  50      *  0.                          0. 0.
50  51      *  0.                          0. 0.
51  53      *  0.                          0. 0.
52  3-rev     *  34. 36. 36. 33. 31. 28. 28. 0. 4. 5. 6. 7. 8. 9.10.
53  53        *  20. 17. 16. 16. 16. 16. 16. 0. 4. 5. 6. 7. 8. 9.10.
54  54        *  22. 20. 18. 18. 18. 18. 18. 0. 4. 5. 6. 7. 8. 9.10.
55  55        *  25. 22. 21. 20. 20. 20. 20. 0. 4. 5. 6. 7. 8. 9.10.
56  56        *  28. 27. 25. 23. 21. 21. 20. 0. 4. 5. 6. 7. 8. 9.10.
57  57        *  30. 31. 29. 27. 25. 23. 23. 0. 4. 5. 6. 7. 8. 9.10.
58  58        *  30. 31. 30. 28. 26. 24. 23. 0. 4. 5. 6. 7. 8. 9.10.
59  59        *  15. 16. 16. 15. 14. 13. 12. 0. 4. 5. 6. 7. 8. 9.10.
60  60a       * -17. -17. -17. -17. -17. -17. -17. 0. 3. 4. 5. 6. 7. 8. 9.
61  60b       *  0. 0. 0. 0. 0. 0. 0. 0. 3. 4. 5. 6. 7. 8. 9.
62  60c       *  0. 0. 0. 0. 0. 0. 0. 0. 3. 4. 5. 6. 7. 8. 9.
63  61        *  0. 0. 7. 10. 9. 6. 4. 0. 3. 4. 5. 6. 7. 8. 9.
64  62        *  0. 0. 0. 0. 0. 0. 0. 0. 3. 4. 5. 6. 7. 8. 9.
65  63        *  0. 0. 0. 0. 0. 0. 0. 0. 3. 4. 5. 6. 7. 8. 9.

HEIGHT INDEX  1  2  3  4  5  6  7  8  1  2  3  4  5  6  7  8

Otay Ranch - Village 7: 02/2004

3rd floor receivers with barriers

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
 5  7  8  8  7  8  7  8  7  7  7  7  8  8  8  8  5  5  5  5  6  8  2  1  1
 1  1  1  1  2  2  4  4  4  6  6  7  8  1  1  1  1  1  1  1  1  1  1  1  1
 1  1  8  8  8  7  7  6  5  3  3  3  3  3  3
CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
11.13.14.14.13.11.10. 9. 8. 8. 8. 8. 9. 9. 9. 9. 9. 9. 9.10.12. 6. 0. 0.
 0. 0. 0. 0. 3. 3. 5. 5. 5. 8. 8. 9.10. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
 0. 0.10.10.10. 9. 9. 8. 7. 4. 4. 4. 4. 4. 4.

R E S U L T S
*************

REC   REC ID        LEQ      LEQ(Z(0))      IL
  1   1             63.1      65.2          2.0
  2   2             64.6      66.3          1.7
  3   3             66.1      67.3          1.2
  4   4             67.7      68.5           .8
  5   5             69.6      70.3           .7
  6   6             70.9      71.6           .7
  7   7             72.1      72.9           .8
  8   8             72.6      73.7          1.1
  9   9             72.4      74.1          1.6
 10   10            71.7      74.3          2.6
 11   11            71.0      74.5          3.5
 12   12            70.1      74.9          4.8
 13   13            69.8      75.2          5.3
 14   14            69.1      75.2          6.1
 15   15            69.0      75.3          6.3
 16   16            68.1      74.5          6.3
 17   17            69.0      74.4          5.4
 18   18            70.7      76.5          5.7
 19   19            70.1      75.8          5.7
 20   20            69.0      74.0          5.0
 21   21            68.8      74.0          5.1
 22   22            69.6      75.6          6.1
 23   23            70.2      76.7          6.5
 24   24            66.4      72.3          6.0
 25   25            67.4      73.0          5.6
 26   26            68.6      74.3          5.7
 27   27            68.7      75.3          6.6
 28   28            69.6      76.2          6.5
 29   29            70.0      75.9          5.9
 30   30            71.9      75.7          3.8
 31   31            75.5      75.6           .1
 32   32            75.3      75.4           .1
 33   33            75.1      75.2           .1
 34   34            74.6      74.6           .1
 35   35            74.0      74.1           .1
 36   36            70.0      71.7          1.7
 37   37            69.7      70.0           .3
 38   38            68.7      68.9           .2
 39   39            68.4      68.5           .2

BARRIER TYPE          COST              AREA (SQ. FT.)
FH-BERM                  0.                 0.
FH-MASON            216800.              40318.
FH-WOOD                  0.                 0.
FH-CONC                  0.                 0.
FH-STEEL                 0.                 0.
**********************************************************************
 TOTALS:        $   216800.              40318.

END OF ALL CASES
```

****
STAM2VU1
Version 1.20
****

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

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****

MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Otay Ranch - Village 7: 02/2004

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM 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)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Southbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
1	6339513.3	1806920.6	600.4	0
2	6339510.5	1806467.0	598.8	0

0ROADWAY 2 Southbound SR-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
2	6339510.5	1806467.0	598.8	0
3	6339509.1	1806114.7	593.8	0
4	6339508.2	1805921.3	592.2	0
5	6339506.6	1805567.2	590.6	0
6	6339518.4	1805084.1	587.3	0
7	6339558.1	1804696.4	584.0	0
8	6339626.5	1804317.1	580.7	0
9	6339721.1	1803940.3	577.4	0
10	6339779.5	1803754.4	575.8	0
11	6339915.4	1803392.1	572.5	0
12	6340052.2	1803092.3	569.2	0
13	6340182.4	1802843.8	564.3	0
14	6340344.6	1802558.3	554.5	0
15	6340485.7	1802306.5	544.6	0
16	6340646.7	1802025.4	531.5	0

0ROADWAY 3 Southbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES X	Y	Z	GRADE
16	6340646.7	1802025.4	531.5	0
17	6340806.7	1801741.3	516.7	0
18	6340985.8	1801426.3	500.3	0
19	6341154.7	1801109.5	483.9	0

0ROADWAY 4 Northbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES X	Y	Z	GRADE
1	6341260.4	1801145.7	485.6	1
2	6341061.5	1801517.5	503.6	1
3	6340903.6	1801796.7	516.7	1
4	6340743.5	1802078.7	531.5	1

0ROADWAY 5 Northbound SR-125, Birch to RM

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
4	6340743.5	1802078.7	531.5	1
5	6340583.6	1802361.5	544.6	1
6	6340405.7	1802676.0	556.1	1
7	6340228.9	1802992.4	564.3	1
8	6340066.7	1803323.5	569.2	1
9	6339993.2	1803497.7	570.9	1
10	6339809.9	1804036.4	575.8	1
11	6339761.7	1804219.9	577.4	1
12	6339684.8	1804591.6	580.7	1
13	6339638.4	1804969.2	584.0	1
14	6339618.1	1805346.8	587.3	1
15	6339618.1	1805728.7	590.6	1
16	6339621.4	1806111.3	593.8	1
17	6339622.2	1806484.0	598.8	1

0ROADWAY 6 Northbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
17	6339622.2	1806484.0	598.8	1
18	6339626.5	1806918.9	600.4	1

0ROADWAY 7 Southbound Ramp to Rock Mountain

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	561.	45.0
VEH5	18.	45.0
VEH6	12.	45.0

0	COORDINATES X	Y	Z	GRADE
1	6339864.2	1803405.4	565.9	1
2	6339924.1	1803175.4	566.5	1
3	6339984.3	1802962.1	567.1	1
4	6340015.7	1802831.9	567.5	1
5	6340026.5	1802684.8	567.9	1
6	6340003.6	1802446.2	568.5	1
7	6339995.2	1802224.4	569.1	1
8	6340032.5	1802046.0	569.6	1
9	6340089.2	1801885.6	570.0	1

0ROADWAY 8 Ramp from wb Rock Mountain to sb-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	671.	45.0
VEH5	21.	45.0
VEH6	14.	45.0

0	COORDINATES X	Y	Z	GRADE
1	6340294.9	1801957.4	570.0	0
2	6340188.4	1802001.2	565.7	0
3	6340138.6	1802064.9	562.8	0
4	6340116.7	1802131.7	560.3	0
5	6340125.6	1802215.3	557.2	0
6	6340173.4	1802290.0	554.0	0
7	6340242.1	1802330.8	551.1	0
8	6340334.8	1802336.8	547.7	0
9	6340430.4	1802292.0	543.8	0
10	6340498.1	1802198.4	539.7	0
11	6340589.7	1802044.0	533.1	0

1

BARRIER 1 TYPE(A) R-O-W barrier 1acont'd

	COORDINATES X	Y	Z0	DELZ	P
8f-16	6339241.5	1805697.6	591.7	580.7	1.0 3
6a	6339296.6	1805665.7	593.0	582.0	
6b	6339342.5	1805640.0	594.1	583.1	
6c	6339383.5	1805617.1	595.0	584.0	
7	6339406.4	1805509.8	595.0	584.0	
8	6339434.3	1805343.0	599.9	588.9	

1

BARRIER 2 TYPE(A) R-O-W barrier 1bcont'd

	COORDINATES X	Y	Z0	DELZ	P
8	6339434.3	1805343.0	596.9	588.9	1.0 3
9	6339453.5	1805206.6	597.6	589.6	
10	6339469.4	1805092.9	597.9	589.9	

1

BARRIER 3 TYPE(A) R-O-W barrier 2cont'd

	COORDINATES X	Y	Z0	DELZ	P
10	6339469.4	1805092.9	595.9	589.9	1.0 3
11	6339469.8	1805006.9	594.9	588.9	
12	6339469.6	1804987.8	593.3	587.3	
13	6339479.8	1804897.0	591.1	585.1	
14	6339495.0	1804777.7	590.0	584.0	
15	6339517.8	1804626.1	588.3	582.3	
16	6339550.1	1804460.9	586.8	580.8	
17	6339589.1	1804285.5	585.1	579.1	

18	6339634.0	1804109.2	583.4	577.4	
19	6339663.6	1803997.1	582.0	576.0	
1					

BARRIER 4 TYPE(A) R-O-W barrier trf to top of slope barrier

	X	Y	Z	Z0	DELZ	P
19	6339663.6	1803997.1	585.0	576.0	1.0	3
20	6339705.0	1803857.9	583.7	574.7		
21	6339735.2	1803763.2	582.9	573.9		
22	6339758.3	1803694.7	582.5	573.5		
23	6339774.3	1803649.9	582.0	573.0		
24	6339798.4	1803582.7	581.6	572.6		
2-rev	6339886.3	1803152.2	580.0	571.0		
3-rev	6339854.5	1803141.6	580.0	571.0		
1						

BARRIER 5 TYPE(A) S-F Pad Edges

	X	Y	Z	Z0	DELZ	P
1	6338450.5	1805660.4	576.7	570.7	1.0	3
2	6338496.9	1805688.8	576.7	570.7		
3	6338586.8	1805745.8	578.3	572.3		
4	6338643.8	1805781.6	578.3	572.3		
5	6338703.0	1805818.1	580.7	574.7		
6	6338761.4	1805846.6	580.7	574.7		
7	6338765.1	1805848.1	582.8	576.8		
8	6338814.8	1805859.8	582.8	576.8		
9	6338819.2	1805860.5	584.2	578.2		
1						

BARRIER 6 TYPE(A) S-F Pad Edges cont'd.1

	X	Y	Z	Z0	DELZ	P
9	6338819.2	1805860.5	584.2	578.2	1.0	3
10	6338898.8	1805853.9	584.2	578.2		
11	6338994.5	1805823.2	584.2	578.2		
12	6338998.2	1805822.5	584.5	578.5		
1						

BARRIER 7 TYPE(A) S-F Pad Edges cont'd.2

	X	Y	Z	Z0	DELZ	P
12	6338998.2	1805822.5	585.5	578.5	1.0	3
13	6339061.0	1805801.3	585.5	578.5		
14	6339065.4	1805799.9	587.7	580.7		
15	6339173.6	1805762.6	587.7	580.7		
16	6339241.5	1805697.6	587.7	580.7		
1						

BARRIER 8 TYPE(A) Elem School Pad Edges

	X	Y	Z	Z0	DELZ	P
40	6339064.2	1804045.1	548.0	548.0	.0	0
41	6339477.3	1804188.3	550.0	550.0		
42	6339517.0	1804198.4	550.2	550.2		
43	6339575.6	1804002.5	552.0	552.0		
44	6339641.2	1803781.3	554.0	554.0		
45	6339706.8	1803560.2	556.0	556.0		
46	6339706.8	1803544.3	556.1	556.1		
48	6339717.2	1803526.8	561.3	561.3		
49	6339762.7	1803371.2	561.5	561.5		
51	6339819.6	1803172.7	562.1	562.1		
1						

BARRIER 9 TYPE(A) Park to High Pads

	X	Y	Z	Z0	DELZ	P
51	6339819.6	1803172.7	562.1	562.1	.0	0
53	6339837.0	1803137.7	579.5	579.5		
52	6339709.4	1803101.9	576.9	576.9		
1						

BARRIER 10 TYPE(A) High School Pad Edges

	X	Y	Z	Z0	DELZ	P
3-rev	6339854.5	1803141.6	578.0	571.0	1.0	3
53	6339837.0	1803137.7	586.5	579.5		
54	6339875.5	1803030.2	585.6	578.6		
55	6339921.0	1802903.4	585.5	578.5		
56	6339942.8	1802838.7	585.4	578.4		
57	6339950.7	1802716.3	585.0	578.0		
58	6339953.3	1802656.0	584.5	577.5		
59	6339944.6	1802632.3	584.3	577.3		
60a	6339822.2	1802585.1	581.6	574.6		
1						

BARRIER 11 TYPE(A) High School Pad Edges cont'd.

	X	Y	Z	Z0	DELZ	P
60a	6339822.2	1802585.1	580.6	574.6	1.0	3
60b	6339807.2	1802441.6	584.7	578.7		
60c	6339785.7	1802288.4	585.1	579.1		
61	6339775.0	1802195.2	586.8	580.8		
62	6339763.6	1802083.2	585.7	579.7		
63	6339781.1	1801897.9	576.4	570.4		
64	6339783.7	1801794.7	576.4	570.4		
1						

BARRIER 12 TYPE(A) Theoretical MF Bldg1

	X	Y	Z	Z0	DELZ	P
1	6339509.2	1804187.8	580.0	550.0	.0	0
2	6339454.7	1804173.9	580.0	550.0		
3	6339478.7	1804085.1	580.0	550.0		
4	6339535.1	1804100.8	580.0	550.0		
1	6339509.2	1804187.8	580.0	550.0		
1						

BARRIER 13 TYPE(A) Theoretical MF Bldg2

	X	Y	Z	Z0	DELZ	P
1	6339487.0	1804064.7	581.0	551.0	.0	0
2	6339541.6	1804079.5	581.0	551.0		
3	6339566.6	1803991.7	581.0	551.0		
4	6339511.1	1803978.7	581.0	551.0		
1	6339487.0	1804064.7	581.0	551.0		
1						

BARRIER 14 TYPE(A) Theoretical MF Bldg3

	X	Y	Z	Z0	DELZ	P
1	6339518.5	1803958.4	582.0	552.0	.0	0
2	6339573.0	1803973.2	582.0	552.0		
3	6339600.8	1803885.3	582.0	552.0		
4	6339543.5	1803870.5	582.0	552.0		
1	6339518.5	1803958.4	582.0	552.0		
1						

BARRIER 15 TYPE(A) Theoretical MF Bldg4

	X	Y	Z	Z0	DELZ	P
1	6339550.8	1803851.1	583.0	553.0	.0	0
2	6339604.5	1803865.9	583.0	553.0		
3	6339630.4	1803778.0	583.0	553.0		
4	6339574.0	1803764.1	583.0	553.0		
1	6339550.8	1803851.1	583.0	553.0		
1						

BARRIER 16 TYPE(A) Theoretical MF Bldg5

	X	Y	Z	Z0	DELZ	P
1	6339582.3	1803744.7	584.0	554.0	.0	0
2	6339635.9	1803757.7	584.0	554.0		
3	6339663.7	1803669.8	584.0	554.0		
4	6339606.3	1803655.0	584.0	554.0		
1	6339582.3	1803744.7	584.0	554.0		
1						

BARRIER 17 TYPE(A) Theoretical MF Bldg6

	X	Y	Z	Z0	DELZ	P
1	6339614.7	1803634.6	585.6	555.6	.0	0
2	6339670.2	1803648.5	585.6	555.6		
3	6339695.1	1803561.6	585.6	555.6		
4	6339638.7	1803545.9	585.6	555.6		
1	6339614.7	1803634.6	585.6	555.6		
1						

BARRIER 18 TYPE(A) Theoretical MF Bldg7

	X	Y	Z	Z0	DELZ	P
1	6339660.0	1803474.6	591.3	561.3	.0	0
2	6339713.6	1803489.4	591.3	561.3		
3	6339739.5	1803402.5	591.3	561.3		
4	6339683.1	1803387.7	591.3	561.3		
1	6339660.0	1803474.6	591.3	561.3		
1						

BARRIER 19 TYPE(A) Theoretical MF Bldg8

	X	Y	Z	Z0	DELZ	P
1	6339692.4	1803367.3	591.6	561.6	.0	0
2	6339745.1	1803382.1	591.6	561.6		
3	6339772.8	1803294.3	591.6	561.6		
4	6339715.5	1803279.5	591.6	561.6		
1	6339692.4	1803367.3	591.6	561.6		
1						

BARRIER 20 TYPE(A) Theoretical MF Bldg9

	X	Y	Z	Z0	DELZ	P
1	6339722.9	1803260.1	592.0	562.0	.0	0
2	6339776.5	1803274.8	592.0	562.0		
3	6339804.3	1803187.9	592.0	562.0		
4	6339746.9	1803172.2	592.0	562.0		
1	6339722.9	1803260.1	592.0	562.0		
1						

First-floor Multi-family Receivers (at 5 feet)

	X	Y	Z
1	6339449.3	1804154.9	555.0
2	6339465.1	1804102.2	555.0
3	6339482.6	1804045.8	556.0
4	6339499.3	1803992.1	556.0
5	6339514.1	1803937.6	557.0
6	6339528.9	1803885.8	557.0
7	6339545.5	1803832.1	558.0
8	6339560.3	1803782.2	558.0
9	6339577.0	1803724.8	559.0
10	6339592.7	1803674.0	559.0
11	6339610.3	1803614.8	560.6
12	6339626.0	1803560.2	560.6
13	6339651.7	1803454.2	566.3
14	6339670.2	1803398.5	566.3
15	6339684.9	1803348.3	566.6
16	6339701.4	1803290.8	566.6
17	6339716.7	1803239.4	567.0
18	6339732.0	1803188.0	567.0
19	6339522.0	1804151.0	555.0
20	6339619.9	1803821.5	558.0
21	6339684.0	1803610.9	560.6
22	6339729.7	1803444.3	566.3
23	6339791.6	1803234.7	567.0
1			

ALPHA 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							
2 *	.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							
4 *	.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							
6 *	.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	.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	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0							
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
2 *  .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
4 *  .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
6 *  .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  .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  .0  .0  .0  .0  .0  .0  .0  .0
     .0  .0  .0
1

 RECEIVER     LEQ(H)    L10
 1             58.1    59.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
             39.7
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             39.7  38.4  43.1  47.7  50.6  49.4  49.6  41.7  40.6  36.8

              34.1  32.8  30.5  29.4
    3          1     2     3
             28.5  27.6  26.3
    4          1     2     3
             27.0  27.0  28.3
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             29.1  31.0  32.7  35.1  34.5  44.0  43.6  45.7  43.7  45.3

              42.9  40.8  38.9
    6          1
             38.1
    7          1     2     3     4     5     6     7     8
             24.1  21.9  18.4  20.2  23.0  25.1  25.5  24.9
    8          1     2     3     4     5     6     7     8     9    10

             16.8  17.1  17.1  17.6  16.3  14.8  13.6  14.0  14.0  15.2
1

 RECEIVER     LEQ(H)    L10
 2             55.1    56.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
             29.5
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             30.0  28.6  32.8  36.8  39.5  45.3  50.0  42.8  41.2  36.5

              34.3  33.0  30.7  29.6
    3          1     2     3
             28.7  27.8  26.4
    4          1     2     3
             26.9  26.9  28.2
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             29.1  31.1  32.9  35.5  35.0  44.7  44.0  45.3  40.4  36.5

              33.7  31.4  29.5
    6          1
             28.6
    7          1     2     3     4     5     6     7     8
             24.7  23.4  20.6  20.3  23.0  25.3  25.7  25.1
    8          1     2     3     4     5     6     7     8     9    10

             17.0  17.1  17.1  17.5  16.5  15.0  15.3  14.9  14.4  15.5
1

 RECEIVER     LEQ(H)    L10
 3             55.1    56.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
             28.5
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             29.0  27.6  31.8  35.9  38.9  44.4  49.9  44.0  42.1  37.3

              34.5  33.2  30.8  29.7
    3          1     2     3
             28.8  27.9  26.5
    4          1     2     3
             27.2  27.2  28.6
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             29.4  31.4  33.3  36.0  35.6  45.5  44.1  44.6  39.7  36.0

              33.3  31.2  29.2
    6          1
             28.3
    7          1     2     3     4     5     6     7     8
             24.9  22.7  19.0  19.7  23.4  25.6  26.0  25.4
    8          1     2     3     4     5     6     7     8     9    10

             17.2  17.5  17.1  17.8  16.9  14.5  14.0  14.4  14.3  15.5
1

 RECEIVER     LEQ(H)    L10
 4             55.1    56.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
             29.0
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             29.5  28.1  32.2  36.1  38.4  43.4  49.8  45.2  43.0  37.6

              34.1  32.6  30.3  29.2
    3          1     2     3
             28.2  27.4  26.1
    4          1     2     3
             27.3  27.3  28.7
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             29.6  31.6  33.7  36.5  36.1  46.1  44.1  44.0  39.1  35.6

              33.0  30.9  29.0
    6          1
             28.1
    7          1     2     3     4     5     6     7     8
             24.9  23.8  20.9  20.8  23.0  25.7  26.2  25.5
    8          1     2     3     4     5     6     7     8     9    10

             16.9  17.0  16.6  17.6  16.3  15.4  15.5  14.9  14.5  15.6
1

 RECEIVER     LEQ(H)    L10
 5             55.1    56.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
             28.1
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             28.6  27.1  31.2  35.2  37.7  42.5  49.3  46.3  43.9  38.2

              35.1  33.7  31.3  30.2
    3          1     2     3
             29.2  28.2  26.9
    4          1     2     3
             27.5  27.6  29.0
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             29.9  31.9  34.0  36.9  36.7  46.8  43.6  43.2  38.6  35.2

              32.6  30.6  28.8
    6          1
             27.9
    7          1     2     3     4     5     6     7     8
             25.8  23.7  19.9  20.4  23.7  26.1  26.5  25.8
    8          1     2     3     4     5     6     7     8     9    10

             17.6  17.5  17.3  17.7  17.4  15.1  14.5  15.0  14.8  16.0
1

 RECEIVER     LEQ(H)    L10
 6             55.2    56.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
             29.1
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             29.5  28.1  32.2  36.1  37.9  41.7  48.7  47.1  44.9  38.8

              35.0  33.8  31.3  30.2
    3          1     2     3
             29.2  28.2  26.8
    4          1     2     3
             27.6  27.7  29.2
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             30.1  32.2  34.4  37.4  37.3  47.1  43.2  42.5  38.0  34.8

              32.6  30.7  29.0
    6          1
             28.2
    7          1     2     3     4     5     6     7     8
             26.0  24.4  21.4  21.4  23.6  26.4  26.7  26.0
    8          1     2     3     4     5     6     7     8     9    10

             17.5  17.4  17.2  18.0  17.0  15.7  16.0  15.4  14.9  16.0
1

 RECEIVER     LEQ(H)    L10
 7             55.1    56.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

    1         1
             27.7
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             28.1  26.6  30.6  34.5  36.7  40.9  47.6  47.8  45.9  39.4

              35.4  33.9  31.4  30.3
    3          1     2     3
             29.2  28.2  26.8
    4          1     2     3
             27.8  27.9  29.4
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             30.4  32.5  34.8  37.9  38.0  47.5  42.6  41.8  37.5  34.5

              32.1  30.1  28.3
    6          1
             27.5
    7          1     2     3     4     5     6     7     8
             26.6  24.6  20.9  20.0  24.1  26.7  27.0  26.3
    8          1     2     3     4     5     6     7     8     9    10
```

```
          18.3 17.2 17.2 17.8 18.0 14.7 15.2 15.4 15.0 16.1
1

 RECEIVER     LEQ(H)    L10
 8             55.2    56.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             29.0
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             29.4 27.9 31.9 35.7 37.6 40.4 46.8 47.9 46.9 40.0

             35.9 34.1 31.5 30.3
    3          1    2    3
             29.1 28.2 26.8
    4          1    2    3
             27.9 28.1 29.6
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             30.6 32.8 35.2 38.5 38.6 47.7 41.9 41.2 37.1 34.2

             32.3 30.5 28.8
    6          1
             28.0
    7          1    2    3    4    5    6    7    8
             27.1 24.9 21.9 21.8 23.9 26.9 27.2 26.5
    8          1    2    3    4    5    6    7    8    9   10

          17.5 17.3 16.9 17.9 17.2 16.3 16.2 15.7 14.7 15.8
1

 RECEIVER     LEQ(H)    L10
 9             55.1    56.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             27.3
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             27.7 26.2 30.1 33.8 35.8 39.5 45.6 47.5 48.1 40.8

             36.4 34.5 31.8 30.7
    3          1    2    3
             29.5 28.5 27.1
    4          1    2    3
             28.2 28.3 29.8
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             30.8 33.2 35.6 39.0 39.4 47.9 41.1 40.5 36.6 33.7

             31.5 29.6 27.9
    6          1
             27.1
    7          1    2    3    4    5    6    7    8
             28.0 25.4 22.0 20.9 24.1 27.3 27.6 26.8
    8          1    2    3    4    5    6    7    8    9   10

          18.3 17.0 16.7 17.7 18.1 14.9 15.9 16.2 15.4 16.4
1

 RECEIVER     LEQ(H)    L10
 10            55.2    56.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             28.7
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             29.1 27.5 31.4 35.1 37.0 39.6 44.5 46.9 48.8 41.5

             37.0 34.9 32.1 30.9
    3          1    2    3
             29.7 28.6 27.2
    4          1    2    3
             28.4 28.5 30.1
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             31.2 33.5 35.9 39.6 40.1 47.9 40.3 39.9 36.2 33.8

             32.0 30.2 28.5
    6          1
             27.8
    7          1    2    3    4    5    6    7    8
             28.9 25.3 22.3 22.2 24.1 27.5 27.8 27.0
    8          1    2    3    4    5    6    7    8    9   10

          17.6 16.5 16.1 17.2 17.7 16.5 16.4 15.3 15.2 16.3
1

 RECEIVER     LEQ(H)    L10
 11            55.0    56.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             26.9
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             27.2 25.7 29.6 33.1 35.0 38.2 43.5 45.7 49.4 42.5

             37.6 35.4 32.5 31.2
    3          1    2    3
             30.0 28.9 27.4
    4          1    2    3
             28.6 28.8 30.4
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             31.5 33.9 36.5 40.2 40.8 47.8 39.5 39.2 35.7 33.0

             30.9 29.1 27.5
    6          1
             26.7
    7          1    2    3    4    5    6    7    8
             30.1 26.2 22.8 21.8 23.7 28.0 28.3 27.4
    8          1    2    3    4    5    6    7    8    9   10

          17.0 17.3 17.3 17.6 17.0 15.8 16.5 16.2 15.6 16.6
1

 RECEIVER     LEQ(H)    L10
 12            55.1    56.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             28.5
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             28.8 27.2 31.0 34.6 36.4 38.9 42.6 44.5 49.7 43.4

             38.8 36.3 33.2 31.6
    3          1    2    3
             30.3 29.1 27.6
    4          1    2    3
             28.8 29.0 30.8
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             32.1 34.7 37.0 40.9 41.5 47.6 38.7 38.6 35.5 33.5

             31.7 29.9 28.3
    6          1
             27.6
    7          1    2    3    4    5    6    7    8
             31.3 27.2 22.7 21.6 23.7 28.4 28.5 27.5
    8          1    2    3    4    5    6    7    8    9   10

          17.3 16.8 16.6 17.7 17.0 15.3 15.8 16.3 16.0 17.0
1

 RECEIVER     LEQ(H)    L10
 13            56.2    57.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             31.4
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             31.6 29.9 33.7 37.1 38.7 41.6 46.0 46.2 49.4 45.2

             39.5 36.8 33.6 32.1
    3          1    2    3
             30.7 29.6 28.0
    4          1    2    3
             29.2 29.4 31.1
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             32.4 35.0 37.9 42.1 42.7 47.2 42.5 42.5 39.4 37.0

             35.1 33.4 31.9
    6          1
             31.2
    7          1    2    3    4    5    6    7    8
             33.6 28.6 23.9 23.4 26.2 30.4 29.8 28.9
    8          1    2    3    4    5    6    7    8    9   10

          20.1 19.5 20.2 20.0 19.7 16.8 17.2 16.8 16.5 17.6
1

 RECEIVER     LEQ(H)    L10
 14            54.9    56.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             28.0
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             28.2 26.5 30.3 33.7 35.2 37.9 40.7 41.2 49.0 46.1

             40.2 37.3 34.0 32.4
    3          1    2    3
             30.9 29.8 28.2
    4          1    2    3
             29.3 29.7 31.4
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             32.7 35.3 38.4 42.8 42.9 46.4 36.7 37.1 35.1 33.2

             31.4 29.8 28.2
    6          1
             27.5
    7          1    2    3    4    5    6    7    8
             34.9 29.7 24.4 24.2 26.6 31.0 30.1 29.1
    8          1    2    3    4    5    6    7    8    9   10

          19.6 20.2 19.9 20.4 19.6 18.1 18.0 17.1 16.9 17.9
1

 RECEIVER     LEQ(H)    L10
 15            54.8    56.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             28.1
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             28.5 26.8 31.0 34.7 36.0 38.0 39.8 40.3 48.4 46.9

             40.9 37.8 34.3 32.6
    3          1    2    3
```

```
        31.3 30.1 28.5
  4       1    2    3
        29.5 29.8 31.6
  5       1    2    3    4    5    6    7    8    9   10

 11      12   13
        33.0 35.7 38.9 43.3 43.3 45.7 36.1 36.6 33.8 31.4

        29.6 28.0 26.5
  6       1
        25.9
  7       1    2    3    4    5    6    7    8
        35.8 30.7 25.2 24.5 26.7 31.6 30.3 29.3
  8       1    2    3    4    5    6    7    8    9   10

        20.5 19.7 19.5 20.5 20.0 17.8 18.2 17.6 17.2 18.2
1

 RECEIVER    LEQ(H)   L10
 16           54.8   55.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1       1
         27.6
   2       1    2    3    4    5    6    7    8    9   10

  11      12   13   14
         27.8 26.1 29.8 33.0 34.4 36.9 40.1 39.4 47.5 47.5

         41.7 38.3 34.9 33.1
   3       1    2    3
         31.6 30.3 28.7
   4       1    2    3
         29.8 30.2 32.0
   5       1    2    3    4    5    6    7    8    9   10

  11      12   13
         33.2 36.1 39.4 43.8 43.3 45.1 35.5 36.6 34.9 32.9

         31.1 29.6 28.1
   6       1
         27.4
   7       1    2    3    4    5    6    7    8
         36.7 31.9 26.2 25.0 28.7 32.0 30.4 29.2
   8       1    2    3    4    5    6    7    8    9   10

         21.3 25.6 24.9 24.3 20.3 18.7 18.5 17.9 17.6 18.6
1

 RECEIVER    LEQ(H)   L10
 17           54.7   55.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1       1
         28.2
   2       1    2    3    4    5    6    7    8    9   10

  11      12   13   14
         28.4 26.9 31.0 34.5 35.9 37.8 39.4 38.6 46.6 47.9

         42.3 39.0 35.3 33.5
   3       1    2    3
         31.8 30.6 28.9
   4       1    2    3
         30.0 30.4 32.2
   5       1    2    3    4    5    6    7    8    9   10

  11      12   13
         33.7 36.5 39.8 44.3 43.0 44.4 35.0 35.6 34.2 32.8

         31.2 29.5 27.5
   6       1
         25.5
   7       1    2    3    4    5    6    7    8
         36.9 33.1 27.2 25.6 30.9 32.2 30.3 28.7
   8       1    2    3    4    5    6    7    8    9   10

         26.9 25.7 25.1 25.6 24.0 18.6 18.8 18.4 18.0 18.9
1

 RECEIVER    LEQ(H)   L10
 18           55.2   56.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1       1
         27.0
   2       1    2    3    4    5    6    7    8    9   10

  11      12   13   14
         27.2 25.5 29.1 32.2 33.6 35.9 39.0 38.1 45.6 48.0

         43.0 39.5 40.8 39.8
   3       1    2    3
         38.1 36.7 34.9
   4       1    2    3
         36.0 36.4 38.2
   5       1    2    3    4    5    6    7    8    9   10

  11      12   13
         36.4 36.9 40.3 44.6 42.7 43.8 34.5 36.1 34.1 32.1

         30.4 28.8 27.5
   6       1
         26.9
   7       1    2    3    4    5    6    7    8
         36.8 34.3 32.2 33.0 33.2 31.5 28.9 27.3
   8       1    2    3    4    5    6    7    8    9   10

         25.6 24.5 24.4 25.4 25.6 25.1 25.4 25.2 24.5 25.4
1

 RECEIVER    LEQ(H)   L10
 19           62.6   64.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1       1
         37.3
   2       1    2    3    4    5    6    7    8    9   10

  11      12   13   14
         37.9 36.7 41.2 46.2 49.4 54.4 58.3 50.0 49.6 45.6

         42.1 40.1 36.9 35.3
   3       1    2    3
         34.0 32.8 31.1
   4       1    2    3
         32.0 32.1 33.8
   5       1    2    3    4    5    6    7    8    9   10

  11      12   13
         35.0 37.3 39.5 41.8 40.9 49.7 48.4 50.4 46.7 43.6

         41.1 38.9 37.0
   6       1
         36.1
   7       1    2    3    4    5    6    7    8
         31.3 30.4 27.7 27.7 27.2 17.8 14.4 13.3
   8       1    2    3    4    5    6    7    8    9   10

         23.1 20.3 16.4 19.5 21.4 20.8 21.1 20.9 20.4 21.1
1

 RECEIVER    LEQ(H)   L10
 20           63.0   65.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1       1
         37.1
   2       1    2    3    4    5    6    7    8    9   10

  11      12   13   14
         37.6 36.2 40.7 45.2 47.8 51.5 56.2 55.8 54.7 48.8

         44.6 42.1 39.0 37.3
   3       1    2    3
         35.8 34.4 32.7
   4       1    2    3
         33.8 34.1 35.9
   5       1    2    3    4    5    6    7    8    9   10

  11      12   13
         37.3 39.8 42.4 45.2 44.6 52.7 47.4 48.6 45.8 43.2

         41.0 38.9 37.0
   6       1
         36.2
   7       1    2    3    4    5    6    7    8
         34.3 33.0 30.0 29.8 29.1 21.1 16.1 14.9
   8       1    2    3    4    5    6    7    8    9   10

         24.2 22.1 21.2 21.5 22.9 22.5 22.8 22.5 21.9 22.8
1

 RECEIVER    LEQ(H)   L10
 21           63.5   65.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1       1
         37.6
   2       1    2    3    4    5    6    7    8    9   10

  11      12   13   14
         38.1 36.7 40.9 44.9 47.3 50.5 53.5 54.3 50.4 51.1

         46.3 43.7 40.2 38.5
   3       1    2    3
         36.9 35.5 33.8
   4       1    2    3
         34.8 35.1 37.0
   5       1    2    3    4    5    6    7    8    9   10

  11      12   13
         38.4 41.1 43.8 47.3 47.7 54.2 46.8 47.4 44.7 42.4

         40.3 38.4 36.7
   6       1
         36.0
   7       1    2    3    4    5    6    7    8
         37.2 35.2 32.0 31.4 30.9 22.9 17.4 17.5
   8       1    2    3    4    5    6    7    8    9   10

         24.9 23.2 22.4 22.8 24.2 23.7 24.1 23.8 23.1 24.0
1

 RECEIVER    LEQ(H)   L10
 22           64.8   66.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1       1
         38.6
   2       1    2    3    4    5    6    7    8    9   10

  11      12   13   14
         38.8 37.3 41.3 45.2 47.5 50.3 52.6 53.1 59.6 54.9

         49.2 46.4 42.7 40.8
   3       1    2    3
         39.1 37.6 35.8
   4       1    2    3
         37.0 37.4 39.3
   5       1    2    3    4    5    6    7    8    9   10

  11      12   13
         40.8 43.6 46.6 50.5 51.0 55.7 47.7 48.6 46.1 43.9

         42.1 40.3 38.7
   6       1
         38.1
   7       1    2    3    4    5    6    7    8
         41.0 38.2 34.5 34.0 32.0 23.2 18.6 17.1
   8       1    2    3    4    5    6    7    8    9   10

         25.9 24.8 24.0 24.4 25.0 26.1 26.2 26.1 25.4 26.3
1

 RECEIVER    LEQ(H)   L10
 23           64.1   65.6
```

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1		1								
	38.8									
2		1	2	3	4	5	6	7	8	9	10
11		12	13	14							
	39.0	37.3	41.2	44.5	45.9	48.2	51.0	50.7	56.8	57.1
	51.3	47.4	43.0	40.8						
3		1	2	3						
	38.9	39.0	37.2							
4		1	2	3						
	36.8	37.3	39.4							
5		1	2	3	4	5	6	7	8	9	10
11		12	13							
	41.2	44.6	48.0	52.3	51.2	54.0	46.8	48.0	45.7	43.7
	42.0	40.4	38.9							
6		1								
	38.4									
7		1	2	3	4	5	6	7	8		
	44.1	41.8	36.6	32.3	33.3	22.8	20.3	18.5		
8		1	2	3	4	5	6	7	8	9	10
	25.7	24.6	24.4	25.4	25.6	23.8	24.8	26.6	25.3	27.2

```
**************************
OPTIMA-VU1
**************************
BARRIER OPTIMIZATION PROGRAM USING
PARTIAL SOUND ENERGIES COMPUTED BY THE
STAMINA 2.0 PROGRAM
MODIFIED FROM THE FHWA VAX VERSON -- MARCH 1983

MODIFIED TO:
1. PLACE BARRIER COST DATA IN A DATA FILE CALLED
OPTCOST.DTA TO ALLOW USER TO USE COSTS OTHER THAN
THE FHWA NATIONAL AVERAGES.
**************************
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
IN JUNE 1991 BY
VANDERBILT ENGINEERING CENTER FOR TRANSPORTATION
OPERATIONS AND RESEARCH (VECTOR)
BOX 96-B, VANDERBILT UNIVERSITY, NASHVILLE, TENNESSEE 37235
(615) 322-3683
**************************

PROBLEM TITLE
*************
Otay Ranch - Village 7: 02/2004

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	5(-16	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	8.
2	6a	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	8.
3	6b	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	8.
4	6c	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	8.
5	7	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	8.
6	8	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	5.	6.	7.	8.		
7	9	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	5.	6.	7.	8.		
8	10	*	-2.	-3.	-3.	-4.	-4.	-5.	-5.	0.	3.	4.	5.	6.	7.	8.	
9	11	*	-5.	-5.	-5.	-5.	-5.	-5.	-5.	0.	3.	4.	5.	6.	7.	8.	
10	12	*	12.	12.	11.	10.	10.	9.	9.	0.	3.	4.	5.	6.	7.	8.	
11	13	*	14.	13.	13.	12.	11.	11.	10.	0.	3.	4.	5.	6.	7.	8.	
12	14	*	16.	16.	15.	14.	13.	13.	13.	0.	3.	4.	5.	6.	7.	8.	
13	15	*	21.	20.	19.	18.	17.	17.	17.	0.	3.	4.	5.	6.	7.	8.	
14	16	*	22.	22.	20.	19.	18.	18.	17.	0.	3.	4.	5.	6.	7.	8.	
15	17	*	28.	27.	25.	24.	23.	22.	22.	0.	3.	4.	5.	6.	7.	8.	
16	18	*	27.	27.	26.	25.	24.	23.	23.	0.	3.	4.	5.	6.	7.	8.	
17	19	*	28.	26	25.	25.	23	21.	21.	0	6.	7.	8.				
18	20	*	30.	28.	27.	26.	25.	23.	22.	0.	6.	7.	8.				
19	21	*	30.	28.	27.	27.	25.	23.	23.	0.	6.	7.	8.				
20	22	*	31.	29.	28.	27.	26.	24.	23.	0.	6.	7.	8.				
21	23	*	32.	29.	28.	28.	26.	24.	23.	0.	6.	7.	8.				
22	24	*	30.	28.	27.	26.	25.	23.	22.	0.	6.	7.	8.				
23	2-rev	*	27.	25.	24.	24.	22.	20.	20.	0.	6.	7.	8.				
24	1	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
25	2	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
26	3	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
27	4	*	0.	0.	0.	0	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
28	5	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
29	6	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
30	7	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
31	8	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
32	9	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
33	10	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
34	11	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
35	12	*	0.	0.	0.	0.	0.	0.	0.	0.	4.	5.	6.	7.	8.		
36	13	*	0.	0.	0.	0.	0.	0.	0.	0.	4.	5.	6.	7.	8.		
37	14	*	0.	0.	0.	0.	0.	0.	0.	0.	4.	5.	6.	7.	8.		
38	15	*	0.	0.	0.	0.	0.	0.	0.	0.	4.	5.	6.	7.	8.		
39	40	*	0.							0.	0.						
40	41	*	0.							0.	0.						
41	42	*	0.							0.	0.						
42	43	*	0.							0.	0.						
43	44	*	0.							0.	0.						
44	45	*	0.							0.	0.						
45	46	*	0.							0.	0.						
46	48	*	0.							0.	0.						
47	49	*	0.							0.	0.						
48	51	*	0.							0.	0.						
49	53	*	0.							0.	0.						
50	3-rev	*	19.	17.	16.	16.	15.	14.	14.	0.	4.	5.	6.	7.	8.		
51	53	*	6.	4.	3.	2.	2.	1.	1.	0.	4.	5.	6.	7.	8.		
52	54	*	12.	11.	10.	9.	9.	8.	8.	0.	4.	5.	6.	7.	8.		
53	55	*	0.	-2.	-3.	-4.	-4.	-5.	-5.	0.	4.	5.	6.	7.	8.		
54	56	*	5.	3.	2.	2.	1.	0.	0.	0.	4.	5.	6.	7.	8.		
55	57	*	5.	3.	2.	2.	1.	1.	0.	0.	4.	5.	6.	7.	8.		
56	58	*	6.	5.	4.	4.	3.	2.	2.	0.	4.	5.	6.	7.	8.		
57	59	*	10.	9.	8.	8.	7.	7.	7.	0.	4.	5.	6.	7.	8.		
58	60a	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
59	60b	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
60	60c	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
61	61	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
62	62	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
63	63	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
64	1	*	0.							0.30.							
65	2	*	0.							0.30.							
66	3	*	0.							0.30.							
67	4	*	0.							0.30.							
68	1	*	0.							0.30.							
69	2	*	0.							0.30.							
70	3	*	0.							0.30.							
71	4	*	0.							0.30.							
72	1	*	0.							0.30.							
73	2	*	0.							0.30.							
74	3	*	0.							0.30.							
75	4	*	0.							0.30.							
76	1	*	0.							0.30.							
77	2	*	0.							0.30.							
78	3	*	0.							0.30.							
79	4	*	0.							0.30.							
80	1	*	0.							0.30.							
81	2	*	0.							0.30.							
82	3	*	0.							0.30.							
83	4	*	0.							0.30.							
84	1	*	0.							0.30.							
85	2	*	0.							0.30.							
86	3	*	0.							0.30.							
87	4	*	0.							0.30.							
88	1	*	0.							0.30.							
89	2	*	0.							0.30.							
90	3	*	0.							0.30.							
91	4	*	0.							0.30.							
92	1	*	0.							0.30.							
93	2	*	0.							0.30.							
94	3	*	0.							0.30.							
95	4	*	0.							0.30.							
96	1	*	0.							0.30.							
97	2	*	0.							0.30.							
98	3	*	0.							0.30.							
99	4	*	0.							0.30.							
HEIGHT INDEX		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8

Otay Ranch - Village 7: 02/2004

1st floor m-f receivers, with building shielding and barriers

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

```
  5  7  8  8  7  8  7  8  7  7  7  7  8  8  8  7  3  2  2  2  2  2  1  1  1
  1  1  1  1  2  2  4  4  4  6  6  7  8  1  1  1  1  1  1  1  1  1  1  1  1
  8  8  8  7  7  6  5  3  3  3  3  3  3  2  2  2  2  2  2  2  2  2  2  2  2
  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2
```

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

```
11,13,14,14,13,11,10, 9, 8, 8, 8, 9, 9, 9, 8, 7, 6, 6, 6, 6, 6, 0, 0, 0,
 0, 0, 0, 0, 3, 3, 5, 5, 5, 8, 8, 9,10, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
10,10,10, 9, 9, 8, 7, 4, 4, 4, 4, 4, 4,30,30,30,30,30,30,30,30,30,30,30,
30,30,30,30,30,30,30,30,30,30,30,30,30,30,30,30,30,30,30,30,30,30,30,30,
```

R E S U L T S
****

REC	REC ID	LEQ	LEQ(Z(0))	IL
1	1	57.4	74.5	17.0
2	2	55.1	75.0	19.9
3	3	55.1	75.0	19.9
4	4	55.1	75.0	19.9
5	5	55.1	75.1	19.9
6	6	55.2	75.0	19.9
7	7	55.1	75.1	20.0
8	8	55.2	75.0	19.9
9	9	55.1	75.1	20.0
10	10	55.2	75.0	19.8
11	11	55.0	75.0	20.0
12	12	55.1	74.7	19.6
13	13	56.2	74.8	18.5
14	14	54.9	74.7	19.8
15	15	54.8	74.6	19.8
16	16	54.8	74.5	19.7
17	17	54.7	74.4	19.7
18	18	55.0	74.1	19.1
19	19	61.6	67.1	5.6
20	20	64.2	69.2	5.0
21	21	65.4	70.3	4.8
22	22	66.8	71.1	4.3
23	23	66.6	70.1	3.5

BARRIER TYPE	COST	AREA (SQ. FT.)
FH-BERM	0.	0.
FH-MASON	574500.	116327.
FH-WOOD	0.	0.
FH-CONC	0.	0.
FH-STEEL	0.	0.
TOTALS:	$ 574500.	116327.

END OF ALL CASES

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Otay Ranch - Village 7: 02/2004

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM 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)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Southbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
1	6339513.3	1806920.6	600.4	0
2	6339510.5	1806467.0	598.8	0

0ROADWAY 2 Southbound SR-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
2	6339510.5	1806467.0	598.8	0
3	6339509.1	1806114.7	593.8	0
4	6339508.2	1805921.3	592.2	0
5	6339506.6	1805567.2	590.6	0
6	6339518.4	1805084.1	587.3	0
7	6339558.1	1804696.4	584.0	0
8	6339626.5	1804317.1	580.7	0
9	6339721.1	1803940.3	577.4	0
10	6339779.5	1803754.4	575.8	0
11	6339915.4	1803392.1	572.5	0
12	6340052.2	1803092.3	569.2	0
13	6340182.4	1802843.8	564.3	0
14	6340344.6	1802558.3	554.5	0
15	6340485.7	1802306.5	544.6	0
16	6340646.7	1802025.4	531.5	0

0ROADWAY 3 Southbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES X	Y	Z	GRADE
16	6340646.7	1802025.4	531.5	0
17	6340806.7	1801741.3	516.7	0
18	6340985.8	1801426.3	500.3	0
19	6341154.7	1801109.5	483.9	0

0ROADWAY 4 Northbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES X	Y	Z	GRADE
1	6341260.4	1801145.7	485.6	1
2	6341061.5	1801517.5	503.6	1
3	6340903.6	1801796.7	516.7	1
4	6340743.5	1802078.7	531.5	1

0ROADWAY 5 Northbound SR-125, Birch to RM

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
4	6340743.5	1802078.7	531.5	1
5	6340583.6	1802361.5	544.6	1
6	6340405.7	1802676.0	556.1	1
7	6340228.9	1802992.4	564.3	1
8	6340066.7	1803323.5	569.2	1
9	6339993.2	1803497.7	570.9	1
10	6339809.9	1804036.4	575.8	1
11	6339761.7	1804219.9	577.4	1
12	6339684.8	1804591.6	580.7	1
13	6339638.4	1804969.2	584.0	1
14	6339618.1	1805346.8	587.3	1
15	6339618.1	1805728.7	590.6	1
16	6339621.4	1806111.3	593.8	1
17	6339622.2	1806484.0	598.8	1

0ROADWAY 6 Northbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
17	6339622.2	1806484.0	598.8	1
18	6339626.5	1806918.9	600.4	1

0ROADWAY 7 Southbound Ramp to Rock Mountain

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	561.	45.0
VEH5	18.	45.0
VEH6	12.	45.0

0	COORDINATES X	Y	Z	GRADE
1	6339864.2	1803405.4	565.9	1
2	6339924.1	1803175.4	566.5	1
3	6339984.3	1802962.1	567.1	1
4	6340015.7	1802831.9	567.5	1
5	6340026.5	1802684.8	567.9	1
6	6340003.6	1802446.2	568.5	1
7	6339995.2	1802224.4	569.1	1
8	6340032.5	1802046.0	569.6	1
9	6340089.2	1801885.6	570.0	1

0ROADWAY 8 Ramp from wb Rock Mountain to sb-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	671.	45.0
VEH5	21.	45.0
VEH6	14.	45.0

0	COORDINATES X	Y	Z	GRADE
1	6340294.9	1801957.4	570.0	0
2	6340188.4	1802001.2	565.7	0
3	6340138.6	1802064.9	562.8	0
4	6340116.7	1802131.7	560.3	0
5	6340125.6	1802215.3	557.2	0
6	6340173.4	1802290.0	554.0	0
7	6340242.1	1802330.8	551.1	0
8	6340334.8	1802336.8	547.7	0
9	6340430.4	1802292.0	543.8	0
10	6340498.1	1802198.4	539.7	0
11	6340589.7	1802044.0	533.1	0

1

BARRIER 1 TYPE(A) R-O-W barrier 1acont'd

	COORDINATES X	Y	Z	Z0	DELZ	P
st-16	6339241.5	1805697.6	591.7	580.7	1.0	3
6a	6339296.6	1805665.7	593.0	582.0		
6b	6339342.5	1805640.0	594.1	583.1		
6c	6339383.5	1805617.1	595.0	584.0		
7	6339406.4	1805509.8	595.0	584.0		
8	6339434.3	1805343.0	599.9	588.9		

1

BARRIER 2 TYPE(A) R-O-W barrier 1bcont'd

	COORDINATES X	Y	Z	Z0	DELZ	P
8	6339434.3	1805343.0	596.9	588.9	1.0	3
9	6339453.5	1805206.6	597.6	589.6		
10	6339469.4	1805092.9	597.9	589.9		

1

BARRIER 3 TYPE(A) R-O-W barrier 2cont'd

	COORDINATES X	Y	Z	Z0	DELZ	P
10	6339469.4	1805092.9	595.9	589.9	1.0	3
11	6339469.8	1805006.9	594.9	588.9		
12	6339469.6	1804987.8	593.3	587.3		
13	6339479.8	1804897.0	591.1	585.1		
14	6339495.0	1804777.7	590.0	584.0		
15	6339517.8	1804626.1	588.3	582.3		
16	6339550.1	1804460.9	586.8	580.8		
17	6339589.1	1804285.5	585.1	579.1		

	X	Y	Z	Z0		
18	6339634.0	1804109.2	583.4	577.4		
19	6339663.6	1803997.1	582.0	576.0		

1

BARRIER 4 TYPE(A) R-O-W barrier trf to top of slope barrier

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
19	6339663.6	1803997.1	585.0	576.0	1.0	3
20	6339705.0	1803857.9	583.7	574.7		
21	6339735.2	1803763.2	582.9	573.9		
22	6339758.3	1803694.7	582.5	573.5		
23	6339774.3	1803649.9	582.0	573.0		
24	6339798.4	1803582.7	581.6	572.6		
2-rev	6339886.3	1803152.2	580.0	571.0		
3-rev	6339854.5	1803141.6	580.0	571.0		

1

BARRIER 5 TYPE(A) S-F Pad Edges

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
1	6338450.5	1805660.4	576.7	570.7	1.0	3
2	6338496.9	1805688.8	576.7	570.7		
3	6338586.8	1805745.8	578.3	572.3		
4	6338643.8	1805781.6	578.3	572.3		
5	6338703.0	1805818.1	580.7	574.7		
6	6338761.4	1805846.6	580.7	574.7		
7	6338765.1	1805848.1	582.8	576.8		
8	6338814.8	1805859.8	582.8	576.8		
9	6338819.2	1805860.5	584.2	578.2		

1

BARRIER 6 TYPE(A) S-F Pad Edges cont'd.1

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
9	6338819.2	1805860.5	584.2	578.2	1.0	3
10	6338898.8	1805853.9	584.2	578.2		
11	6338994.5	1805823.2	584.2	578.2		
12	6338998.2	1805822.5	584.5	578.5		

1

BARRIER 7 TYPE(A) S-F Pad Edges cont'd.2

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
12	6338998.2	1805822.5	585.5	578.5	1.0	3
13	6339061.0	1805801.3	585.5	578.5		
14	6339065.4	1805799.9	587.7	580.7		
15	6339173.6	1805762.6	587.7	580.7		
16	6339241.5	1805697.6	587.7	580.7		

1

BARRIER 8 TYPE(A) Elem School Pad Edges

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
40	6339064.2	1804045.1	548.0	548.0	.0	0
41	6339477.3	1804188.3	550.0	550.0		
42	6339517.0	1804198.4	550.2	550.2		
43	6339575.6	1804002.5	552.0	552.0		
44	6339641.2	1803781.3	554.0	554.0		
45	6339706.8	1803560.2	556.0	556.0		
46	6339706.8	1803544.3	556.1	556.1		
48	6339717.2	1803526.8	561.3	561.3		
49	6339762.7	1803371.2	561.5	561.5		
51	6339819.6	1803172.7	562.1	562.1		

1

BARRIER 9 TYPE(A) Park to High Pads

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
51	6339819.6	1803172.7	562.1	562.1	.0	0
53	6339837.0	1803137.7	579.5	579.5		
52	6339709.4	1803101.9	576.9	576.9		

1

BARRIER 10 TYPE(A) High School Pad Edges

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
3-rev	6339854.5	1803141.6	578.0	571.0	1.0	3
53	6339837.0	1803137.7	586.5	579.5		
54	6339875.5	1803030.2	585.6	578.6		
55	6339921.0	1802903.4	585.5	578.5		
56	6339942.8	1802838.7	585.4	578.4		
57	6339950.7	1802716.3	585.0	578.0		
58	6339953.3	1802656.0	584.5	577.5		
59	6339944.6	1802632.3	584.3	577.3		
60a	6339822.2	1802585.1	581.6	574.6		

1

BARRIER 11 TYPE(A) High School Pad Edges cont'd.

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
60a	6339822.2	1802585.1	580.6	574.6	1.0	3
60b	6339807.2	1802441.6	584.7	578.7		
60c	6339785.7	1802288.4	585.1	579.1		
61	6339775.0	1802195.2	586.8	580.8		
62	6339763.6	1802083.2	585.7	579.7		
63	6339781.1	1801897.9	576.4	570.4		
64	6339783.7	1801794.7	576.4	570.4		

1

BARRIER 12 TYPE(A) Theoretical MF Bldg1

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
1	6339509.2	1804187.8	580.0	550.0	.0	0
2	6339454.7	1804173.9	580.0	550.0		
3	6339478.7	1804085.1	580.0	550.0		
4	6339535.1	1804100.8	580.0	550.0		
1	6339509.2	1804187.8	580.0	550.0		

1

BARRIER 13 TYPE(A) Theoretical MF Bldg2

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
1	6339487.0	1804064.7	581.0	551.0	.0	0
2	6339541.6	1804079.5	581.0	551.0		
3	6339566.6	1803991.7	581.0	551.0		
4	6339511.1	1803978.7	581.0	551.0		
1	6339487.0	1804064.7	581.0	551.0		

1

BARRIER 14 TYPE(A) Theoretical MF Bldg3

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
1	6339518.5	1803958.4	582.0	552.0	.0	0
2	6339573.0	1803973.2	582.0	552.0		
3	6339600.8	1803885.3	582.0	552.0		
4	6339543.5	1803870.5	582.0	552.0		
1	6339518.5	1803958.4	582.0	552.0		

1

BARRIER 15 TYPE(A) Theoretical MF Bldg4

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
1	6339550.8	1803851.1	583.0	553.0	.0	0
2	6339604.5	1803865.9	583.0	553.0		
3	6339630.4	1803778.0	583.0	553.0		
4	6339574.0	1803764.1	583.0	553.0		
1	6339550.8	1803851.1	583.0	553.0		

1

BARRIER 16 TYPE(A) Theoretical MF Bldg5

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
1	6339582.3	1803744.7	584.0	554.0	.0	0
2	6339635.9	1803757.7	584.0	554.0		
3	6339663.7	1803669.8	584.0	554.0		
4	6339606.3	1803655.0	584.0	554.0		
1	6339582.3	1803744.7	584.0	554.0		

1

BARRIER 17 TYPE(A) Theoretical MF Bldg6

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
1	6339614.7	1803634.6	585.6	555.6	.0	0
2	6339670.2	1803648.5	585.6	555.6		
3	6339695.1	1803561.6	585.6	555.6		
4	6339638.7	1803545.9	585.6	555.6		
1	6339614.7	1803634.6	585.6	555.6		

1

BARRIER 18 TYPE(A) Theoretical MF Bldg7

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
1	6339660.0	1803474.6	591.3	561.3	.0	0
2	6339713.6	1803489.4	591.3	561.3		
3	6339739.5	1803402.5	591.3	561.3		
4	6339683.1	1803387.7	591.3	561.3		
1	6339660.0	1803474.6	591.3	561.3		

1

BARRIER 19 TYPE(A) Theoretical MF Bldg8

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
1	6339692.4	1803367.3	591.6	561.6	.0	0
2	6339745.1	1803382.1	591.6	561.6		
3	6339772.8	1803294.3	591.6	561.6		
4	6339715.5	1803279.5	591.6	561.6		
1	6339692.4	1803367.3	591.6	561.6		

1

BARRIER 20 TYPE(A) Theoretical MF Bldg9

---------COORDINATES---------

	X	Y	Z	Z0	DELZ	P
1	6339722.9	1803260.1	592.0	562.0	.0	0
2	6339776.5	1803274.8	592.0	562.0		
3	6339804.3	1803187.9	592.0	562.0		
4	6339746.9	1803172.2	592.0	562.0		
1	6339722.9	1803260.1	592.0	562.0		

1

Second-floor Multi-family Receivers (at 15 feet)

------------COORDINATES------------

	X	Y	Z
1	6339449.3	1804154.9	565.0
2	6339465.1	1804102.2	565.0
3	6339482.6	1804045.8	566.0
4	6339499.3	1803992.1	566.0
5	6339514.1	1803937.6	567.0
6	6339528.9	1803885.8	567.0
7	6339545.5	1803832.1	568.0
8	6339560.3	1803782.2	568.0
9	6339577.0	1803724.8	569.0
10	6339592.7	1803674.0	569.0
11	6339610.3	1803614.8	570.6
12	6339626.0	1803560.2	570.6
13	6339653.7	1803454.2	576.3
14	6339670.2	1803398.5	576.3
15	6339684.9	1803348.3	576.6
16	6339701.4	1803290.8	576.6
17	6339716.7	1803239.4	577.0
18	6339732.0	1803188.0	577.0
19	6339522.0	1804151.0	565.0
20	6339619.9	1803821.5	568.0
21	6339684.0	1803610.9	570.6
22	6339729.7	1803444.3	576.3
23	6339791.6	1803234.7	577.0

1

ALPHA 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
2 *  .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
4 *  .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
6 *  .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  .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  .0  .0  .0  .0  .0  .0  .0  .0
     .0  .0  .0
```

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
2 *  .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
4 *  .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
6 *  .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  .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  .0  .0  .0  .0  .0  .0  .0  .0
     .0  .0  .0
1

 RECEIVER     LEQ(H)    L10
 1             59.4    60.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             41.2
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             41.5 40.2 44.8 49.2 52.2 50.4 49.7 43.2 43.5 40.0

             37.2 36.1 33.7 32.6
    3          1     2     3
             31.6 30.7 29.3
    4          1     2     3
             30.1 30.1 31.5
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             32.3 34.1 35.9 37.9 36.9 44.6 43.6 45.7 45.4 47.6

             45.2 43.1 41.2
    6          1
             40.4
    7          1     2     3     4     5     6     7     8
             27.5 26.0 22.5 23.3 26.3 26.3 26.2 25.7
    8          1     2     3     4     5     6     7     8     9    10

             20.2 19.4 18.9 19.5 19.3 18.0 17.6 17.8 17.3 18.4

1

 RECEIVER     LEQ(H)    L10
 2             56.0    57.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             32.6
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             33.2 31.8 36.0 39.9 42.2 46.0 50.0 43.4 43.8 39.5

             37.4 36.1 33.7 32.7
    3          1     2     3
             31.6 30.7 29.4
    4          1     2     3
             29.4 29.4 30.8
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             31.8 33.9 35.8 38.6 36.6 45.0 44.0 45.3 41.2 38.6

             36.3 34.4 32.6
    6          1
             31.8
    7          1     2     3     4     5     6     7     8
             27.7 26.4 23.5 23.7 26.1 26.4 26.4 25.9
    8          1     2     3     4     5     6     7     8     9    10

             20.3 19.4 18.9 19.7 19.3 18.3 18.2 17.8 17.3 18.4

1

 RECEIVER     LEQ(H)    L10
 3             56.3    57.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             32.6
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             33.1 31.7 35.9 40.2 43.3 46.6 50.0 44.4 44.2 40.5

             37.6 36.4 33.9 32.9
    3          1     2     3
             31.8 30.9 29.6
    4          1     2     3
             30.3 30.3 31.6
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             32.5 34.4 36.2 38.4 37.3 45.7 44.1 44.6 42.1 40.5

             37.6 35.4 33.3
    6          1
             32.4
    7          1     2     3     4     5     6     7     8
             28.1 26.7 23.2 23.3 26.6 26.7 26.8 26.2
    8          1     2     3     4     5     6     7     8     9    10

             20.6 19.7 19.2 19.9 19.9 17.9 18.0 18.1 17.6 18.6

1

 RECEIVER     LEQ(H)    L10
 4             55.9    57.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             32.1
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             32.6 31.1 35.3 39.2 41.3 44.6 49.9 45.2 44.6 40.1

             36.5 35.0 32.6 31.5
    3          1     2     3
             30.3 29.5 28.1
    4          1     2     3
             29.3 29.4 30.9
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             31.9 34.0 36.2 39.1 37.1 46.1 44.1 44.1 40.3 37.8

             35.6 33.7 32.0
    6          1
             31.2
    7          1     2     3     4     5     6     7     8
             27.6 26.6 23.7 23.9 26.3 26.9 27.0 26.5
    8          1     2     3     4     5     6     7     8     9    10

             20.3 19.7 19.2 20.0 19.5 18.5 18.3 17.8 17.3 18.4

1

 RECEIVER     LEQ(H)    L10
 5             56.4    57.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             32.3
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             32.8 31.3 35.4 39.5 42.1 46.2 49.4 46.4 45.3 41.2

             38.2 36.9 34.4 33.3
    3          1     2     3
             32.3 31.3 29.9
    4          1     2     3
             30.6 30.6 32.1
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             32.9 34.9 36.6 39.0 38.1 46.8 43.6 43.6 42.2 39.6

             36.9 34.9 33.0
    6          1
             32.1
    7          1     2     3     4     5     6     7     8
             28.9 27.4 24.1 24.0 27.0 27.3 27.3 26.8
    8          1     2     3     4     5     6     7     8     9    10

             21.1 19.9 19.4 20.2 20.2 18.5 18.6 18.6 18.0 19.1

1

 RECEIVER     LEQ(H)    L10
 6             56.2    57.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             32.3
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             32.8 31.3 35.5 39.3 41.2 44.3 49.0 47.1 46.1 41.6

             37.8 36.9 34.4 33.3
    3          1     2     3
             32.2 31.2 29.8
    4          1     2     3
             29.9 29.9 31.5
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             32.5 34.8 37.1 40.3 38.2 47.2 43.3 43.1 40.3 37.8

             35.8 34.0 32.2
    6          1
             31.5
    7          1     2     3     4     5     6     7     8
             28.9 27.5 24.4 24.5 26.5 27.5 27.6 27.0
    8          1     2     3     4     5     6     7     8     9    10

             20.7 19.8 19.4 20.2 20.2 18.8 19.0 18.4 18.0 19.0

1

 RECEIVER     LEQ(H)    L10
 7             56.4    57.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             31.6
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             31.9 30.5 34.5 38.4 40.6 45.1 48.7 47.9 46.4 41.7

             38.5 37.1 34.5 33.4
    3          1     2     3
             32.3 31.3 29.9
    4          1     2     3
             30.6 30.7 32.1
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             33.0 35.0 36.9 39.4 38.7 47.6 42.5 43.8 41.6 38.4

             36.0 34.0 32.2
    6          1
             31.4
    7          1     2     3     4     5     6     7     8
             29.4 27.7 24.6 24.1 26.9 27.8 27.9 27.3
    8          1     2     3     4     5     6     7     8     9    10
```

```
          21.4 19.9 19.5 20.4 20.6 18.5 19.1 18.6 18.1 19.2

1

 RECEIVER     LEQ(H)    L10
 8             56.0    57.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             32.1
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             32.5 31.0 35.2 39.0 40.7 43.4 47.3 48.0 47.1 41.6

             38.8 36.9 34.1 32.9
    3          1    2    3
             31.6 30.6 29.2
    4          1    2    3
             30.4 30.6 32.2
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             33.3 35.3 36.2 39.4 38.8 47.7 41.9 42.1 39.6 37.4

             35.4 33.6 31.9
    6          1
             31.2
    7          1    2    3    4    5    6    7    8
             29.5 27.8 24.8 24.8 26.9 28.1 28.2 27.6
    8          1    2    3    4    5    6    7    8    9   10

             20.9 19.8 19.3 20.3 20.4 19.2 19.2 18.7 17.4 18.3

1

 RECEIVER     LEQ(H)    L10
 9             56.4    57.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             31.3
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             31.6 30.1 34.0 37.7 39.8 43.6 47.8 47.5 48.2 42.6

             39.1 37.5 34.9 33.8
    3          1    2    3
             32.6 31.6 30.2
    4          1    2    3
             30.9 31.0 32.4
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             33.3 35.4 37.4 40.1 39.4 47.9 41.3 43.7 40.7 37.7

             35.4 33.6 31.9
    6          1
             31.1
    7          1    2    3    4    5    6    7    8
             30.4 28.5 25.3 25.0 26.9 28.5 28.6 27.9
    8          1    2    3    4    5    6    7    8    9   10

             21.0 19.7 19.3 20.3 20.6 18.9 19.5 19.1 18.5 19.6

1

 RECEIVER     LEQ(H)    L10
 10            55.9    57.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             31.8
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             32.2 30.7 34.8 38.5 40.1 42.7 45.8 46.9 48.8 42.4

             38.2 37.6 34.6 33.3
    3          1    2    3
             32.0 30.9 29.4
    4          1    2    3
             30.6 30.8 32.4
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             32.1 34.5 37.0 39.9 40.0 47.9 40.5 41.3 39.0 36.9

             35.0 33.3 31.6
    6          1
             30.9
    7          1    2    3    4    5    6    7    8
             30.2 27.9 25.1 25.0 26.7 28.8 28.9 28.2
    8          1    2    3    4    5    6    7    8    9   10

             20.5 19.2 18.9 19.9 20.3 19.3 19.2 17.7 17.6 18.7

1

 RECEIVER     LEQ(H)    L10
 11            56.3    57.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             31.3
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             31.6 30.1 34.0 37.5 39.4 42.7 47.1 45.8 49.5 43.2

             39.5 37.8 35.1 33.9
    3          1    2    3
             32.8 31.7 30.3
    4          1    2    3
             31.0 31.1 32.6
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             33.5 35.6 37.7 40.6 40.8 47.8 40.0 43.3 40.1 37.4

             35.3 33.6 31.9
    6          1
             31.2
    7          1    2    3    4    5    6    7    8
             31.2 29.1 25.8 25.6 26.8 29.3 29.4 28.7
    8          1    2    3    4    5    6    7    8    9   10

             20.1 20.1 20.1 20.2 20.1 19.5 19.7 19.2 18.7 19.7

1

 RECEIVER     LEQ(H)    L10
 12            56.0    57.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             31.6
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             32.0 30.4 34.5 38.2 39.7 42.1 44.8 44.7 49.7 43.6

             41.4 39.3 36.2 34.6
    3          1    2    3
             33.3 32.0 30.5
    4          1    2    3
             31.7 32.0 33.8
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             35.1 37.7 37.6 40.9 41.5 47.6 39.5 40.7 38.6 36.6

             34.8 33.0 31.4
    6          1
             30.7
    7          1    2    3    4    5    6    7    8
             32.0 30.1 25.7 24.6 26.4 29.7 29.7 28.9
    8          1    2    3    4    5    6    7    8    9   10

             20.2 19.8 19.5 20.5 19.6 18.3 18.9 19.3 19.0 20.0

1

 RECEIVER     LEQ(H)    L10
 13            59.2    60.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             37.1
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             37.2 35.5 39.4 42.7 44.2 47.0 51.1 50.5 49.4 45.3

             40.7 38.7 35.9 34.7
    3          1    2    3
             33.4 32.4 30.9
    4          1    2    3
             31.6 31.7 33.3
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             34.3 36.4 38.7 42.1 42.7 48.0 47.5 47.8 44.8 42.5

             40.6 39.0 37.5
    6          1
             36.9
    7          1    2    3    4    5    6    7    8
             33.7 30.5 26.9 26.7 29.3 31.7 31.0 30.2
    8          1    2    3    4    5    6    7    8    9   10

             23.5 22.7 22.8 23.1 22.5 20.7 20.4 20.0 19.5 20.5

1

 RECEIVER     LEQ(H)    L10
 14            56.0    57.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             31.6
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             32.0 30.4 34.4 37.9 39.4 41.5 43.8 42.7 49.1 46.1

             42.5 39.7 36.4 34.6
    3          1    2    3
             33.8 32.7 31.2
    4          1    2    3
             31.6 31.9 33.7
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             35.1 37.9 40.1 42.7 42.9 46.5 38.6 40.1 38.2 36.3

             34.6 33.0 31.4
    6          1
             30.7
    7          1    2    3    4    5    6    7    8
             35.0 31.9 27.5 27.4 29.6 32.2 31.4 30.6
    8          1    2    3    4    5    6    7    8    9   10

             23.1 23.2 22.9 23.2 23.1 21.2 21.1 20.3 19.9 20.9

1

 RECEIVER     LEQ(H)    L10
 15            56.0    57.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             31.3
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             31.7 30.0 34.1 37.8 39.1 41.0 43.0 43.5 49.0 46.9

             41.6 39.4 36.5 35.1
    3          1    2    3
```

```
          33.8 32.7 31.2
 4          1    2    3
          31.9 32.1 33.7
 5          1    2    3    4    5    6    7    8    9   10

 11        12   13
          34.7 37.0 39.4 43.3 43.3 46.7 39.4 39.9 37.0 34.8

          33.0 31.4 29.9
 6          1
          29.3
 7          1    2    3    4    5    6    7    8
          35.8 31.7 27.9 27.6 29.9 32.9 31.8 30.9
 8          1    2    3    4    5    6    7    8    9   10

          23.6 23.2 22.8 23.5 22.8 21.4 21.2 20.8 20.0 20.9

1

 RECEIVER     LEQ(H)    L10
 16            55.9     56.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1          1
            31.7
   2          1    2    3    4    5    6    7    8    9   10

  11         12   13   14
            32.1 30.4 34.1 37.3 38.7 41.1 43.4 42.1 47.8 47.5

            42.7 40.6 37.1 35.3
   3          1    2    3
            33.6 32.5 31.4
   4          1    2    3
            31.8 32.2 34.1
   5          1    2    3    4    5    6    7    8    9   10

  11         12   13
            35.5 38.5 40.1 43.8 43.3 45.5 38.2 39.9 38.1 36.4

            34.7 33.1 31.5
   6          1
            30.8
   7          1    2    3    4    5    6    7    8
            36.6 33.0 28.4 28.1 31.0 33.4 32.2 31.3
   8          1    2    3    4    5    6    7    8    9   10

            24.4 27.4 26.5 26.1 23.3 21.7 21.6 20.5 19.7 20.6

1

 RECEIVER     LEQ(H)    L10
 17            55.9     56.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1          1
            31.4
   2          1    2    3    4    5    6    7    8    9   10

  11         12   13   14
            31.6 30.1 34.2 37.6 39.0 40.9 42.6 41.8 47.6 47.9

            42.5 39.9 36.9 35.4
   3          1    2    3
            34.1 33.0 31.5
   4          1    2    3
            32.2 32.3 33.9
   5          1    2    3    4    5    6    7    8    9   10

  11         12   13
            35.0 37.3 40.0 44.3 43.0 45.6 38.4 39.0 37.4 36.0

            34.4 32.7 30.7
   6          1
            29.1
   7          1    2    3    4    5    6    7    8
            36.9 33.2 28.9 28.4 32.6 34.0 32.7 31.7
   8          1    2    3    4    5    6    7    8    9   10

            29.5 27.9 27.0 27.2 26.0 22.3 21.7 21.2 20.4 21.3

1

 RECEIVER     LEQ(H)    L10
 18            56.6     57.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1          1
            31.2
   2          1    2    3    4    5    6    7    8    9   10

  11         12   13   14
            31.5 29.8 33.4 36.5 37.8 40.1 42.6 41.1 46.2 48.0

            43.1 39.9 44.1 43.2
   3          1    2    3
            41.3 39.7 37.9
   4          1    2    3
            39.3 39.7 41.8
   5          1    2    3    4    5    6    7    8    9   10

  11         12   13
            39.1 37.9 40.4 44.6 42.7 44.4 37.5 39.2 37.5 35.8

            34.2 32.4 31.0
   6          1
            30.4
   7          1    2    3    4    5    6    7    8
            36.7 34.2 34.4 35.2 35.0 34.5 33.1 32.1
   8          1    2    3    4    5    6    7    8    9   10

            30.0 28.2 27.4 27.7 27.6 27.3 27.8 28.0 27.6 28.5

1

 RECEIVER     LEQ(H)    L10
 19            65.2     67.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1          1
            40.0
   2          1    2    3    4    5    6    7    8    9   10

  11         12   13   14
            40.5 39.2 43.6 48.4 51.4 56.9 61.1 52.0 51.5 47.3

            44.1 42.2 39.1 37.7
   3          1    2    3
            36.2 35.0 33.3
   4          1    2    3
            34.3 34.5 36.3
   5          1    2    3    4    5    6    7    8    9   10

  11         12   13
            37.5 39.8 42.0 44.4 43.4 52.6 51.5 53.5 49.6 46.4

            44.0 41.8 39.8
   6          1
            39.0
   7          1    2    3    4    5    6    7    8
            32.3 31.5 28.8 28.8 28.4 21.7 18.6 17.5
   8          1    2    3    4    5    6    7    8    9   10

            24.5 21.4 19.6 20.7 22.7 22.3 22.9 22.7 22.3 23.2

1

 RECEIVER     LEQ(H)    L10
 20            65.7     67.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1          1
            40.2
   2          1    2    3    4    5    6    7    8    9   10

  11         12   13   14
            40.5 39.1 43.3 47.4 49.8 53.5 58.7 58.6 57.1 51.0

            47.0 44.9 41.6 40.0
   3          1    2    3
            38.4 37.0 35.2
   4          1    2    3
            36.5 36.8 38.7
   5          1    2    3    4    5    6    7    8    9   10

  11         12   13
            40.1 42.7 45.3 48.2 47.8 56.1 50.7 52.0 49.0 46.3

            44.1 42.1 40.3
   6          1
            39.5
   7          1    2    3    4    5    6    7    8
            35.6 34.4 31.4 31.2 30.4 24.6 19.7 18.6
   8          1    2    3    4    5    6    7    8    9   10

            25.9 23.3 22.3 22.6 24.5 24.4 24.9 24.8 24.3 25.3

1

 RECEIVER     LEQ(H)    L10
 21            66.5     68.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1          1
            40.6
   2          1    2    3    4    5    6    7    8    9   10

  11         12   13   14
            41.0 39.4 43.4 47.0 49.0 52.1 55.5 56.9 61.4 54.1

            49.3 46.8 43.4 41.6
   3          1    2    3
            39.9 38.5 36.7
   4          1    2    3
            38.0 38.4 40.3
   5          1    2    3    4    5    6    7    8    9   10

  11         12   13
            41.8 44.6 47.4 51.0 51.4 58.1 50.3 50.6 47.8 45.4

            43.4 41.7 40.0
   6          1
            39.3
   7          1    2    3    4    5    6    7    8
            38.8 37.0 33.7 33.4 32.4 25.7 21.4 20.8
   8          1    2    3    4    5    6    7    8    9   10

            27.0 24.6 23.7 24.1 26.2 26.1 26.5 26.5 26.0 27.0

1

 RECEIVER     LEQ(H)    L10
 22            68.1     69.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

   1          1
            41.0
   2          1    2    3    4    5    6    7    8    9   10

  11         12   13   14
            41.2 39.5 43.4 46.8 48.6 51.3 54.2 54.9 62.7 58.8

            52.9 50.1 46.5 44.6
   3          1    2    3
            42.8 41.1 39.5
   4          1    2    3
            40.9 41.3 43.4
   5          1    2    3    4    5    6    7    8    9   10

  11         12   13
            45.0 47.9 51.0 55.2 56.0 60.0 50.9 51.4 48.6 46.3

            44.5 42.9 41.4
   6          1
            40.8
   7          1    2    3    4    5    6    7    8
            43.1 40.4 36.8 36.5 34.1 26.7 21.8 20.3
   8          1    2    3    4    5    6    7    8    9   10

            28.3 26.4 25.5 26.0 27.5 29.1 29.4 29.3 28.9 29.9

1

 RECEIVER     LEQ(H)    L10
 23            68.2     69.8
```

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1		1											
		40.6											
2		1	2	3	4	5	6	7	8	9	10		
11		12	13	14									
		40.7	39.0	42.7	45.9	47.1	49.3	52.2	52.0	59.9	62.1		
		56.3	52.6	48.5	46.5								
3		1	2	3									
		44.6	44.3	42.5									
4		1	2	3									
		42.5	43.0	45.1									
5		1	2	3	4	5	6	7	8	9	10		
11		12	13										
		46.8	49.9	53.5	58.2	56.9	58.0	49.2	50.1	47.6	45.6		
		43.9	42.4	41.0									
6		1											
		40.4											
7		1	2	3	4	5	6	7	8				
		47.1	45.5	41.5	36.6	35.6	26.3	23.8	22.2				
8		1	2	3	4	5	6	7	8	9	10		
		29.6	28.0	27.1	27.8	28.1	27.6	29.7	31.7	31.0	32.6		

```
**************************
OPTIMA-VU1
**************************
BARRIER OPTIMIZATION PROGRAM USING
PARTIAL SOUND ENERGIES COMPUTED BY THE
STAMINA 2.0 PROGRAM
MODIFIED FROM THE FHWA VAX VERSON -- MARCH 1983

MODIFIED TO:
1. PLACE BARRIER COST DATA IN A DATA FILE CALLED
OPTCOST.DTA TO ALLOW USER TO USE COSTS OTHER THAN
THE FHWA NATIONAL AVERAGES.
**************************
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
IN JUNE 1991 BY
VANDERBILT ENGINEERING CENTER FOR TRANSPORTATION
OPERATIONS AND RESEARCH (VECTOR)
BOX 96-B, VANDERBILT UNIVERSITY, NASHVILLE, TENNESSEE 37235
(615) 322-3683
**************************

PROBLEM TITLE
*************
Otay Ranch - Village 7: 02/2004

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	st-16	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	8.
2	6a	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	8.
3	6b	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	8.
4	6c	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	8.
5	7	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	8.
6	8	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	5.	6.	7.	8.		
7	9	*	0.	0.	0.	0.	0.	0.	0.	0.	0.	5.	6.	7.	8.		
8	10	*	-1.	-1.	-2.	-2.	-3.	-3.	-3.	0.	3.	4.	5.	6.	7.	8.	
9	11	*	-8.	-7.	-8.	-8.	-7.	-7.	-7.	0.	3.	4.	5.	6.	7.	8.	
10	12	*	13.	13.	12.	12.	11.	11.	11.	0.	3.	4.	5.	6.	7.	8.	
11	13	*	14.	14.	14.	13.	13.	12.	12.	0.	3.	4.	5.	6.	7.	8.	
12	14	*	17.	17.	17.	16.	15.	15.	15.	0.	3.	4.	5.	6.	7.	8.	
13	15	*	22.	22.	21.	20.	20.	19.	19.	0.	3.	4.	5.	6.	7.	8.	
14	16	*	25.	24.	23.	22.	21.	20.	20.	0.	3.	4.	5.	6.	7.	8.	
15	17	*	31.	29.	28.	27.	26.	25.	25.	0.	3.	4.	5.	6.	7.	8.	
16	18	*	30.	29.	28.	27.	26.	26.	25.	0.	3.	4.	5.	6.	7.	8.	
17	19	*	31.	29.	28.	28.	26.	24.	24.	0.	6.	7.	8.				
18	20	*	32.	30.	30.	29.	27.	26.	25.	0.	6.	7.	8.				
19	21	*	32.	30.	30.	29.	28.	26.	26.	0.	6.	7.	8.				
20	22	*	33.	32.	31.	30.	29.	27.	27.	0.	6.	7.	8.				
21	23	*	33.	32.	31.	31.	29.	27.	27.	0.	6.	7.	8.				
22	24	*	33.	32.	32.	31.	29.	28.	27.	0.	6.	7.	8.				
23	2-rev	*	29.	30.	30.	29.	28.	27.	26.	0.	6.	7.	8.				
24	1	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
25	2	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
26	3	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
27	4	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
28	5	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
29	6	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
30	7	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
31	8	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
32	9	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
33	10	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
34	11	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
35	12	*	0.	0.	0.	0.	0.	0.	0.	0.	4.	5.	6.	7.	8.		
36	13	*	0.	0.	0.	0.	0.	0.	0.	0.	4.	5.	6.	7.	8.		
37	14	*	0.	0.	0.	0.	0.	0.	0.	0.	4.	5.	6.	7.	8.		
38	15	*	0.	0.	0.	0.	0.	0.	0.	0.	4.	5.	6.	7.	8.		
39	40	*	0.							0.	0.						
40	41	*	0.							0.	0.						
41	42	*	0.							0.	0.						
42	43	*	0.							0.	0.						
43	44	*	0.							0.	0.						
44	45	*	0.							0.	0.						
45	46	*	0.							0.	0.						
46	48	*	0.							0.	0.						
47	49	*	0.							0.	0.						
48	51	*	0.							0.	0.						
49	53	*	0.							0.	0.						
50	3-rev	*	19.	20.	20.	20.	20.	20.	20.	0.	4.	5.	6.	7.	8.		
51	53	*	10.	9.	8.	7.	7.	6.	6.	0.	4.	5.	6.	7.	8.		
52	54	*	16.	15.	14.	14.	13.	12.	12.	0.	4.	5.	6.	7.	8.		
53	55	*	2.	1.	0.	-1.	-1.	-2.	-2.	0.	4.	5.	6.	7.	8.		
54	56	*	7.	6.	5.	4.	3.	3.	3.	0.	4.	5.	6.	7.	8.		
55	57	*	7.	7.	6.	5.	5.	4.	4.	0.	4.	5.	6.	7.	8.		
56	58	*	9.	8.	7.	7.	6.	6.	5.	0.	4.	5.	6.	7.	8.		
57	59	*	11.	11.	10.	10.	10.	9.	9.	0.	4.	5.	6.	7.	8.		
58	60a	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
59	60b	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
60	60c	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
61	61	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
62	62	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
63	63	*	0.	0.	0.	0.	0.	0.	0.	0.	3.	4.	5.	6.	7.	8.	
64	1	*	0.							0.	30.						
65	2	*	0.							0.	30.						
66	3	*	0.							0.	30.						
67	4	*	0.							0.	30.						
68	1	*	0.							0.	30.						
69	2	*	0.							0.	30.						
70	3	*	0.							0.	30.						
71	4	*	0.							0.	30.						
72	1	*	0.							0.	30.						
73	2	*	0.							0.	30.						
74	3	*	0.							0.	30.						
75	4	*	0.							0.	30.						
76	1	*	0.							0.	30.						
77	2	*	0.							0.	30.						
78	3	*	0.							0.	30.						
79	4	*	0.							0.	30.						
80	1	*	0.							0.	30.						
81	2	*	0.							0.	30.						
82	3	*	0.							0.	30.						
83	4	*	0.							0.	30.						
84	1	*	0.							0.	30.						
85	2	*	0.							0.	30.						
86	3	*	0.							0.	30.						
87	4	*	0.							0.	30.						
88	1	*	0.							0.	30.						
89	2	*	0.							0.	30.						
90	3	*	0.							0.	30.						
91	4	*	0.							0.	30.						
92	1	*	0.							0.	30.						
93	2	*	0.							0.	30.						
94	3	*	0.							0.	30.						
95	4	*	0.							0.	30.						
96	1	*	0.							0.	30.						
97	2	*	0.							0.	30.						
98	3	*	0.							0.	30.						
99	4	*	0.							0.	30.						
HEIGHT INDEX		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8

Otay Ranch - Village 7: 02/2004

2nd floor m-f receivers, with building shielding, and barriers

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION

```
  5  7  8  8  7  8  7  8  7  7  7  7  8  8  8  7  3  2  2  2  2  2  1  1  1
  1  1  1  1  2  2  4  4  4  6  6  7  8  1  1  1  1  1  1  1  1  1  1  1  1
  8  8  8  7  7  6  5  3  3  3  3  3  3  2  2  2  2  2  2  2  2  2  2  2  2
  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2
```

CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION

```
11.13.14.14.13.11.10. 9. 8. 8. 8. 9. 9. 9. 8. 7. 6. 6. 6. 6. 6. 0. 0. 0.
 0. 0. 0. 0. 3. 3. 5. 5. 5. 8. 8. 9.10. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
10.10.10. 9. 9. 8. 7. 4. 4. 4. 4. 4.30.30.30.30.30.30.30.30.30.30.30.30.
30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.
```

R E S U L T S
****

REC	REC ID	LEQ	LEQ(Z(0))	IL
1	1	58.7	74.5	15.8
2	2	56.0	75.0	19.0
3	3	56.3	75.0	18.7
4	4	55.9	75.1	19.2
5	5	56.4	75.1	18.7
6	6	56.2	75.1	18.9
7	7	56.4	75.1	18.7
8	8	56.0	75.1	19.1
9	9	56.4	75.1	18.7
10	10	55.9	75.0	19.1
11	11	56.3	75.0	18.7
12	12	56.0	74.9	18.9
13	13	59.2	74.8	15.6
14	14	56.0	74.7	18.7
15	15	56.0	74.6	18.6
16	16	55.9	74.5	18.6
17	17	55.9	74.4	18.6
18	18	56.3	74.2	17.8
19	19	63.9	69.9	6.0
20	20	67.1	72.1	5.0
21	21	68.5	72.3	3.9
22	22	70.1	73.1	3.0
23	23	70.3	73.3	3.0

BARRIER TYPE	COST	AREA (SQ. FT.)
FH-BERM	0.	0.
FH-MASON	574500.	116327.
FH-WOOD	0.	0.
FH-CONC	0.	0.
FH-STEEL	0.	0.
TOTALS:	$ 574500.	116327.

END OF ALL CASES

****
STAMZVU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Otay Ranch - Village 7: 02/2004

EMISSION LEVELS: Calveno Levels (trucks>30mph)

0PROGRAM 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)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

0ROADWAY 1 Southbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

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

	X	Y	Z	GRADE
1	6339513.3	1806920.6	600.4	0
2	6339510.5	1806467.0	598.8	0

0ROADWAY 2 Southbound SR-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

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

	X	Y	Z	GRADE
2	6339510.5	1806467.0	598.8	0
3	6339509.1	1806114.7	593.8	0
4	6339508.2	1805921.3	592.2	0
5	6339506.6	1805567.2	590.6	0
6	6339518.4	1805084.1	587.3	0
7	6339558.1	1804696.4	584.0	0
8	6339626.5	1804317.1	580.7	0
9	6339721.1	1803940.3	577.4	0
10	6339779.5	1803754.4	575.8	0
11	6339915.4	1803392.1	572.5	0
12	6340052.2	1803092.3	569.2	0
13	6340182.4	1802843.8	564.3	0
14	6340344.6	1802558.3	554.5	0
15	6340485.7	1802306.5	544.6	0
16	6340646.7	1802025.4	531.5	0

0ROADWAY 3 Southbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

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

	X	Y	Z	GRADE
16	6340646.7	1802025.4	531.5	0
17	6340806.7	1801741.3	516.7	0
18	6340985.8	1801426.3	500.3	0
19	6341154.7	1801109.5	483.9	0

0ROADWAY 4 Northbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

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

	X	Y	Z	GRADE
1	6341260.4	1801145.7	485.6	1
2	6341061.5	1801517.5	503.6	1
3	6340903.6	1801796.7	516.7	1
4	6340743.5	1802078.7	531.5	1

0ROADWAY 5 Northbound SR-125, Birch to RM

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

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

	X	Y	Z	GRADE
4	6340743.5	1802078.7	531.5	1
5	6340583.6	1802361.5	544.6	1
6	6340405.7	1802676.0	556.1	1
7	6340228.9	1802992.4	564.3	1
8	6340066.7	1803323.5	569.2	1
9	6339993.2	1803497.7	570.9	1
10	6339809.9	1804036.4	575.8	1
11	6339761.7	1804219.9	577.4	1
12	6339684.8	1804591.6	580.7	1
13	6339638.4	1804969.2	584.0	1
14	6339618.1	1805346.8	587.3	1
15	6339618.1	1805728.7	590.6	1
16	6339621.4	1806111.3	593.8	1
17	6339622.2	1806484.0	598.8	1

0ROADWAY 6 Northbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

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

	X	Y	Z	GRADE
17	6339622.2	1806484.0	598.8	1
18	6339626.5	1806918.9	600.4	1

0ROADWAY 7 Southbound Ramp to Rock Mountain

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	561.	45.0
VEH5	18.	45.0
VEH6	12.	45.0

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

	X	Y	Z	GRADE
1	6339864.2	1803405.4	565.9	1
2	6339924.1	1803175.4	566.5	1
3	6339984.3	1802962.1	567.1	1
4	6340015.7	1802831.9	567.5	1
5	6340026.5	1802684.8	567.9	1
6	6340003.6	1802446.2	568.5	1
7	6339995.2	1802224.4	569.1	1
8	6340032.5	1802046.0	569.6	1
9	6340089.2	1801885.6	570.0	1

0ROADWAY 8 Ramp from wb Rock Mountain to sb-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	671.	45.0
VEH5	21.	45.0
VEH6	14.	45.0

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

	X	Y	Z	GRADE
1	6340294.9	1801957.4	570.0	0
2	6340188.4	1802001.2	565.7	0
3	6340138.6	1802064.9	562.8	0
4	6340116.7	1802131.7	560.3	0
5	6340125.6	1802215.3	557.2	0
6	6340173.4	1802290.0	554.0	0
7	6340242.1	1802330.8	551.1	0
8	6340334.8	1802336.8	547.7	0
9	6340430.4	1802292.0	543.8	0
10	6340498.1	1802198.4	539.7	0
11	6340589.7	1802044.0	533.1	0

1
BARRIER 1 TYPE(A) R-O-W barrier 1acont'd

---------COORDINATES----------

	X	Y	Z	Z0	DELZ	P
sf-16	6339241.5	1805697.6	591.7	580.7	1.0	3
6a	6339296.6	1805665.7	593.0	582.0		
6b	6339342.5	1805640.0	594.1	583.1		
6c	6339383.5	1805617.1	595.0	584.0		
7	6339406.4	1805509.8	595.0	584.0		
8	6339434.3	1805343.0	599.9	588.9		

1
BARRIER 2 TYPE(A) R-O-W barrier 1bcont'd

---------COORDINATES----------

	X	Y	Z	Z0	DELZ	P
8	6339434.3	1805343.0	596.9	588.9	1.0	3
9	6339453.5	1805206.6	597.6	589.6		
10	6339469.4	1805092.9	597.9	589.9		

1
BARRIER 3 TYPE(A) R-O-W barrier 2cont'd

---------COORDINATES----------

	X	Y	Z	Z0	DELZ	P
10	6339469.4	1805092.9	595.9	589.9	1.0	3
11	6339469.8	1805006.9	594.9	588.9		
12	6339469.6	1804987.8	593.3	587.3		
13	6339479.8	1804897.0	591.1	585.1		
14	6339495.0	1804777.7	590.0	584.0		
15	6339517.8	1804626.1	588.3	582.3		
16	6339550.1	1804460.9	586.8	580.8		
17	6339589.1	1804285.5	585.1	579.1		

```
18        6339634.0 1804109.2      583.4      577.4
19        6339663.6 1803997.1      582.0      576.0
1

BARRIER   4   TYPE(A)     R-O-W barrier trf to top of slope barrier

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
19        6339663.6 1803997.1      585.0      576.0        1.0        3
20        6339705.0 1803857.9      583.7      574.7
21        6339735.2 1803763.2      582.9      573.9
22        6339758.3 1803694.7      582.5      573.5
23        6339774.3 1803649.9      582.0      573.0
24        6339798.4 1803582.7      581.6      572.6
2-rev     6339886.3 1803152.2      580.0      571.0
3-rev     6339854.5 1803141.6      580.0      571.0
1

BARRIER   5   TYPE(A)     S-F Pad Edges

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
1         6338450.5 1805660.4      576.7      570.7        1.0        3
2         6338496.9 1805688.8      576.7      570.7
3         6338586.8 1805745.8      578.3      572.3
4         6338643.8 1805781.6      578.3      572.3
5         6338703.0 1805818.1      580.7      574.7
6         6338761.4 1805846.6      580.7      574.7
7         6338765.1 1805848.1      582.8      576.8
8         6338814.8 1805859.8      582.8      576.8
9         6338819.2 1805860.5      584.2      578.2
1

BARRIER   6   TYPE(A)     S-F Pad Edges cont'd.1

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
9         6338819.2 1805860.5      584.2      578.2        1.0        3
10        6338898.8 1805853.9      584.2      578.2
11        6338994.5 1805823.2      584.2      578.2
12        6338998.2 1805822.5      584.5      578.5
1

BARRIER   7   TYPE(A)     S-F Pad Edges cont'd.2

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
12        6338998.2 1805822.5      585.5      578.5        1.0        3
13        6339061.0 1805801.3      585.5      578.5
14        6339065.4 1805799.9      587.7      580.7
15        6339173.6 1805762.6      587.7      580.7
16        6339241.5 1805697.6      587.7      580.7
1

BARRIER   8   TYPE(A)     Elem School Pad Edges

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
40        6339064.2 1804045.1      548.0      548.0         .0        0
41        6339477.3 1804188.3      550.0      550.0
42        6339517.0 1804198.4      550.2      550.2
43        6339575.6 1804002.5      552.0      552.0
44        6339641.2 1803781.3      554.0      554.0
45        6339706.8 1803560.2      556.0      556.0
46        6339706.8 1803544.3      556.1      556.1
48        6339717.2 1803526.8      561.3      561.3
49        6339762.7 1803371.2      561.5      561.5
51        6339819.6 1803172.7      562.1      562.1
1

BARRIER   9   TYPE(A)     Park to High Pads

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
51        6339819.6 1803172.7      562.1      562.1         .0        0
53        6339837.0 1803137.7      579.5      579.5
52        6339709.4 1803101.9      576.9      576.9
1

BARRIER   10   TYPE(A)     High School Pad Edges

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
3-rev     6339854.5 1803141.6      578.0      571.0        1.0        3
53        6339837.0 1803137.7      586.5      579.5
54        6339875.5 1803030.2      585.6      578.6
55        6339921.0 1802901.4      585.5      578.5
56        6339942.8 1802838.7      585.4      578.4
57        6339950.7 1802716.3      585.0      578.0
58        6339953.3 1802656.0      584.5      577.5
59        6339944.6 1802632.3      584.3      577.3
60a       6339822.2 1802585.1      581.6      574.6
1

BARRIER   11   TYPE(A)     High School Pad Edges cont'd.

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
60a       6339822.2 1802585.1      580.6      574.6        1.0        3
60b       6339807.2 1802441.6      584.7      578.7
60c       6339785.7 1802288.4      585.1      579.1
61        6339775.0 1802195.2      586.8      580.8
62        6339763.6 1802083.2      585.7      579.7
63        6339781.1 1801897.9      576.4      570.4
64        6339783.7 1801794.7      576.4      570.4
1

BARRIER   12   TYPE(A)     Theoretical MF Bldg1

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
1         6339509.2 1804187.8      580.0      550.0         .0        0
2         6339454.7 1804173.9      580.0      550.0
3         6339478.7 1804085.1      580.0      550.0
4         6339535.1 1804100.8      580.0      550.0
1         6339509.2 1804187.8      580.0      550.0
1

BARRIER   13   TYPE(A)     Theoretical MF Bldg2

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
1         6339487.0 1804064.7      581.0      551.0         .0        0
2         6339541.6 1804079.5      581.0      551.0
3         6339566.6 1803991.7      581.0      551.0
4         6339511.1 1803978.7      581.0      551.0
1         6339487.0 1804064.7      581.0      551.0
1

BARRIER   14   TYPE(A)     Theoretical MF Bldg3

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
1         6339518.5 1803958.4      582.0      552.0         .0        0
2         6339573.0 1803973.2      582.0      552.0
3         6339600.8 1803885.3      582.0      552.0
4         6339543.5 1803870.5      582.0      552.0
1         6339518.5 1803958.4      582.0      552.0
1

BARRIER   15   TYPE(A)     Theoretical MF Bldg4

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
1         6339550.8 1803851.1      583.0      553.0         .0        0
2         6339604.5 1803865.9      583.0      553.0
3         6339630.4 1803778.0      583.0      553.0
4         6339574.0 1803764.1      583.0      553.0
1         6339550.8 1803851.1      583.0      553.0
1

BARRIER   16   TYPE(A)     Theoretical MF Bldg5

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
1         6339582.3 1803744.7      584.0      554.0         .0        0
2         6339635.9 1803757.7      584.0      554.0
3         6339663.7 1803669.8      584.0      554.0
4         6339606.3 1803655.0      584.0      554.0
1         6339582.3 1803744.7      584.0      554.0
1

BARRIER   17   TYPE(A)     Theoretical MF Bldg6

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
1         6339614.7 1803634.6      585.6      555.6         .0        0
2         6339670.2 1803648.5      585.6      555.6
3         6339695.1 1803561.6      585.6      555.6
4         6339638.7 1803545.9      585.6      555.6
1         6339614.7 1803634.6      585.6      555.6
1

BARRIER   18   TYPE(A)     Theoretical MF Bldg7

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
1         6339660.0 1803474.6      591.3      561.3         .0        0
2         6339713.6 1803489.4      591.3      561.3
3         6339739.5 1803402.5      591.3      561.3
4         6339683.1 1803387.7      591.3      561.3
1         6339660.0 1803474.6      591.3      561.3
1

BARRIER   19   TYPE(A)     Theoretical MF Bldg8

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
1         6339692.4 1803367.3      591.6      561.6         .0        0
2         6339745.1 1803382.1      591.6      561.6
3         6339772.8 1803294.3      591.6      561.6
4         6339715.5 1803279.5      591.6      561.6
1         6339692.4 1803367.3      591.6      561.6
1

BARRIER   20   TYPE(A)     Theoretical MF Bldg9

          ---------COORDINATES----------
               X          Y          Z         Z0       DELZ        P
1         6339722.9 1803260.1      592.0      562.0         .0        0
2         6339776.5 1803274.8      592.0      562.0
3         6339804.3 1803187.9      592.0      562.0
4         6339746.9 1803172.2      592.0      562.0
1         6339722.9 1803260.1      592.0      562.0
1

Third-floor Multi-family Receivers (at 25 feet)

                    ----------COORDINATES----------
                         X          Y          Z
1                   6339449.3 1804154.9      575.0
2                   6339465.1 1804102.2      575.0
3                   6339482.6 1804045.8      576.0
4                   6339499.3 1803992.1      576.0
5                   6339514.1 1803937.6      577.0
6                   6339528.9 1803885.8      577.0
7                   6339545.5 1803832.1      578.0
8                   6339560.3 1803782.2      578.0
9                   6339577.0 1803724.8      579.0
10                  6339592.7 1803674.0      579.0
11                  6339610.3 1803614.8      580.6
12                  6339626.0 1803560.2      580.6
13                  6339653.7 1803454.2      586.3
14                  6339670.2 1803398.5      586.3
15                  6339684.9 1803348.3      586.6
16                  6339701.4 1803290.8      586.6
17                  6339716.7 1803239.4      587.0
18                  6339732.0 1803188.0      587.0
19                  6339522.0 1804151.0      575.0
20                  6339619.9 1803821.5      578.0
21                  6339684.0 1803610.9      580.6
22                  6339729.7 1803444.3      586.3
23                  6339791.6 1803234.7      587.0
1

 ALPHA 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
  2 *  .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
  4 *  .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
  6 *  .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  .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  .0  .0  .0  .0  .0  .0  .0  .0
       .0  .0  .0
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
2 *  .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
4 *  .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
6 *  .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  .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  .0  .0  .0  .0  .0  .0  .0  .0
     .0  .0  .0
```

1

RECEIVER	LEQ(H)	L10
1	64.2	65.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY	SEGMENT
1	1
	42.7
2	1 2 3 4 5 6 7 8 9 10
11	12 13 14
	43.2 41.9 46.3 50.5 53.5 55.5 57.1 51.0 50.9 47.0
	44.1 42.9 40.4 39.3
3	1 2 3
	38.3 37.2 35.4
4	1 2 3
	36.9 37.0 38.4
5	1 2 3 4 5 6 7 8 9 10
11	12 13
	39.3 41.2 43.1 45.3 44.3 52.3 50.5 53.0 50.8 50.1
	47.5 45.4 43.4
6	1
	42.6
7	1 2 3 4 5 6 7 8
	32.2 31.8 29.1 28.2 27.3 27.3 26.9 26.5
8	1 2 3 4 5 6 7 8 9 10
	22.7 21.3 20.5 21.1 20.9 22.2 23.9 24.2 23.8 25.0

1

RECEIVER	LEQ(H)	L10
2	63.1	64.2

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY	SEGMENT
1	1
	39.9
2	1 2 3 4 5 6 7 8 9 10
11	12 13 14
	40.4 39.0 43.2 47.3 49.8 53.8 56.7 51.2 51.3 46.7
	43.7 42.4 39.9 38.9
3	1 2 3
	37.8 36.8 35.4
4	1 2 3
	36.4 36.5 38.0
5	1 2 3 4 5 6 7 8 9 10
11	12 13
	38.9 41.1 43.1 45.8 44.5 52.2 50.2 52.2 49.0 46.2
	43.9 41.9 40.1
6	1
	39.2
7	1 2 3 4 5 6 7 8
	32.6 32.2 29.1 28.3 27.5 27.5 27.2 26.7
8	1 2 3 4 5 6 7 8 9 10
	22.9 21.5 20.7 21.3 21.1 22.4 23.7 23.7 23.4 24.5

1

RECEIVER	LEQ(H)	L10
3	63.9	65.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY	SEGMENT
1	1
	41.3
2	1 2 3 4 5 6 7 8 9 10
11	12 13 14
	41.8 40.4 44.6 48.8 51.8 54.7 57.0 52.1 51.7 47.5
	44.5 43.2 40.7 39.6
3	1 2 3
	38.5 37.6 36.1
4	1 2 3
	37.1 37.1 38.6
5	1 2 3 4 5 6 7 8 9 10
11	12 13
	39.5 41.5 43.4 45.7 44.8 52.9 50.6 52.0 50.3 48.9
	46.2 44.0 42.0
6	1
	41.1
7	1 2 3 4 5 6 7 8
	33.2 32.7 29.8 28.5 28.0 27.9 27.5 27.1
8	1 2 3 4 5 6 7 8 9 10
	23.3 21.9 21.1 21.7 21.6 22.5 24.1 24.6 24.1 25.2

1

RECEIVER	LEQ(H)	L10
4	62.8	63.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY	SEGMENT
1	1
	39.2
2	1 2 3 4 5 6 7 8 9 10
11	12 13 14
	39.7 37.9 42.4 46.4 48.6 52.2 56.2 52.2 52.1 47.5
	43.9 42.4 39.9 38.7
3	1 2 3
	37.6 36.6 35.2
4	1 2 3
	36.4 36.6 38.1
5	1 2 3 4 5 6 7 8 9 10
11	12 13
	39.1 41.2 43.5 46.4 44.9 52.7 49.9 51.0 47.9 45.2
	43.0 41.1 39.3
6	1
	38.5
7	1 2 3 4 5 6 7 8
	33.7 32.9 29.3 28.2 28.3 28.2 27.8 27.3
8	1 2 3 4 5 6 7 8 9 10
	23.5 22.0 21.3 22.1 21.7 22.5 23.9 23.8 23.4 24.5

1

RECEIVER	LEQ(H)	L10
5	64.0	65.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY	SEGMENT
1	1
	41.0
2	1 2 3 4 5 6 7 8 9 10
11	12 13 14
	41.4 39.9 44.0 48.1 50.6 54.5 56.7 53.6 52.9 48.4
	45.2 43.8 41.3 40.1
3	1 2 3
	39.0 38.0 36.6
4	1 2 3
	37.5 37.5 39.0
5	1 2 3 4 5 6 7 8 9 10
11	12 13
	40.0 42.1 44.0 46.5 45.7 53.8 50.4 51.3 50.5 48.1
	45.5 43.5 41.6
6	1
	40.8
7	1 2 3 4 5 6 7 8
	34.3 33.7 31.0 28.3 28.7 28.6 28.1 27.7
8	1 2 3 4 5 6 7 8 9 10
	23.8 22.4 21.7 22.5 22.1 22.1 24.6 24.9 24.6 25.7

1

RECEIVER	LEQ(H)	L10
6	63.4	64.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY	SEGMENT
1	1
	39.5
2	1 2 3 4 5 6 7 8 9 10
11	12 13 14
	39.9 38.5 42.6 46.5 48.4 51.8 56.2 54.1 53.7 48.8
	44.9 43.3 40.8 39.6
3	1 2 3
	38.4 37.4 36.0
4	1 2 3
	36.8 37.0 38.6
5	1 2 3 4 5 6 7 8 9 10
11	12 13
	39.7 42.0 44.3 47.4 46.1 54.1 50.1 50.9 47.9 45.4
	43.3 41.4 39.6
6	1
	38.9
7	1 2 3 4 5 6 7 8
	34.8 34.1 30.0 28.1 29.0 29.0 28.4 27.9
8	1 2 3 4 5 6 7 8 9 10
	24.0 22.5 21.9 22.7 22.5 22.0 24.4 24.5 24.1 25.2

1

RECEIVER	LEQ(H)	L10
7	64.0	65.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY	SEGMENT
1	1
	40.4
2	1 2 3 4 5 6 7 8 9 10
11	12 13 14
	40.7 39.2 43.3 47.1 49.3 53.6 56.5 54.5 54.0 49.1
	45.7 44.1 41.5 40.3
3	1 2 3
	39.2 38.1 36.6
4	1 2 3
	37.6 37.7 39.2
5	1 2 3 4 5 6 7 8 9 10
11	12 13
	40.2 42.3 44.3 46.9 46.3 54.3 49.8 51.9 50.1 47.1
	44.7 42.8 41.0
6	1
	40.2
7	1 2 3 4 5 6 7 8
	35.4 34.7 29.9 28.6 29.4 29.4 28.8 28.3
8	1 2 3 4 5 6 7 8 9 10

```
          24.3 22.8 22.3 23.1 22.9 22.2 24.5 25.2 24.9 25.9

1

 RECEIVER     LEQ(H)    L10
 8             62.9     64.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             39.1
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             39.5 38.0 42.0 45.8 47.6 50.6 54.6 54.0 54.1 49.2

             46.0 44.0 41.3 39.9
    3          1    2    3
             38.6 37.6 36.1
    4          1    2    3
             37.3 37.5 39.2
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             40.3 42.5 44.1 46.8 46.2 54.0 48.9 49.7 47.0 44.7

             42.6 40.8 39.1
    6          1
             38.4
    7          1    2    3    4    5    6    7    8
             36.0 34.7 29.3 28.7 29.8 29.7 29.1 28.5
    8          1    2    3    4    5    6    7    8    9   10

          24.3 22.9 22.4 23.3 23.1 22.6 23.6 24.9 24.2 25.3

1

 RECEIVER     LEQ(H)    L10
 9             63.9     65.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             40.0
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             40.3 38.8 42.7 46.4 48.4 52.1 55.9 54.3 55.3 50.0

             46.3 44.7 42.0 40.7
    3          1    2    3
             39.5 38.5 37.0
    4          1    2    3
             37.9 38.0 39.6
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             40.5 42.8 44.9 47.7 47.2 54.6 49.0 51.9 49.2 46.3

             44.1 42.3 40.6
    6          1
             39.8
    7          1    2    3    4    5    6    7    8
             36.8 34.5 29.8 29.2 30.3 30.1 29.5 28.9
    8          1    2    3    4    5    6    7    8    9   10

          24.6 23.1 22.7 23.8 23.7 22.8 23.7 24.5 25.3 26.4

1

 RECEIVER     LEQ(H)    L10
 10            62.7     63.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             38.7
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             39.0 37.5 41.5 45.2 46.9 49.6 53.2 53.2 55.1 49.9

             46.1 44.3 41.3 39.4
    3          1    2    3
             38.0 36.7 35.1
    4          1    2    3
             37.2 37.4 39.1
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             40.3 42.4 44.5 47.4 46.9 53.9 47.9 48.8 46.3 44.1

             42.2 40.4 38.7
    6          1
             38.0
    7          1    2    3    4    5    6    7    8
             37.4 33.7 30.0 29.3 30.7 30.5 29.8 29.2
    8          1    2    3    4    5    6    7    8    9   10

          24.3 23.0 22.6 23.5 23.8 23.1 23.8 23.9 23.7 24.8

1

 RECEIVER     LEQ(H)    L10
 11            63.6     64.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             40.2
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             40.5 38.9 42.8 46.4 48.1 51.4 55.3 52.9 55.8 50.7

             46.5 44.4 41.4 39.9
    3          1    2    3
             38.4 37.2 35.5
    4          1    2    3
             36.8 37.1 38.9
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             40.3 42.8 45.1 48.1 47.7 54.2 47.8 51.7 48.8 46.2

             44.1 42.4 40.8
    6          1
             40.1
    7          1    2    3    4    5    6    7    8
             37.8 34.3 30.7 29.8 31.3 31.1 30.4 29.7
    8          1    2    3    4    5    6    7    8    9   10

          24.5 23.7 23.4 24.0 24.3 23.6 24.2 24.4 24.2 25.2

1

 RECEIVER     LEQ(H)    L10
 12            62.4     63.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             38.4
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             38.7 37.2 41.1 44.8 46.3 48.8 52.1 51.9 55.6 50.7

             46.1 43.8 40.7 39.1
    3          1    2    3
             37.8 36.5 34.9
    4          1    2    3
             36.2 36.4 38.3
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             39.6 42.2 44.9 48.1 47.8 53.8 47.0 48.1 45.7 43.6

             41.8 40.1 38.5
    6          1
             37.8
    7          1    2    3    4    5    6    7    8
             38.0 34.2 30.2 29.3 30.8 31.4 30.7 30.1
    8          1    2    3    4    5    6    7    8    9   10

          24.2 23.8 23.5 24.0 23.7 22.9 23.5 23.8 23.5 24.5

1

 RECEIVER     LEQ(H)    L10
 13            64.5     65.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             41.5
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             41.7 40.1 43.9 47.2 48.9 51.8 55.1 54.3 55.9 52.3

             48.1 46.0 43.1 41.7
    3          1    2    3
             40.3 39.2 37.7
    4          1    2    3
             38.6 38.8 40.4
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             41.6 43.9 46.3 49.4 49.1 54.5 52.3 52.5 49.5 47.3

             45.2 43.5 42.0
    6          1
             41.3
    7          1    2    3    4    5    6    7    8
             41.4 37.4 33.5 32.8 33.4 33.0 32.1 31.3
    8          1    2    3    4    5    6    7    8    9   10

          28.2 26.9 26.5 26.7 27.0 26.7 27.0 26.8 26.4 27.3

1

 RECEIVER     LEQ(H)    L10
 14            62.6     63.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             38.3
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             38.6 36.9 40.8 44.3 45.6 47.8 50.6 50.0 55.2 52.5

             49.5 46.9 43.7 42.0
    3          1    2    3
             40.6 39.4 37.8
    4          1    2    3
             38.7 39.2 41.0
    5          1    2    3    4    5    6    7    8    9   10

   11         12   13
             42.4 45.1 47.3 49.4 48.9 53.1 46.0 47.2 45.2 43.2

             41.4 39.9 38.3
    6          1
             37.7
    7          1    2    3    4    5    6    7    8
             41.9 38.1 33.9 33.6 34.0 33.5 32.5 31.7
    8          1    2    3    4    5    6    7    8    9   10

          28.2 27.2 27.0 27.2 27.6 27.2 27.4 27.0 26.6 27.6

1

 RECEIVER     LEQ(H)    L10
 15            63.0     64.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             38.1
    2          1    2    3    4    5    6    7    8    9   10

   11         12   13   14
             38.4 36.7 40.7 44.1 45.4 47.5 50.6 51.0 55.7 53.5

             49.0 46.7 43.7 42.2
    3          1    2    3
```

```
          40.8 39.6 38.1
   4        1    2    3
          38.9 39.2 40.9
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          42.1 44.5 47.0 50.3 49.7 54.0 47.2 47.8 45.2 43.0

          41.2 39.7 38.3
   6        1
          37.7
   7        1    2    3    4    5    6    7    8
          42.9 38.5 34.5 34.2 34.5 34.0 33.0 32.1
   8        1    2    3    4    5    6    7    8    9   10

          28.6 27.6 27.5 27.8 28.0 27.7 27.8 27.5 26.9 27.9

1

 RECEIVER    LEQ(H)   L10
 16           62.6   63.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           38.2
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           38.5 36.9 40.6 44.0 45.3 47.4 49.9 49.1 54.5 53.6

           49.7 47.7 44.3 42.5
    3        1    2    3
           40.9 39.5 37.9
    4        1    2    3
           39.0 39.4 41.3
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           42.7 45.6 47.4 50.3 49.4 52.6 45.4 46.9 44.9 43.0

           41.4 39.8 38.3
    6        1
           37.6
    7        1    2    3    4    5    6    7    8
           43.2 39.2 35.3 34.4 35.1 34.7 33.5 32.5
    8        1    2    3    4    5    6    7    8    9   10

           29.0 29.1 28.0 28.3 28.5 27.6 27.8 27.3 26.9 27.9

1

 RECEIVER    LEQ(H)   L10
 17           62.7   63.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           38.2
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           38.3 36.7 40.6 43.8 45.1 47.2 49.7 49.5 54.6 54.0

           49.8 47.3 44.1 42.6
    3        1    2    3
           41.1 39.9 38.3
    4        1    2    3
           39.2 39.5 41.2
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           42.4 44.8 47.5 50.8 49.4 53.1 46.3 47.0 44.7 42.9

           41.2 39.7 38.1
    6        1
           37.5
    7        1    2    3    4    5    6    7    8
           43.1 40.1 35.8 35.1 35.9 35.3 34.0 33.0
    8        1    2    3    4    5    6    7    8    9   10

           31.1 29.6 28.6 28.9 29.1 28.1 28.4 28.0 27.3 28.2

1

 RECEIVER    LEQ(H)   L10
 18           62.6   63.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           37.8
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           38.0 36.3 40.1 43.4 44.7 46.7 49.1 48.0 53.3 53.8

           50.0 47.3 48.3 47.1
    3        1    2    3
           45.1 43.4 41.4
    4        1    2    3
           43.2 43.8 46.0
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           44.6 44.7 47.5 50.7 48.8 51.7 44.7 46.1 44.2 42.5

           40.8 39.2 37.8
    6        1
           37.3
    7        1    2    3    4    5    6    7    8
           42.9 40.3 38.3 37.7 36.5 35.9 34.6 33.4
    8        1    2    3    4    5    6    7    8    9   10

           31.7 30.0 29.1 29.5 29.7 29.8 30.5 31.3 31.3 32.1

1

 RECEIVER    LEQ(H)   L10
 19           68.1   70.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           42.6

    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           43.1 41.7 46.0 50.5 53.5 59.4 63.9 54.2 53.3 49.2

           46.1 44.7 41.6 40.3
    3        1    2    3
           38.9 37.6 36.0
    4        1    2    3
           37.2 37.5 39.3
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           40.5 42.9 45.0 47.4 46.6 56.5 55.9 57.8 53.3 49.7

           47.1 44.9 43.0
    6        1
           42.1
    7        1    2    3    4    5    6    7    8
           33.3 32.6 29.9 29.8 29.3 26.8 25.3 24.5
    8        1    2    3    4    5    6    7    8    9   10

           25.7 22.4 21.3 21.6 24.0 23.9 24.6 24.8 24.6 25.6

1

 RECEIVER    LEQ(H)   L10
 20           68.7   70.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           42.4
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           42.8 41.3 45.3 49.1 51.2 55.1 61.1 61.7 59.6 53.1

           49.4 47.5 44.4 42.9
    3        1    2    3
           41.3 40.0 38.3
    4        1    2    3
           39.7 40.1 42.0
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           43.4 46.0 48.5 51.7 51.5 60.8 55.2 55.7 51.9 48.9

           46.7 44.7 43.0
    6        1
           42.2
    7        1    2    3    4    5    6    7    8
           37.0 35.8 32.8 32.5 31.8 28.8 26.8 25.7
    8        1    2    3    4    5    6    7    8    9   10

           27.4 24.5 23.4 23.8 26.3 26.3 27.0 27.2 27.1 28.1

1

 RECEIVER    LEQ(H)   L10
 21           69.5   71.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           41.9
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           42.2 40.7 44.5 48.0 49.9 53.1 57.2 59.1 64.1 56.8

           52.2 49.9 46.6 45.0
    3        1    2    3
           43.4 42.0 40.2
    4        1    2    3
           41.7 42.1 44.0
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           45.5 48.2 51.1 55.0 55.8 62.9 53.9 53.7 50.3 47.7

           45.7 44.0 42.4
    6        1
           41.7
    7        1    2    3    4    5    6    7    8
           40.7 38.7 35.4 35.0 33.8 29.8 26.9 25.6
    8        1    2    3    4    5    6    7    8    9   10

           28.4 26.1 24.9 25.5 28.3 28.4 28.9 29.3 29.2 30.2

1

 RECEIVER    LEQ(H)   L10
 22           70.9   72.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
           41.8
    2        1    2    3    4    5    6    7    8    9   10

   11       12   13   14
           41.9 40.2 44.0 47.4 49.0 51.9 55.5 56.5 65.9 61.8

           55.4 52.4 49.0 47.3
    3        1    2    3
           45.8 44.5 42.8
    4        1    2    3
           44.2 44.5 46.4
    5        1    2    3    4    5    6    7    8    9   10

   11       12   13
           47.7 50.4 53.6 58.6 59.8 63.3 52.5 52.6 49.5 47.1

           45.3 43.8 42.3
    6        1
           41.7
    7        1    2    3    4    5    6    7    8
           45.6 42.5 38.4 37.9 35.9 32.2 29.5 28.1
    8        1    2    3    4    5    6    7    8    9   10

           30.0 28.0 27.0 27.7 29.9 31.2 31.7 31.8 31.7 32.7

1

 RECEIVER    LEQ(H)   L10
 23           71.3   73.0
```

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1		1								
		41.6								
2		1	2	3	4	5	6	7	8	9	10
11		12	13	14							
		41.5	39.8	43.4	46.4	47.5	49.9	53.1	53.1	62.8	66.0
		59.3	55.3	51.5	49.6						
3		1	2	3							
		47.8	47.2	45.1							
4		1	2	3							
		45.8	46.2	48.2							
5		1	2	3	4	5	6	7	8	9	10
11		12	13								
		49.8	52.7	56.7	62.1	60.7	60.7	50.2	50.8	48.2	46.2
		44.6	43.3	42.0							
6		1									
		41.5									
7		1	2	3	4	5	6	7	8		
		50.8	48.7	44.5	40.9	38.0	33.5	30.4	28.9		
8		1	2	3	4	5	6	7	8	9	10
		31.5	30.0	29.1	29.9	30.9	32.5	33.6	34.1	34.1	35.6

```
                    *************************
                          OPTIMA-VU1
                    *************************
              BARRIER OPTIMIZATION PROGRAM USING
             PARTIAL SOUND ENERGIES COMPUTED BY THE
                      STAMINA 2.0 PROGRAM
          MODIFIED FROM THE FHWA VAX VERSON -- MARCH 1983

      MODIFIED TO:
        1.  PLACE BARRIER COST DATA IN A DATA FILE CALLED
            OPTCOST.DTA TO ALLOW USER TO USE COSTS OTHER THAN
            THE FHWA NATIONAL AVERAGES.
                    *************************
          MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
                         IN JUNE 1991 BY
          VANDERBILT ENGINEERING CENTER FOR TRANSPORTATION
                  OPERATIONS AND RESEARCH (VECTOR)
      BOX 96-B, VANDERBILT UNIVERSITY, NASHVILLE, TENNESSEE 37235
                          (615) 322-3683
                    *************************

    PROBLEM TITLE
    *************
 Otay Ranch - Village 7: 02/2004

          EFFECTIVENESS/COST RATIO AND BARRIER HEIGHT MATRICES
          ****************************************************
BARRIER SECTION        EFFECTIVENESS/COST                 CORRESPONDING
  NO   IDENT                 RATIO                         BARRIER HEIGHTS(IN
FT)

 HEIGHT INDEX  1   2    3    4    5    6    7    8   1  2  3  4  5  6  7  8
   1   sf-16       *    0.    0.    0.    0.    0.    0.     0.   0. 8.
9.10.11.12.13.14.
   2   6a          *    0.    0.    0.    0.    0.    0.     0.   0. 8.
9.10.11.12.13.14.
   3   6b          *    0.    0.    0.    0.    0.    0.     0.   0. 8.
9.10.11.12.13.14.
   4   6c          *    0.    0.    0.    0.    0.    0.     0.   0. 8.
9.10.11.12.13.14.
   5   7           *    0.    0.    0.    0.    0.    0.     0.   0. 8.
9.10.11.12.13.14.
   6   8         *   0.   0.   0.   0.   0.   0.   0.  0. 5. 6. 7. 8.
9.10.11.
   7   9         *   0.   0.   0.   0.   0.   0.   0.  0. 5. 6. 7. 8.
9.10.11.
   8   10       *  -1    0   -1   -1.  -1.  -1.  -1  0. 3. 4. 5. 6. 7. 8.
9
   9   11       * -12  -11. -11. -11. -10  -10  -10  0. 3  4  5  6  7. 8
9.
  10   12       *  12.  13.  13.  12.  12.  12.  12.  0. 3. 4. 5. 6. 7. 8.
9.
  11   13       *  13.  14.  14.  13.  13.  13.  13.  0. 3. 4. 5. 6. 7. 8.
9.
  12   14       *  17.  18.  17.  17.  17.  16.  16.  0. 3. 4. 5. 6. 7. 8.
9.
  13   15       *  23.  23.  22.  22.  22.  21.  21.  0. 3. 4. 5. 6. 7. 8.
9.
  14   16       *  27.  27.  25.  24.  24.  24.  23.  0. 3. 4. 5. 6. 7. 8.
9.
  15   17       *  33.  33.  31.  30.  29.  29.  28.  0. 3. 4. 5. 6. 7. 8.
9.
  16   18       *  32.  31.  30.  29.  28.  28.  28.  0. 3. 4. 5. 6. 7. 8.
9.
  17   19          *  33.  32.  31.  30.  29.  28.  27.   0. 6. 7. 8.
9.10.11.12.
  18   20          *  35.  34.  33.  32.  31.  29.  29.   0. 6. 7. 8.
9.10.11.12.
  19   21          *  35.  34.  32.  32.  30.  29.  29.   0. 6. 7. 8.
9.10.11.12.
  20   22          *  37.  35.  34.  33.  31.  30.  30.   0. 6. 7. 8.
9.10.11.12.
  21   23          *  37   35   34.  33   31   30   30    0. 6. 7. 8.
9.10.11.12.
  22   24          *  36.  36.  35.  33.  31.  30.  30.   0. 6. 7. 8.
9.10.11.12.
  23   2-rev     *  35.  36.  33.  31.  27.  24.  22.   0. 6. 7. 8.
9.10.11.12.
  24   1        *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  25   2        *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  26   3        *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  27   4        *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  28   5        *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  29   6        *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  30   7        *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  31   8        *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  32   9        *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9
  33   10       *  0    0.   0.   0.   0.   0.   0   0. 3  4. 5. 6. 7. 8.
9.
  34   11       *  0.   0    0.   0.   0.   0    0.  0. 3  4. 5  6. 7. 8
9.
  35   12       *   0.   0.   0.   0.   0.   0.   0.  0. 4. 5. 6. 7. 8.
9.10.
  36   13       *   0.   0.   0.   0.   0.   0.   0.  0. 4. 5. 6. 7. 8.
9.10.
  37   14       *   0.   0.   0.   0.   0.   0.   0.  0. 4. 5. 6. 7. 8.
9.10.
  38   15       *   0.   0.   0.   0.   0.   0.   0.  0. 4. 5. 6. 7. 8.
9.10.
  39   40      *  0.                                 0. 0.
  40   41      *  0.                                 0. 0.
  41   42      *  0.                                 0. 0.
  42   43      *  0.                                 0. 0.
  43   44      *  0.                                 0. 0.
  44   45      *  0.                                 0. 0.
  45   46      *  0.                                 0. 0.
  46   48      *  0.                                 0. 0.
  47   49      *  0.                                 0. 0.
  48   51      *  0.                                 0. 0.
  49   53      *  0.                                 0. 0.
  50   3-rev    *  27.  28.  26.  24.  22.  20.  19.  0. 4. 5. 6. 7. 8.
9.10.
  51   53       *  10.  11.  11.  11.  11.  11.  10.  0. 4. 5. 6. 7. 8.
9.10.
  52   54       *  17.  18.  17.  17.  17.  17.  16.  0. 4. 5. 6. 7. 8.
9.10.
  53   55       *   5.   4.   3.   3.   2.   2.   2.  0. 4. 5. 6. 7. 8.
9.10.
  54   56       *  11.  10.   9.   9.   8.   8.   7.  0. 4. 5. 6. 7. 8.
9.10.
  55   57       *  10.  10.   9.   9.   8.   8.   8.  0. 4. 5. 6. 7. 8.
9.10.
  56   58       *  13.  12.  11.  11.  11.  10.  10.  0. 4. 5. 6. 7. 8.
9.10.
  57   59       *  12.  12.  11.  11.  11.  11.  11.  0. 4. 5. 6. 7. 8.
9.10.
  58   60a      *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  59   60b      *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  60   60c      *  0.   0.   0.   0.   0.   0.   0   0  3  4  5  6  7  8
9.
  61   61       *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  62   62       *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  63   63       *  0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
  64   1       *  0.                                 0.30.
  65   2       *  0.                                 0.30.
  66   3       *  0.                                 0.30.
  67   4       *  0.                                 0.30.
  68   1       *  0.                                 0.30.
  69   2       *  0.                                 0.30.
  70   3       *  0.                                 0.30.
  71   4       *  0.                                 0.30.
  72   1       *  0.                                 0.30.
  73   2       *  0.                                 0.30.
  74   3       *  0.                                 0.30.
  75   4       *  0.                                 0.30.
  76   1       *  0.                                 0.30.
  77   2       *  0.                                 0.30.
  78   3       *  0.                                 0.30.
  79   4       *  0.                                 0.30.
  80   1       *  0.                                 0.30.
  81   2       *  0.                                 0.30.
  82   3       *  0.                                 0.30.
  83   4       *  0.                                 0.30.
  84   1       *  0.                                 0.30.
  85   2       *  0.                                 0.30.
  86   3       *  0.                                 0.30.
  87   4       *  0.                                 0.30.
  88   1       *  0.                                 0.30.
  89   2       *  0.                                 0.30.
  90   3       *  0.                                 0.30.
  91   4       *  0.                                 0.30.
  92   1       *  0.                                 0.30.
  93   2       *  0.                                 0.30.
  94   3       *  0.                                 0.30.
  95   4       *  0.                                 0.30.
  96   1       *  0.                                 0.30.
  97   2       *  0.                                 0.30.
  98   3       *  0.                                 0.30.
  99   4       *  0.                                 0.30.

HEIGHT INDEX  1  2   3   4   5   6   7   8  1  2  3  4  5  6  7  8

Otay Ranch - Village 7: 02/2004

3rd floor m-f receivers, with building shielding and barriers

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
  5  7  8  8  7  8  7  8  7  7  7  7  8  8  8  7  3  2  2  2  2  2  1  1  1
  1  1  1  1  2  2  4  4  4  6  6  7  8  1  1  1  1  1  1  1  1  1  1  1  1
  8  8  8  7  7  6  5  3  3  3  3  3  3  2  2  2  2  2  2  2  2  2  2  2  2
  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2
CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
11.13.14.14.13.11.10. 9. 8. 8. 8. 8. 9. 9. 9. 8. 7. 6. 6. 6. 6. 6. 0. 0. 0.
 0. 0. 0. 0. 3. 3. 5. 5. 5. 8. 8. 9.10. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
10.10.10. 9. 9. 8. 7. 4. 4. 4. 4. 4. 4.30.30.30.30.30.30.30.30.30.30.30.30.
30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.

     R E S U L T S
     *************

REC     REC ID          LEQ      LEQ(Z(0))      IL
  1     1               63.9      74.6         10.7
  2     2               63.1      75.0         11.9
  3     3               63.8      75.0         11.2
  4     4               62.8      75.1         12.4
  5     5               64.0      75.1         11.2
  6     6               63.4      75.1         11.7
  7     7               64.0      75.2         11.2
  8     8               62.9      75.1         12.2
  9     9               63.9      75.1         11.2
 10     10              62.7      75.1         12.4
 11     11              63.7      75.0         11.3
 12     12              62.4      75.0         12.5
 13     13              64.9      74.6          9.7
 14     14              62.6      74.7         12.1
 15     15              63.0      74.6         11.6
 16     16              62.6      74.5         11.9
 17     17              62.7      74.4         11.7
 18     18              62.4      74.2         11.8
 19     19              66.6      72.3          5.7
 20     20              70.1      73.9          3.8
 21     21              71.5      75.4          3.9
 22     22              72.6      76.2          3.6
 23     23              74.2      75.8          1.6

BARRIER TYPE        COST              AREA (SQ. FT.)
FH-BERM                0.                   0.
FH-MASON          574500.              116327.
FH-WOOD                0.                   0.
FH-CONC                0.                   0.
FH-STEEL               0.                   0.
*****************************************************************
 TOTALS:        $  574500.             116327.

END OF ALL CASES
```

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Otay Ranch - Village 7: 02/2004

EMISSION LEVELS: Calveno Levels (trucks>30mph)

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)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

OROADWAY 1 Southbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6339513.3	1806920.6	600.4	0
2	6339510.5	1806467.0	598.8	0

OROADWAY 2 Southbound SR-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
2	6339510.5	1806467.0	598.8	0
3	6339509.1	1806114.7	593.8	0
4	6339508.2	1805921.3	592.2	0
5	6339506.6	1805567.2	590.6	0
6	6339518.4	1805084.1	587.3	0
7	6339558.1	1804696.4	584.0	0
8	6339626.5	1804317.1	580.7	0
9	6339721.1	1803940.3	577.4	0
10	6339779.5	1803754.4	575.8	0
11	6339915.4	1803392.1	572.5	0
12	6340052.2	1803092.3	569.2	0
13	6340182.4	1802843.8	564.3	0
14	6340344.6	1802558.3	554.5	0
15	6340485.7	1802306.5	544.6	0
16	6340646.7	1802025.4	531.5	0

OROADWAY 3 Southbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
16	6340646.7	1802025.4	531.5	0
17	6340806.7	1801741.3	516.7	0
18	6340985.8	1801426.3	500.3	0
19	6341154.7	1801109.5	483.9	0

OROADWAY 4 Northbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6341260.4	1801145.7	485.6	1
2	6341061.5	1801517.5	503.6	1
3	6340903.6	1801796.7	516.7	1
4	6340743.5	1802078.7	531.5	1

OROADWAY 5 Northbound SR-125, Birch to RM

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
4	6340743.5	1802078.7	531.5	1
5	6340583.6	1802361.5	544.6	1
6	6340405.7	1802676.0	556.1	1
7	6340228.9	1802992.4	564.3	1
8	6340066.7	1803323.5	569.2	1
9	6339993.2	1803497.7	570.9	1
10	6339809.9	1804036.4	575.8	1
11	6339761.7	1804219.9	577.4	1
12	6339684.8	1804591.6	580.7	1
13	6339638.4	1804969.2	584.0	1
14	6339618.1	1805346.8	587.3	1
15	6339618.1	1805728.7	590.6	1
16	6339621.4	1806111.3	593.8	1
17	6339622.2	1806484.0	598.8	1

OROADWAY 6 Northbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES			
	X	Y	Z	GRADE
17	6339622.2	1806484.0	598.8	1
18	6339626.5	1806918.9	600.4	1

OROADWAY 7 Southbound Ramp to Rock Mountain

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	561.	45.0
VEH5	18.	45.0
VEH6	12.	45.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6339864.2	1803405.4	565.9	1
2	6339924.1	1803175.4	566.5	1
3	6339984.3	1802962.1	567.1	1
4	6340015.7	1802831.9	567.5	1
5	6340026.5	1802684.8	567.9	1
6	6340003.6	1802446.2	568.5	1
7	6339995.2	1802224.4	569.1	1
8	6340032.5	1802046.0	569.6	1
9	6340089.2	1801885.6	570.0	1

OROADWAY 8 Ramp from wb Rock Mountain to sb-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	671.	45.0
VEH5	21.	45.0
VEH6	14.	45.0

0	COORDINATES			
	X	Y	Z	GRADE
1	6340294.9	1801957.4	570.0	0
2	6340188.4	1802001.2	565.7	0
3	6340138.6	1802064.9	562.8	0
4	6340116.7	1802131.7	560.3	0
5	6340125.6	1802215.3	557.2	0
6	6340173.4	1802290.0	554.0	0
7	6340242.1	1802330.8	551.1	0
8	6340334.8	1802336.8	547.7	0
9	6340430.4	1802292.0	543.8	0
10	6340498.1	1802198.4	539.7	0
11	6340589.7	1802044.0	533.1	0
1				

BARRIER 1 TYPE(A) R-O-W barrier 1acont'd

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
sf-16	6339241.5	1805697.6	591.7	580.7	1.0	3
6a	6339296.6	1805665.7	593.0	582.0		
6b	6339342.5	1805640.0	594.1	583.1		
6c	6339383.5	1805617.1	595.0	584.0		
7	6339406.4	1805509.8	595.0	584.0		
8	6339434.3	1805343.0	599.9	588.9		
1						

BARRIER 2 TYPE(A) R-O-W barrier 1bcont'd

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
8	6339434.3	1805343.0	596.9	588.9	1.0	3
9	6339453.5	1805206.6	597.6	589.6		
10	6339469.4	1805092.9	597.9	589.9		
1						

BARRIER 3 TYPE(A) R-O-W barrier 2cont'd

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
10	6339469.4	1805092.9	595.9	589.9	1.0	3
11	6339469.8	1805006.9	594.9	588.9		
12	6339469.6	1804987.8	593.3	587.3		
13	6339479.8	1804897.0	591.1	585.1		
14	6339495.0	1804777.7	590.0	584.0		
15	6339517.8	1804626.1	588.3	582.3		
16	6339550.1	1804460.9	586.8	580.8		
17	6339589.1	1804285.5	585.1	579.1		

	X	Y	Z	Z0	DELZ	P
18	6339634.0	1804109.2	583.4	577.4		
19	6339663.6	1803997.1	582.0	576.0		

1

BARRIER 4 TYPE(A) R-O-W barrier trf to top of slope barrier

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
19	6339663.6	1803997.1	585.0	576.0	1.0	3
20	6339705.0	1803857.9	583.7	574.7		
21	6339735.2	1803763.2	582.9	573.9		
22	6339758.3	1803694.7	582.5	573.5		
23	6339774.3	1803649.9	582.0	573.0		
24	6339798.4	1803582.7	581.6	572.6		
2-rev	6339886.3	1803152.2	580.0	571.0		
3-rev	6339854.5	1803141.6	580.0	571.0		

1

BARRIER 5 TYPE(A) S-F Pad Edges

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
1	6338450.5	1805660.4	576.7	570.7	1.0	3
2	6338496.9	1805688.8	576.7	570.7		
3	6338586.8	1805745.8	578.3	572.3		
4	6338643.8	1805781.6	578.3	572.3		
5	6338703.0	1805818.1	580.7	574.7		
6	6338761.4	1805846.6	580.7	574.7		
7	6338765.1	1805848.1	582.8	576.8		
8	6338814.8	1805859.8	582.8	576.8		
9	6338819.2	1805860.5	584.2	578.2		

1

BARRIER 6 TYPE(A) S-F Pad Edges cont'd.1

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
9	6338819.2	1805860.5	584.2	578.2	1.0	3
10	6338898.8	1805853.9	584.2	578.2		
11	6338994.5	1805823.2	584.2	578.2		
12	6338998.2	1805822.5	584.5	578.5		

1

BARRIER 7 TYPE(A) S-F Pad Edges cont'd.2

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
12	6338998.2	1805822.5	585.5	578.5	1.0	3
13	6339061.0	1805801.3	585.5	578.5		
14	6339065.4	1805799.9	587.7	580.7		
15	6339173.6	1805762.6	587.7	580.7		
16	6339241.5	1805697.6	587.7	580.7		

1

BARRIER 8 TYPE(A) Elem School Pad Edges

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
40	6339064.2	1804045.1	548.0	548.0	.0	0
41	6339477.3	1804188.3	550.0	550.0		
42	6339517.0	1804198.4	550.2	550.2		
43	6339575.6	1804002.5	552.0	552.0		
44	6339641.2	1803781.3	554.0	554.0		
45	6339706.8	1803560.2	556.0	556.0		
46	6339706.8	1803544.3	556.1	556.1		
48	6339717.2	1803526.8	561.3	561.3		
49	6339762.7	1803371.2	561.5	561.5		
51	6339819.6	1803172.7	562.1	562.1		

1

BARRIER 9 TYPE(A) Park to High Pads

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
51	6339819.6	1803172.7	562.1	562.1	.0	0
53	6339837.0	1803137.7	579.5	579.5		
52	6339709.4	1803101.9	576.9	576.9		

1

BARRIER 10 TYPE(A) High School Pad Edges

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
3-rev	6339854.5	1803141.6	578.0	571.0	1.0	3
53	6339837.0	1803137.7	586.5	579.5		
54	6339875.5	1803030.2	585.6	578.6		
55	6339921.0	1802903.4	585.5	578.5		
56	6339942.8	1802838.7	585.4	578.4		
57	6339950.7	1802716.3	585.0	578.0		
58	6339953.3	1802656.0	584.5	577.5		
59	6339944.6	1802632.3	584.3	577.3		
60a	6339822.2	1802585.1	581.6	574.6		

1

BARRIER 11 TYPE(A) High School Pad Edges cont'd.

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
60a	6339822.2	1802585.1	580.6	574.6	1.0	3
60b	6339807.2	1802441.6	584.7	578.7		
60c	6339785.7	1802288.4	585.1	579.1		
61	6339775.0	1802195.2	586.8	580.8		
62	6339763.6	1802083.2	585.7	579.7		
63	6339781.1	1801897.9	576.4	570.4		
64	6339783.7	1801794.7	576.4	570.4		

1

BARRIER 12 TYPE(A) Theoretical MF Bldg1

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
1	6339509.2	1804187.8	580.0	550.0	.0	0
2	6339454.7	1804173.9	580.0	550.0		
3	6339478.7	1804085.1	580.0	550.0		
4	6339535.1	1804100.8	580.0	550.0		
1	6339509.2	1804187.8	580.0	550.0		

1

BARRIER 13 TYPE(A) Theoretical MF Bldg2

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
1	6339487.0	1804064.7	581.0	551.0	.0	0
2	6339541.6	1804079.5	581.0	551.0		
3	6339566.6	1803991.7	581.0	551.0		
4	6339511.1	1803978.7	581.0	551.0		
1	6339487.0	1804064.7	581.0	551.0		

1

BARRIER 14 TYPE(A) Theoretical MF Bldg3

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
1	6339518.5	1803958.4	582.0	552.0	.0	0
2	6339573.0	1803973.2	582.0	552.0		
3	6339600.8	1803885.3	582.0	552.0		
4	6339543.5	1803870.5	582.0	552.0		
1	6339518.5	1803958.4	582.0	552.0		

1

BARRIER 15 TYPE(A) Theoretical MF Bldg4

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
1	6339550.8	1803851.1	583.0	553.0	.0	0
2	6339604.5	1803865.9	583.0	553.0		
3	6339630.4	1803778.0	583.0	553.0		
4	6339574.0	1803764.1	583.0	553.0		
1	6339550.8	1803851.1	583.0	553.0		

1

BARRIER 16 TYPE(A) Theoretical MF Bldg5

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
1	6339582.3	1803744.7	584.0	554.0	.0	0
2	6339635.9	1803757.7	584.0	554.0		
3	6339663.7	1803669.8	584.0	554.0		
4	6339606.3	1803655.0	584.0	554.0		
1	6339582.3	1803744.7	584.0	554.0		

1

BARRIER 17 TYPE(A) Theoretical MF Bldg6

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
1	6339614.7	1803634.6	585.6	555.6	.0	0
2	6339670.2	1803648.5	585.6	555.6		
3	6339695.1	1803561.6	585.6	555.6		
4	6339638.7	1803545.9	585.6	555.6		
1	6339614.7	1803634.6	585.6	555.6		

1

BARRIER 18 TYPE(A) Theoretical MF Bldg7

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
1	6339660.0	1803474.6	591.3	561.3	.0	0
2	6339713.6	1803489.4	591.3	561.3		
3	6339739.5	1803402.5	591.3	561.3		
4	6339683.1	1803387.7	591.3	561.3		
1	6339660.0	1803474.6	591.3	561.3		

1

BARRIER 19 TYPE(A) Theoretical MF Bldg8

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
1	6339692.4	1803367.3	591.6	561.6	.0	0
2	6339745.1	1803382.1	591.6	561.6		
3	6339772.8	1803294.3	591.6	561.6		
4	6339715.5	1803279.5	591.6	561.6		
1	6339692.4	1803367.3	591.6	561.6		

1

BARRIER 20 TYPE(A) Theoretical MF Bldg9

	---------COORDINATES---------					
	X	Y	Z	Z0	DELZ	P
1	6339722.9	1803260.1	592.0	562.0	.0	0
2	6339776.5	1803274.8	592.0	562.0		
3	6339804.3	1803187.9	592.0	562.0		
4	6339746.9	1803172.2	592.0	562.0		
1	6339722.9	1803260.1	592.0	562.0		

1

First floor Single&HS Receivers (at 5 feet)

	------------COORDINATES------------		
	X	Y	Z
1	6338479.4	1805665.4	575.7
2	6338619.2	1805753.4	577.3
3	6338733.3	1805822.9	579.7
4	6338855.3	1805846.9	583.2
5	6339024.6	1805803.3	583.5
6	6339119.0	1805771.7	585.7
7	6339203.7	1805718.6	585.7
8	6339251.7	1805661.2	584.7
9	6339273.2	1805611.7	584.7
10	6339288.6	1805561.7	583.9
11	6339301.3	1805516.7	583.9
12	6339316.9	1805468.2	582.6
13	6339327.2	1805419.0	582.6
14	6339335.0	1805369.9	581.2
15	6339341.9	1805324.7	581.2
16	6339363.2	1805182.2	578.4
17	6339385.5	1805043.2	577.0
18	6339414.0	1804855.2	573.8
19	6339431.0	1804701.9	570.3
20	6339425.1	1804573.3	568.7
21	6339440.9	1804451.3	568.0
22	6339468.2	1804409.0	568.4
23	6339493.4	1804369.0	568.4
31	6339845.6	1803083.2	583.8
32	6339888.6	1802961.6	583.2
33	6339928.8	1802847.1	583.2
34	6339938.9	1802755.1	582.9
35	6339942.7	1802657.4	582.3
36	6339815.4	1802591.7	579.5
37	6339770.7	1802344.7	577.2
38	6339735.0	1802080.3	575.0
39	6339766.6	1801907.1	574.9

1

ALPHA 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								
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								
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								
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								
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
  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
  7 *   .0   .0   .0   .0   .0   .0   .0   .0   .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   .0   .0   .0   .0   .0   .0   .0   .0
        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
        .0   .0
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
  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
  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
  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
  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
  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
  7 *   .0   .0   .0   .0   .0   .0   .0   .0   .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   .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
 1             60.4     61.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             49.3
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             49.8 48.3 50.9 48.5 46.0 45.6 44.2 39.3 41.0 39.3

             37.5 37.1 34.6 33.0
    3          1     2     3
             31.5 30.3 28.7
    4          1     2     3
             30.5 30.9 32.5
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             33.9 36.1 37.6 39.2 37.2 43.9 40.4 44.4 45.1 45.4

             48.7 50.4 49.3
    6          1
             48.5
    7          1     2     3     4     5     6     7     8
             21.7 21.7 18.5 18.3 19.7 21.2 21.5 20.9
    8          1     2     3     4     5     6     7     8     9    10

             18.9 16.7 15.4 15.1 14.1 13.5 14.0 15.9 16.8 18.2

1

 RECEIVER     LEQ(H)    L10
 2             61.4     62.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             50.3
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             51.1 49.7 52.3 49.5 46.5 45.8 44.4 39.8 41.3 39.6

             37.8 37.2 34.9 33.5
    3          1     2     3
             32.1 30.9 29.4
    4          1     2     3
             31.2 31.4 33.0
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             34.4 36.5 38.0 39.4 38.0 44.0 40.6 44.6 45.3 46.1

             50.0 51.6 50.5
    6          1
             49.4
    7          1     2     3     4     5     6     7     8
             22.3 22.8 20.2 18.8 19.9 21.1 21.0 21.0
    8          1     2     3     4     5     6     7     8     9    10

             18.7 16.5 15.3 14.9 14.3 13.6 16.0 17.2 17.4 18.7

1

 RECEIVER     LEQ(H)    L10
 3             62.3     63.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             51.4
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             52.2 50.9 53.5 50.5 46.8 46.0 44.5 40.3 41.6 39.9

             38.1 37.6 35.1 34.2
    3          1     2     3
             32.9 31.9 30.7
    4          1     2     3
             32.2 32.3 34.1
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             35.2 37.2 38.6 40.0 38.0 44.1 40.8 44.8 45.4 47.0

             51.2 52.8 51.5
    6          1
             50.4
    7          1     2     3     4     5     6     7     8
             22.8 23.2 21.2 20.8 20.0 21.0 20.9 20.9
    8          1     2     3     4     5     6     7     8     9    10

             18.1 16.5 15.2 14.8 14.4 15.0 17.2 17.8 17.9 19.4

1

 RECEIVER     LEQ(H)    L10
 4             63.5     64.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             52.0
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             53.7 52.5 55.2 51.8 47.4 46.5 44.9 40.7 42.4 40.2

             38.7 38.2 36.2 35.2
    3          1     2     3
             33.9 32.9 31.4
    4          1     2     3
             32.8 32.9 34.5
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             35.6 37.5 38.9 40.3 38.3 44.5 41.1 45.3 45.9 48.2

             52.8 54.3 52.9
    6          1
             51.1
    7          1     2     3     4     5     6     7     8
             23.5 23.7 21.8 21.9 21.0 21.0 21.1 21.0
    8          1     2     3     4     5     6     7     8     9    10

             18.5 16.5 15.3 14.8 15.7 16.8 18.0 18.7 19.1 20.5

1

 RECEIVER     LEQ(H)    L10
 5             64.5     65.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             50.7
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             53.5 53.7 57.3 53.8 48.3 47.4 45.6 41.3 43.1 40.9

             39.1 38.4 36.3 35.4
    3          1     2     3
             34.4 33.4 31.9
    4          1     2     3
             33.2 33.2 34.8
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             35.5 37.6 39.0 40.4 38.5 44.9 41.6 45.7 46.6 49.7

             54.5 55.7 52.7
    6          1
             49.9
    7          1     2     3     4     5     6     7     8
             24.9 24.7 22.5 22.7 22.5 21.2 21.3 21.1
    8          1     2     3     4     5     6     7     8     9    10

             20.5 16.3 15.6 15.2 18.1 18.2 19.3 19.6 19.5 20.8

1

 RECEIVER     LEQ(H)    L10
 6             65.7     66.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY  SEGMENT

    1         1
             50.6
    2          1     2     3     4     5     6     7     8     9    10

   11         12    13    14
             53.7 54.5 59.4 55.6 49.1 48.0 46.0 41.7 43.4 41.2

             39.3 38.6 36.6 35.8
    3          1     2     3
             34.6 33.8 32.3
    4          1     2     3
             33.0 33.4 34.9
    5          1     2     3     4     5     6     7     8     9    10

   11         12    13
             35.9 37.9 39.1 40.7 38.8 45.2 42.1 45.9 47.4 51.0

             56.5 57.0 52.9
    6          1
             49.9
    7          1     2     3     4     5     6     7     8
             26.9 25.4 23.0 23.3 23.2 21.2 20.9 20.5
    8          1     2     3     4     5     6     7     8     9    10

             21.0 18.1 16.2 17.2 19.0 18.8 19.8 20.0 19.8 21.2

1

 RECEIVER     LEQ(H)    L10
 7             66.4     67.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA
```

```
ROADWAY  SEGMENT

   1        1
           50.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           53.8 54.9 60.6 57.1 49.9 48.5 46.4 41.9 43.6 41.2

           39.2 38.6 36.1 35.1
   3        1    2    3
           34.1 33.2 31.9
   4        1    2    3
           32.6 32.5 33.9
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           35.3 37.1 38.5 40.3 38.6 45.1 41.7 45.8 48.1 52.1

           57.2 57.4 53.1
   6        1
           50.2
   7        1    2    3    4    5    6    7    8
           27.2 26.3 23.7 23.5 23.7 21.6 21.1 20.6
   8        1    2    3    4    5    6    7    8    9   10

           20.9 19.4 16.6 18.7 19.3 19.3 19.9 20.0 19.5 20.6
1

RECEIVER     LEQ(H)   L10
8             64.1    65.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           45.2
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           48.0 49.1 57.1 57.8 50.4 48.8 46.6 42.0 43.6 41.1

           38.8 37.7 35.7 34.8
   3        1    2    3
           33.3 32.5 31.2
   4        1    2    3
           32.5 32.5 33.8
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           34.6 36.3 38.1 39.8 38.0 44.6 41.5 45.8 48.4 52.4

           55.4 52.4 47.4
   6        1
           44.5
   7        1    2    3    4    5    6    7    8
           27.2 26.3 23.6 23.7 24.0 21.7 21.2 20.7
   8        1    2    3    4    5    6    7    8    9   10

           21.0 19.5 18.9 19.2 19.7 19.2 19.7 19.2 19.0 20.3
1

RECEIVER     LEQ(H)   L10
9             65.2    66.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           47.4
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           49.9 50.8 58.9 58.5 50.9 49.1 47.0 42.2 43.8 41.4

           38.8 37.8 35.7 34.6
   3        1    2    3
           33.4 32.6 31.3
   4        1    2    3
           32.6 32.5 33.9
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           34.6 36.3 38.0 39.9 38.1 44.8 41.8 46.1 48.7 52.7

           56.3 54.0 49.3
   6        1
           46.6
   7        1    2    3    4    5    6    7    8
           27.4 26.4 23.7 23.7 24.2 21.9 21.3 20.9
   8        1    2    3    4    5    6    7    8    9   10

           21.1 19.6 19.1 19.5 19.9 19.3 19.7 19.2 19.0 20.4
1

RECEIVER     LEQ(H)   L10
10            65.2    66.9

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           47.8
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           50.1 50.8 58.6 58.9 51.3 49.4 47.2 42.4 43.9 41.4

           38.8 37.8 35.7 34.8
   3        1    2    3
           33.2 32.4 31.2
   4        1    2    3
           32.4 32.3 33.7
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           34.4 36.2 38.2 39.9 38.1 44.8 41.8 46.2 48.8 52.5

           56.2 53.8 49.4
   6        1
           47.0
   7        1    2    3    4    5    6    7    8
           27.4 26.5 23.7 23.8 24.4 22.1 21.4 21.1
   8        1    2    3    4    5    6    7    8    9   10

           21.1 19.6 19.1 19.6 19.9 19.3 19.7 19.1 19.0 20.3
1

RECEIVER     LEQ(H)   L10
11            65.3    67.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           48.2
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           50.4 50.9 58.2 59.3 51.8 49.8 47.5 42.6 44.1 41.6

           39.0 37.8 35.8 34.9
   3        1    2    3
           33.8 32.4 31.2
   4        1    2    3
           32.4 32.3 33.7
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           34.5 36.4 38.4 40.0 38.2 45.0 42.1 46.5 49.0 52.7

           56.2 53.7 49.7
   6        1
           47.4
   7        1    2    3    4    5    6    7    8
           27.6 26.6 23.9 23.9 24.5 22.2 21.6 21.3
   8        1    2    3    4    5    6    7    8    9   10

           21.2 19.8 19.3 19.8 20.1 19.4 19.8 19.2 19.1 20.4
1

RECEIVER     LEQ(H)   L10
12            64.7    66.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           47.7
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           49.8 50.2 57.1 58.8 52.1 50.0 47.6 42.6 44.0 41.4

           38.8 37.5 35.5 34.6
   3        1    2    3
           33.7 32.3 30.8
   4        1    2    3
           32.0 31.9 33.3
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           34.1 36.5 38.1 39.7 38.0 44.8 41.9 46.5 48.9 52.2

           55.1 52.6 49.2
   6        1
           46.9
   7        1    2    3    4    5    6    7    8
           27.6 26.5 23.8 23.8 24.5 22.4 21.6 21.4
   8        1    2    3    4    5    6    7    8    9   10

           21.1 19.8 19.3 19.8 19.9 19.2 19.6 19.0 18.8 20.1
1

RECEIVER     LEQ(H)   L10
13            64.6    66.0

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           47.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           49.8 49.9 56.4 58.7 52.7 50.5 47.9 42.9 44.3 41.6

           39.2 37.9 35.6 34.7
   3        1    2    3
           33.8 32.9 31.6
   4        1    2    3
           32.0 32.0 34.1
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           34.9 36.7 38.2 39.9 38.2 45.0 42.2 46.9 49.2 52.5

           54.3 52.3 49.0
   6        1
           47.1
   7        1    2    3    4    5    6    7    8
           27.8 26.8 24.0 24.0 24.7 22.5 21.8 21.6
   8        1    2    3    4    5    6    7    8    9   10

           21.2 19.9 19.5 19.9 20.1 19.4 20.0 19.4 18.9 20.2
1

RECEIVER     LEQ(H)   L10
14            64.0    65.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           47.5
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           49.2 48.9 55.0 58.2 53.1 50.8 48.0 43.0 44.3 41.5

           39.2 38.0 35.6 34.4
   3        1    2    3
           33.5 32.6 31.3
   4        1    2    3
           32.4 32.4 33.8
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           34.6 36.4 37.9 40.0 38.6 45.4 42.3 46.8 49.2 52.6

           52.8 51.0 48.2
   6        1
```

```
          46.4
   7        1    2    3    4    5    6    7    8
          27.8 26.7 23.9 24.0 24.8 22.6 21.8 21.6
   8        1    2    3    4    5    6    7    8    9   10

          21.2 19.8 19.6 20.0 19.9 19.2 19.8 19.5 19.2 20.0

1

 RECEIVER      LEQ(H)    L10
 15             64.0    65.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1         1
          47.5
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          48.9 48.6 54.2 58.4 53.8 51.3 48.3 43.3 44.6 41.9

          39.4 38.6 36.1 35.2
   3        1    2    3
          33.7 32.7 31.4
   4        1    2    3
          32.5 32.5 33.9
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          34.7 36.5 38.7 40.5 38.9 45.8 43.0 47.3 49.6 53.2

          52.3 50.2 47.9
   6        1
          46.3
   7        1    2    3    4    5    6    7    8
          28.0 27.0 24.2 24.2 25.0 22.8 22.0 21.6
   8        1    2    3    4    5    6    7    8    9   10

          21.4 20.2 19.7 20.1 20.2 19.5 20.0 20.0 19.5 20.6

1

 RECEIVER      LEQ(H)    L10
 16             63.5    65.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1         1
          46.2
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          47.2 46.1 50.5 57.5 55.8 52.3 49.1 43.8 45.0 41.9

          39.5 38.5 36.2 35.3
   3        1    2    3
          34.2 33.3 31.9
   4        1    2    3
          32.8 32.8 34.3
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          35.3 37.2 38.7 40.8 39.2 46.2 43.7 48.3 50.7 52.6

          50.9 47.0 45.0
   6        1
          44.2
   7        1    2    3    4    5    6    7    8
          28.3 27.2 24.4 24.5 25.4 23.1 22.2 21.7
   8        1    2    3    4    5    6    7    8    9   10

          21.6 20.6 19.7 20.4 20.1 19.4 19.8 19.9 19.5 20.8

1

 RECEIVER      LEQ(H)    L10
 17             63.9    65.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1         1
          44.4
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          45.0 43.7 49.2 56.1 58.4 53.8 50.1 44.7 45.6 42.5

          39.9 38.9 36.5 35.3
   3        1    2    3
          34.4 33.4 32.1
   4        1    2    3
          33.1 33.1 34.6
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          35.5 37.4 39.0 41.1 39.6 46.7 44.3 49.6 52.4 52.7

          49.1 46.3 44.1
   6        1
          42.0
   7        1    2    3    4    5    6    7    8
          28.9 27.8 25.0 25.1 26.0 23.4 22.5 21.9
   8        1    2    3    4    5    6    7    8    9   10

          22.1 21.3 18.2 20.6 20.7 19.8 20.4 20.2 19.8 21.0

1

 RECEIVER      LEQ(H)    L10
 18             64.4    66.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1         1
          42.8
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          43.4 42.4 47.0 53.5 60.1 56.1 51.4 45.8 46.6 43.1

          40.4 39.1 36.6 35.5
   3        1    2    3
          34.4 33.2 31.9
   4        1    2    3
          32.9 33.0 34.5
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          35.4 37.4 39.2 41.3 39.9 47.1 44.9 50.5 53.8 51.9

          47.5 44.0 42.0
   6        1
          41.0
   7        1    2    3    4    5    6    7    8
          29.9 28.8 26.1 26.2 26.5 23.9 22.8 22.2
   8        1    2    3    4    5    6    7    8    9   10

          23.1 21.3 19.1 20.7 21.4 20.3 20.6 20.4 19.9 21.1

1

 RECEIVER      LEQ(H)    L10
 19             64.3    66.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1         1
          41.4
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          42.0 40.8 45.4 52.1 58.6 58.3 52.8 46.9 47.6 43.8

          41.0 39.6 36.9 35.7
   3        1    2    3
          34.5 33.4 31.9
   4        1    2    3
          32.9 32.9 34.5
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          35.4 37.6 39.5 41.7 40.4 47.7 45.7 51.4 53.4 50.1

          46.6 43.7 41.3
   6        1
          40.0
   7        1    2    3    4    5    6    7    8
          30.2 29.2 26.6 26.7 26.8 24.0 23.0 22.3
   8        1    2    3    4    5    6    7    8    9   10

          23.7 21.0 19.5 20.3 21.6 20.9 21.1 20.8 20.2 21.3

1

 RECEIVER      LEQ(H)    L10
 20             64.9    66.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1         1
          41.4
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          41.8 40.6 44.9 51.6 56.9 60.0 54.8 48.5 49.1 45.7

          42.6 40.9 38.2 36.9
   3        1    2    3
          35.6 34.5 32.9
   4        1    2    3
          33.9 34.0 35.7
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          36.8 39.0 41.0 43.2 41.9 49.3 47.5 53.1 53.4 49.6

          46.5 44.0 41.8
   6        1
          40.2
   7        1    2    3    4    5    6    7    8
          30.0 29.4 27.0 27.0 26.9 24.3 23.1 22.4
   8        1    2    3    4    5    6    7    8    9   10

          23.8 20.4 19.1 19.4 21.6 21.3 21.4 21.8 21.3 22.5

1

 RECEIVER      LEQ(H)    L10
 21             65.1    67.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1         1
          40.9
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
          41.2 40.1 45.6 51.0 55.2 60.4 56.7 49.8 48.8 45.6

          42.6 40.8 38.2 37.3
   3        1    2    3
          36.4 35.2 33.6
   4        1    2    3
          34.5 34.7 36.4
   5        1    2    3    4    5    6    7    8    9   10

  11        12   13
          37.6 39.9 41.9 44.2 43.0 50.5 48.9 54.2 52.7 49.0

          46.0 43.7 41.7
   6        1
          40.7
   7        1    2    3    4    5    6    7    8
          30.5 29.9 27.4 27.5 27.3 24.7 23.4 22.6
   8        1    2    3    4    5    6    7    8    9   10

          24.0 20.4 19.5 19.4 22.0 21.5 22.0 21.7 21.3 22.4

1

 RECEIVER      LEQ(H)    L10
 22             65.3    67.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING     1.0 DBA

 ROADWAY   SEGMENT

   1         1
          41.4
   2        1    2    3    4    5    6    7    8    9   10

  11        12   13   14
```

```
          42.0 40.9 45.5 50.4 54.6 60.7 57.6 50.3 49.2 45.7

          42.7 40.8 39.1 37.8
    3       1    2    3
          36.4 35.2 33.6
    4       1    2    3
          34.6 34.7 36.4
    5       1    2    3    4    5    6    7    8    9   10

   11      12   13
          37.6 39.8 41.9 44.2 43.1 50.8 49.3 54.4 52.2 48.4

          45.5 43.2 41.2
    6       1
          40.2
    7       1    2    3    4    5    6    7    8
          31.0 30.3 27.8 27.8 27.7 24.8 23.6 22.8
    8       1    2    3    4    5    6    7    8    9   10

          24.3 20.9 19.7 20.0 22.2 21.8 22.1 21.9 21.4 22.4
1

 RECEIVER     LEQ(H)   L10
 23            65.3   67.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1       1
          40.7
    2       1    2    3    4    5    6    7    8    9   10

   11      12   13   14
          41.3 40.2 44.8 49.9 53.8 60.5 58.4 50.7 49.7 45.7

          42.6 41.4 39.1 37 7
    3       1    2    3
          36.3 35.1 33.5
    4       1    2    3
          34.4 34.6 36.3
    5       1    2    3    4    5    6    7    8    9   10

   11      12   13
          37.4 39.5 41.7 44.0 43.0 50.8 49.5 54.4 51.5 47.7

          44.9 42.6 40.5
    6       1
          39.6
    7       1    2    3    4    5    6    7    8
          31.4 30.7 28.0 28.1 28.0 25.0 23.7 22.9
    8       1    2    3    4    5    6    7    8    9   10

          24.6 21.1 19.9 20 3 22.5 22.0 22.2 21.8 21.6 23.3
1

 RECEIVER     LEQ(H)   L10
 31            67.1   68.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1       1
          39.2
    2       1    2    3    4    5    6    7    8    9   10

   11      12   13   14
          39.3 37.6 41.3 44.6 46.6 48.7 51.1 50.0 56.4 60.4

          57.8 53.8 49.8 47.7
    3       1    2    3
          45.9 44.4 42.6
    4       1    2    3
          43.6 44.1 46.1
    5       1    2    3    4    5    6    7    8    9   10

   11      12   13
          47.7 50.7 54.1 57.7 54.0 55.1 46.9 48.0 45.9 44.0

          42.3 40.9 39.5
    6       1
          38.9
    7       1    2    3    4    5    6    7    8
          48.2 49.8 44.1 42.0 39.7 36.9 35.2 33.9
    8       1    2    3    4    5    6    7    8    9   10

          32.4 30.8 30.3 31.1 31.9 32.8 33.3 33.1 32.5 33.2
1

 RECEIVER     LEQ(H)   L10
 32            66.8   68.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1       1
          39.1
    2       1    2    3    4    5    6    7    8    9   10

   11      12   13   14
          39.2 37.4 41.1 44.1 45.2 47.2 49.7 49.0 54.9 58.7

          58.9 54.9 50.5 48.2
    3       1    2    3
          46.2 44.6 42.7
    4       1    2    3
          43.8 44.3 46.4
    5       1    2    3    4    5    6    7    8    9   10

   11      12   13
          48.2 51.4 55.0 57.3 52.5 54.0 46.3 47.5 45.5 43.7

          42.1 40.7 39.3
    6       1
          38.8
    7       1    2    3    4    5    6    7    8
          44.3 49.6 47.4 44.3 42.1 38.7 36.5 35.0
    8       1    2    3    4    5    6    7    8    9   10

          33.5 32.2 31.7 32.8 33.5 33.5 34.1 33.8 33.0 33.6
1

 RECEIVER     LEQ(H)   L10
 33            66.7   67.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1       1
          38.9
    2       1    2    3    4    5    6    7    8    9   10

   11      12   13   14
          38.9 37.2 40.8 43.8 44.7 46.6 49.0 48.1 53.6 57.1

          59.1 56.6 51.6 49.0
    3       1    2    3
          46.8 45.1 43.1
    4       1    2    3
          44.2 44.8 47.0
    5       1    2    3    4    5    6    7    8    9   10

   11      12   13
          49.0 52.5 56.2 56.6 51.5 53.0 45.6 46.9 45.0 43.3

          41.8 40.4 39.1
    6       1
          38.6
    7       1    2    3    4    5    6    7    8
          42.2 46.9 49.3 48.2 45.7 41.2 38.1 36.2
    8       1    2    3    4    5    6    7    8    9   10

          34.5 33.6 33.5 34.7 35.4 35.1 35.4 34.8 33.9 34.4
1

 RECEIVER     LEQ(H)   L10
 34            66.2   67.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1       1
          39.1
    2       1    2    3    4    5    6    7    8    9   10

   11      12   13   14
          39.0 37.2 40.8 43.7 44.5 46.4 48.6 47.5 52.9 55.7

          57.8 56.8 51.8 49.1
    3       1    2    3
          46.8 45.0 43.1
    4       1    2    3
          44.1 44.8 47.0
    5       1    2    3    4    5    6    7    8    9   10

   11      12   13
          48.9 52.4 56.0 55.6 50.8 52.7 45.3 46.8 44.9 43.2

          41.8 40.6 39.3
    6       1
          38.9
    7       1    2    3    4    5    6    7    8
          40.4 44.2 46.6 49.9 48.2 43.0 39.4 37.2
    8       1    2    3    4    5    6    7    8    9   10

          35.1 34.3 34.4 35.7 36.3 36.0 36.0 35.2 34.2 34.6
1

 RECEIVER     LEQ(H)   L10
 35            65.7   66.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1       1
          38.9
    2       1    2    3    4    5    6    7    8    9   10

   11      12   13   14
          38.8 37.0 40.6 43.4 44.1 45.9 47.9 46.6 51.7 54.4

          56.3 57.0 52.5 49.5
    3       1    2    3
          47.1 45.2 43.1
    4       1    2    3
          44.1 44.9 47.2
    5       1    2    3    4    5    6    7    8    9   10

   11      12   13
          49.4 53.1 55.5 54.5 49.7 51.9 44.7 46.2 44.5 42.9

          41.6 40.4 39.0
    6       1
          38.7
    7       1    2    3    4    5    6    7    8
          38.5 42.0 43.6 48.3 51.1 44.6 40.2 37.4
    8       1    2    3    4    5    6    7    8    9   10

          35.3 34.7 34.9 36.4 37.2 37.1 36.7 35.8 34.7 35.0
1

 RECEIVER     LEQ(H)   L10
 36            63.5   64.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1       1
          37.6
    2       1    2    3    4    5    6    7    8    9   10

   11      12   13   14
          37.4 35.5 39.0 41.6 42.3 43.7 45.3 43.4 50.2 51.3

          52.1 53.7 51.8 49.1
    3       1    2    3
          46.7 45.1 44.8
    4       1    2    3
          44.2 44.5 46.9
    5       1    2    3    4    5    6    7    8    9   10

   11      12   13
          49.0 52.4 52.6 51.6 47.4 50.7 43.5 43.8 42.4 41.1

          39.9 38.8 37.7
    6       1
          37.4
    7       1    2    3    4    5    6    7    8
          35.1 36.6 36.8 39.5 47.4 45.8 41.5 38.6
    8       1    2    3    4    5    6    7    8    9   10

          36.5 36.0 36.3 37.9 38.0 36.0 35.8 35.0 34.1 34.5
```

```
1

 RECEIVER     LEQ(H)   L10
 37            59.3   60.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            37.3
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            37.2 35.3 38.7 41.5 41.9 42.9 44.0 41.5 47.5 48.1

            47.9 47.3 45.2 43.4
    3         1    2    3
            41.4 39.7 37.8
    4         1    2    3
            38.7 39.3 41.4
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            43.0 45.4 46.6 47.6 44.9 48.5 40.4 42.5 41.5 40.4

            39.3 38.3 37.2
    6         1
            36.9
    7         1    2    3    4    5    6    7    8
            32.0 32.8 32.9 35.3 39.2 40.3 37.5 34.6
    8         1    2    3    4    5    6    7    8    9   10

            31.0 30.7 30.9 32.1 32.4 30.8 30.0 29.2 28.4 29.0
1

 RECEIVER     LEQ(H)   L10
 38            57.2   58.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            37.0
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            37.0 35.4 38.8 41.5 41.9 42.7 42.6 40.0 45.4 45.6

            43.6 43.7 42.4 41.5
    3         1    2    3
            40.3 39.3 37.7
    4         1    2    3
            38.4 38.6 40.1
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            41.0 42.6 43.1 43.8 42.5 46.6 39.1 41.4 40.7 39.8

            38.8 37.8 36.8
    6         1
            36.6
    7         1    2    3    4    5    6    7    8
            29.6 30.1 30.2 30.8 34.4 36.2 36.3 35.3
    8         1    2    3    4    5    6    7    8    9   10

            30.5 30.1 29.8 30.5 29.8 28.1 27.5 26.9 26.4 27.3
1

 RECEIVER     LEQ(H)   L10
 39            61.0   62.0

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            36.6
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            36.3 34.4 38.0 40.9 41.3 41.7 41.9 39.0 44.0 45.1

            46.8 48.8 49.0 49.5
    3         1    2    3
            48.8 47.7 46.0
    4         1    2    3
            46.7 47.0 48.5
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            48.8 49.1 48.1 46.5 42.0 45.0 37.8 40.3 40.1 39.2

            38.4 37.4 36.4
    6         1
            36.2
    7         1    2    3    4    5    6    7    8
            28.6 29.3 30.3 33.7 38.0 41.0 43.4 44.1
    8         1    2    3    4    5    6    7    8    9   10

            39.1 38.4 37.9 37.7 36.5 34.6 34.2 34.0 33.9 35.5
```

```
                    ************************
                          OPTIMA-VU1
                    ************************
              BARRIER OPTIMIZATION PROGRAM USING
              PARTIAL SOUND ENERGIES COMPUTED BY THE
                      STAMINA 2.0 PROGRAM
        MODIFIED FROM THE FHWA VAX VERSON -- MARCH 1983

     MODIFIED TO:
        1.  PLACE BARRIER COST DATA IN A DATA FILE CALLED
            OPTCOST.DTA TO ALLOW USER TO USE COSTS OTHER THAN
            THE FHWA NATIONAL AVERAGES.
                    ************************
        MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
                        IN JUNE 1991 BY
        VANDERBILT ENGINEERING CENTER FOR TRANSPORTATION
                OPERATIONS AND RESEARCH (VECTOR)
     BOX 96-B, VANDERBILT UNIVERSITY, NASHVILLE, TENNESSEE 37235
                        (615) 322-3683
                    ************************

      PROBLEM TITLE
      *************
  Otay Ranch - Village 7: 02/2004

              EFFECTIVENESS/COST RATIO AND BARRIER HEIGHT MATRICES
              ****************************************************
BARRIER SECTION        EFFECTIVENESS/COST                    CORRESPONDING
  NO  IDENT                  RATIO                           BARRIER HEIGHTS(IN
FT)

 HEIGHT INDEX  1   2   3    4    5    6    7    8   1  2  3  4  5  6  7  8
   1   sf-16        *   36.   33.   30.   28.   27.   26.   25.   0. 8.
9.10.11.12.13.14.
   2   6a            *   35.   34.   33.   31.   30.   29.   28.   0. 8.
9.10.11.12.13.14.
   3   6b            *   35.   35.   33.   32.   31.   30.   30.   0. 8.
9.10.11.12.13.14.
   4   6c            *   37.   36.   34.   33.   32.   31.   31.   0. 8.
9.10.11.12.13.14.
   5   7             *   36.   34.   32.   31.   30.   29.   29.   0. 8.
9.10.11.12.13.14.
   6   8          *  34.  32.  31.  30.  30.  28.  27.  0. 5. 6. 7. 8.
9.10.11.
   7   9          *  32.  30.  29.  29.  28.  26.  25.  0. 5. 6. 7. 8.
9.10.11.
   8  10        * 33. 33. 31. 30. 30. 29. 29. 0. 3. 4. 5. 6. 7. 8.
9.
   9  11        * 33. 32. 31. 30. 29. 28. 28. 0. 3. 4. 5. 6. 7. 8.
9.
  10  12        * 33. 32. 31. 30. 29. 29. 28. 0. 3. 4. 5. 6. 7. 8.
9.
  11  13        * 34. 33. 32. 31. 30. 29. 29. 0. 3. 4. 5. 6. 7. 8.
9.
  12  14        * 34. 33. 32. 31. 30. 29. 28. 0. 3. 4. 5. 6. 7. 8.
9.
  13  15        * 35. 34. 32. 31. 30. 29. 29. 0. 3. 4. 5. 6. 7. 8.
9.
  14  16        * 35. 34. 33. 31. 30. 29. 29. 0. 3. 4. 5. 6. 7. 8.
9.
  15  17        * 29. 28. 27. 26. 26. 25. 25. 0. 3. 4. 5. 6. 7. 8.
9.
  16  18        * 25. 25. 24. 24. 23. 23. 22. 0. 3. 4. 5. 6. 7. 8.
9.
  17   19          *  21.   20.   20.   20.   18.   17.   17.   0. 6. 7. 8.
9.10.11.12.
  18   20          *  16.   13.   12.   13.   12.   12.   12.   0. 6. 7. 8.
9.10.11.12.
  19   21          *  12.   11.   11.   11.   10.    9.    9.   0. 6. 7. 8.
9.10.11.12.
  20   22          *   5.    5.    5.    5.    4.    3.    2.   0. 6. 7. 8
9.10.11.12.
  21   23          *   7.    7.    7     7.    6.    4.    4.   0  6. 7. 8
9.10.11.12.
  22   24          *  14.   13.   12.   12.   11.   10.   10.   0. 6. 7. 8.
9.10.11.12.
  23   2-rev      *    6.    6.    6.    6.    5.    4.    4.   0. 6. 7. 8.
9.10.11.12.
  24  1         *  0.  0.  0.  0.  0.  0.  0.  0. 3. 4. 5. 6. 7. 8.
9.
  25  2         * 19. 15. 11.  9. 12. 14. 15. 0. 3. 4. 5. 6. 7. 8.
9.
  26  3         * 19. 16. 11.  9. 11. 13. 13. 0. 3. 4. 5. 6. 7. 8.
9.
  27  4         * 19. 14. 12. 15. 17. 18. 18. 0. 3. 4. 5. 6. 7. 8.
9.
  28  5         * 28. 25. 19. 17. 20. 22. 22. 0. 3. 4. 5. 6. 7. 8.
9.
  29  6         * 18. 16. 17. 19. 21. 22. 22. 0. 3. 4. 5. 6. 7. 8.
9.
  30  7         * 23. 18. 17. 20. 21. 22. 22. 0. 3. 4. 5. 6. 7. 8.
9.
  31  8         * 13. 12. 15. 16. 17. 18. 18. 0. 3. 4. 5. 6. 7. 8.
9.
  32  9         * 34. 32. 26. 26. 28. 28. 28. 0. 3. 4. 5. 6. 7. 8.
9.
  33  10        * 28. 24. 20. 18. 20. 22. 22. 0. 3. 4. 5. 6. 7. 8.
9.
  34  11        * 15. 12.  9.  9. 10. 12. 12. 0. 3. 4. 5. 6. 7. 8.
9.
  35  12         * 35. 31. 30. 32. 32. 30. 30. 0. 4. 5. 6. 7. 8.
9.10.
  36  13         * 23. 17. 16. 20. 22. 23. 24. 0. 4. 5. 6. 7. 8.
9.10.
  37  14         * 35. 30. 30. 32. 31. 30. 29. 0. 4. 5. 6. 7. 8.
9.10.
  38  15         * 38. 34. 33. 35. 35. 33. 32. 0. 4. 5. 6. 7. 8.
9.10.
  39  40        *  0.                                0. 0.
  40  41        *  0.                                0. 0.
  41  42        *  0.                                0. 0.
  42  43        *  0.                                0. 0.
  43  44        *  0.                                0. 0.
  44  45        *  0.                                0. 0.
  45  46        *  0.                                0. 0.
  46  48        *  0.                                0. 0.
  47  49        *  0.                                0. 0.
  48  51        *  0.                                0. 0.
  49  53        *  0.                                0. 0.
  50  3-rev      * -6. -6. -7. -7. -7. -7. -7. 0. 4. 5. 6. 7. 8.
9.10.
  51  53         * 39. 37. 38. 37. 35. 33. 32. 0. 4. 5. 6. 7. 8.
9.10.
  52  54         * 39. 37. 37. 36. 34. 32. 32. 0. 4. 5. 6. 7. 8.
9.10.
  53  55         * 41. 39. 39. 38. 36. 34. 33. 0. 4. 5. 6. 7. 8.
9.10.
  54  56         * 39. 37. 37. 36. 34. 32. 31. 0. 4. 5. 6. 7. 8.
9.10.
  55  57         * 38. 36. 37. 36. 34. 32. 31. 0. 4. 5. 6. 7. 8.
9.10.
  56  58         * 39. 38. 38. 37  35. 33. 31  0. 4. 5. 6  7  8
9.10.
  57  59         * 30. 29. 29. 28  27  25. 24. 0. 4. 5. 6. 7. 8.
9.10.
  58  60a       * 23. 20. 18. 19. 18. 16. 15. 0. 3. 4. 5. 6. 7. 8.
9.
  59  60b       * 27. 25. 24. 22. 20. 19. 19. 0. 3. 4. 5. 6. 7. 8.
9.
  60  60c       * 12. 12. 11.  9.  9.  8.  8. 0. 3. 4. 5. 6. 7. 8.
9.
  61  61        * 22. 21. 19. 18. 17. 16. 15. 0. 3. 4. 5. 6. 7. 8.
9.
  62  62        * 30. 28. 29. 28. 26. 24. 23. 0  3. 4. 5. 6. 7. 8
9.
  63  63        *  0.  0.  0.  0   0.  0.  0. 0  3. 4. 5. 6. 7. 8.
9.
  64  1         *  0.                                0.30.
  65  2         *  0.                                0.30.
  66  3         *  0.                                0.30.
  67  4         *  0                                 0.30
  68  1         *  0.                                0.30.
  69  2         *  0.                                0.30.
  70  3         *  0.                                0.30.
  71  4         *  0.                                0.30.
  72  1         *  0.                                0.30.
  73  2         *  0.                                0.30.
  74  3         *  0.                                0.30.
  75  4         *  0.                                0.30.
  76  1         *  0.                                0.30.
  77  2         *  0.                                0.30.
  78  3         *  0.                                0.30.
  79  4         *  0.                                0.30.
  80  1         *  0.                                0.30.
  81  2         *  0.                                0.30.
  82  3         *  0.                                0.30.
  83  4         *  0.                                0.30.
  84  1         *  0.                                0.30.
  85  2         *  0.                                0.30.
  86  3         *  0.                                0.30.
  87  4         *  0.                                0.30.
  88  1         *  0.                                0.30.
  89  2         *  0.                                0.30.
  90  3         *  0.                                0.30.
  91  4         *  0.                                0.30.
  92  1         *  0.                                0.30.
  93  2         *  0.                                0.30.
  94  3         *  0.                                0.30.
  95  4         *  0.                                0.30.
  96  1         *  0.                                0.30.
  97  2         *  0.                                0.30.
  98  3         *  0.                                0.30.
  99  4         *  0.                                0.30.

HEIGHT INDEX   1   2   3   4   5   6   7   8   1  2  3  4  5  6  7  8

Otay Ranch - Village 7: 02/2004

1st floor s-f &HS receivers, with barriers, and m-f bldgs

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
  5  7  8  8  7  8  7  8  7  7  7  7  8  8  8  7  3  2  2  2  2  2  1  1  1
  1  1  1  1  2  2  4  4  4  6  6  7  8  1  1  1  1  1  1  1  1  1  1  1  1
  8  8  8  7  7  6  5  3  3  3  3  3  3  2  2  2  2  2  2  2  2  2  2  2  2
  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2
CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
11.13.14.14.13.11.10. 9. 8. 8. 8. 8. 9. 9. 9. 8. 7. 6. 6. 6. 6. 6. 0. 0. 0.
 0. 0. 0. 0. 3. 3. 5. 5. 5. 8. 8. 9.10. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
10.10.10. 9. 9. 8. 7. 4. 4. 4. 4. 4. 4.30.30.30.30.30.30.30.30.30.30.30.30.
30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.

     R E S U L T S
     *************

REC     REC ID           LEQ       LEQ(Z(0))      IL
  1      1               60.8        63.1         2.4
  2      2               61.7        63.9         2.2
  3      3               63.2        65.3         2.1
  4      4               63.3        67.9         4.6
  5      5               63.2        69.5         6.3
  6      6               63.5        71.2         7.7
  7      7               62.8        72.4         9.6
  8      8               63.0        72.5         9.5
  9      9               63.5        71.4         7.9
 10      10              63.4        71.1         7.7
 11      11              63.5        71.2         7.6
 12      12              63.0        70.8         7.8
 13      13              63.0        70.6         7.6
 14      14              62.6        69.9         7.3
 15      15              62.6        69.6         7.0
 16      16              62.2        68.6         6.3
 17      17              62.6        68.4         5.9
 18      18              63.0        69.0         6.0
 19      19              62.8        68.8         6.0
 20      20              63.2        69.1         5.9
 21      21              63.4        69.4         6.0
 22      22              63.5        69.7         6.2
 23      23              63.4        69.8         6.4
 24      31              63.1        75.6        12.4
 25      32              62.5        75.3        12.8
 26      33              62.6        75.1        12.5
 27      34              63.3        74.3        11.1
 28      35              63.3        73.6        10.3
 29      36              63.2        69.5         6.3
 30      37              60.2        65.3         5.2
 31      38              57.9        62.5         4.7
 32      39              63.3        68.5         5.1

BARRIER TYPE         COST               AREA (SQ. FT.)
FH-BERM                 0.                  0.
FH-MASON           574500.             116327.
FH-WOOD                 0.                  0.
FH-CONC                 0.                  0.
FH-STEEL                0.                  0.
******************************************************************
 TOTALS:       $   574500.             116327.

END OF ALL CASES
```

****
STAM2VU1
Version 1.20
****
STAMINA 2.0/BCR
MODIFIED FROM FHWA VERSION 3 (MARCH 1983)
TRAFFIC NOISE PREDICTION MODEL

MODIFIED TO:
1. ALLOW EQUIVALENT SPEEDS BELOW 30 MPH PER NCHRP 311;
2. CORRECT MEDIUM TRUCK BARRIER CALCULATION ERROR BY USING VEH4, VEH5 AND VEH6 FOR CARS, MT AND HT; AND
3. PLACE REFERENCE ENGERGY MEAN EMISSION LEVELS IN A DATA FILE CALLED REMEL.DTA TO ALLOW USER TO USE LEVELS OTHER THAN THE FHWA NATIONAL AVERAGES.

****
MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
BY VANDERBILT UNIVERSITY, NASHVILLE, TN 37235
AND BOWLBY & ASSOCIATES, INC.
2014 BROADWAY, SUITE 210
NASHVILLE, TN 37203-2425
TEL 615-327-8130, FAX 615-327-8137

NOTE:
IN STAM2VU1, THE TRAFFIC DATA FROM THE ORIGINAL DATA FILE HAS BEEN SHIFTED TO CORRECT THE STAMINA 2.0 MEDIUM TRUCK CALCULATION ERROR. THIS SHIFT IS REFLECTED BELOW IN THE *.STA OUTPUT FILE. THE ORIGINAL DATA FILE IS UNCHANGED.

(INPUT UNITS- ENGLISH , OUTPUT UNITS- ENGLISH)

Otay Ranch - Village 7: 02/2004

EMISSION LEVELS: Calveno Levels (trucks>30mph)

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)
.00	4	HEIGHT ADJUSTMENT FOR HEAVY TRUCKS (HT)
.00	5	HEIGHT ADJUSTMENT FOR MEDIUM TRUCKS (MT)
.000	6	HEIGHT ADJUSTMENT FOR TYPE4 VEHICLES (VEH4) CARS--CALVENO C0 = 5.20 C1 = 38.80 S0 = .00
2.300	7	HEIGHT ADJUSTMENT FOR TYPE5 VEHICLES (VEH5) MT--CALVENO C0 = 35.30 C1 = 25.60 S0 = .00
8.000	8	HEIGHT ADJUSTMENT FOR TYPE6 VEHICLES (VEH6) HT--CALVENO C0 = 50.40 C1 = 19.20 S0 = .00

OROADWAY 1 Southbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
1	6339513.3	1806920.6	600.4	0
2	6339510.5	1806467.0	598.8	0

OROADWAY 2 Southbound SR-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
2	6339510.5	1806467.0	598.8	0
3	6339509.1	1806114.7	593.8	0
4	6339508.2	1805921.3	592.2	0
5	6339506.6	1805567.2	590.6	0
6	6339518.4	1805084.1	587.3	0
7	6339558.1	1804696.4	584.0	0
8	6339626.5	1804317.1	580.7	0
9	6339721.1	1803940.3	577.4	0
10	6339779.5	1803754.4	575.8	0
11	6339915.4	1803392.1	572.5	0
12	6340052.2	1803092.3	569.2	0
13	6340182.4	1802843.8	564.3	0
14	6340344.6	1802558.3	554.5	0
15	6340485.7	1802306.5	544.6	0
16	6340646.7	1802025.4	531.5	0

OROADWAY 3 Southbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES X	Y	Z	GRADE
16	6340646.7	1802025.4	531.5	0
17	6340806.7	1801741.3	516.7	0
18	6340985.8	1801426.3	500.3	0
19	6341154.7	1801109.5	483.9	0

OROADWAY 4 Northbound SR-125, RM&south

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4663.	65.0
VEH5	147.	65.0
VEH6	98.	65.0

0	COORDINATES X	Y	Z	GRADE
1	6341260.4	1801145.7	485.6	1
2	6341061.5	1801517.5	503.6	1 *
3	6340903.6	1801796.7	516.7	1
4	6340743.5	1802078.7	531.5	1

OROADWAY 5 Northbound SR-125, Birch to RM

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
4	6340743.5	1802078.7	531.5	1
5	6340583.6	1802361.5	544.6	1
6	6340405.7	1802676.0	556.1	1
7	6340228.9	1802992.4	564.3	1
8	6340066.7	1803323.5	569.2	1
9	6339993.2	1803497.7	570.9	1
10	6339809.9	1804036.4	575.8	1
11	6339761.7	1804219.9	577.4	1
12	6339684.8	1804591.6	580.7	1
13	6339638.4	1804969.2	584.0	1
14	6339618.1	1805346.8	587.3	1
15	6339618.1	1805728.7	590.6	1
16	6339621.4	1806111.3	593.8	1
17	6339622.2	1806484.0	598.8	1

OROADWAY 6 Northbound SR-125, n of Birch

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	4237.	65.0
VEH5	134.	65.0
VEH6	89.	65.0

0	COORDINATES X	Y	Z	GRADE
17	6339622.2	1806484.0	598.8	1
18	6339626.5	1806918.9	600.4	1

OROADWAY 7 Southbound Ramp to Rock Mountain

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	561.	45.0
VEH5	18.	45.0
VEH6	12.	45.0

0	COORDINATES X	Y	Z	GRADE
1	6339864.2	1803405.4	565.9	1
2	6339924.1	1803175.4	566.5	1
3	6339984.3	1802962.1	567.1	1
4	6340015.7	1802831.9	567.5	1
5	6340026.5	1802684.8	567.9	1
6	6340003.6	1802446.2	568.5	1
7	6339995.2	1802224.4	569.1	1
8	6340032.5	1802046.0	569.6	1
9	6340089.2	1801885.6	570.0	1

OROADWAY 8 Ramp from wb Rock Mountain to sb-125

VEHICLE TYPE	VEHICLES/HOUR	SPEED
CARS	0.	30.0
HT	0.	30.0
MT	0.	30.0
VEH4	671.	45.0
VEH5	21.	45.0
VEH6	14.	45.0

0	COORDINATES X	Y	Z	GRADE
1	6340294.9	1801957.4	570.0	0
2	6340188.4	1802001.2	565.7	0
3	6340138.6	1802064.9	562.8	0
4	6340116.7	1802131.7	560.3	0
5	6340125.6	1802215.3	557.2	0
6	6340173.4	1802290.0	554.0	0
7	6340242.1	1802330.8	551.1	0
8	6340334.8	1802336.8	547.7	0
9	6340430.4	1802292.0	543.8	0
10	6340498.1	1802198.4	539.7	0
11	6340589.7	1802044.0	533.1	0

1

BARRIER 1 TYPE(A) R-O-W barrier 1acont'd

	COORDINATES X	Y	Z	Z0	DELZ	P
8f-16	6339241.5	1805697.6	591.7	580.7	1.0	3
6a	6339296.6	1805665.7	593.0	582.0		
6b	6339342.5	1805640.0	594.1	583.1		
6c	6339383.5	1805617.1	595.0	584.0		
7	6339406.4	1805509.8	595.0	584.0		
8	6339434.3	1805343.0	599.9	588.9		

1

BARRIER 2 TYPE(A) R-O-W barrier 1bcont'd

	COORDINATES X	Y	Z	Z0	DELZ	P
8	6339434.3	1805343.0	596.9	588.9	1.0	3
9	6339453.5	1805206.6	597.6	589.6		
10	6339469.4	1805092.9	597.9	589.9		

1

BARRIER 3 TYPE(A) R-O-W barrier 2cont'd

	COORDINATES X	Y	Z	Z0	DELZ	P
10	6339469.4	1805092.9	595.9	589.9	1.0	3
11	6339469.8	1805006.9	594.9	588.9		
12	6339469.6	1804987.8	593.3	587.3		
13	6339479.8	1804897.0	591.1	585.1		
14	6339495.0	1804777.7	590.0	584.0		
15	6339517.8	1804626.1	588.3	582.3		
16	6339550.1	1804460.9	586.8	580.8		
17	6339589.1	1804285.5	585.1	579.1		

18	6339634.0	1804109.2	581.4	577.4	
19	6339663.6	1803997.1	582.0	576.0	

1

BARRIER 4 TYPE(A) R-O-W barrier trf to top of slope barrier

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
19	6339663.6	1803997.1	585.0	576.0	1.0	3
20	6339705.0	1803857.9	583.7	574.7		
21	6339735.2	1803763.2	582.9	573.9		
22	6339758.3	1803694.7	582.5	573.5		
23	6339774.3	1803649.9	582.0	573.0		
24	6339798.4	1803582.7	581.6	572.6		
2-rev	6339886.3	1803152.2	580.0	571.0		
3-rev	6339854.5	1803141.6	580.0	571.0		

1

BARRIER 5 TYPE(A) S-F Pad Edges

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
1	6338450.5	1805660.4	576.7	570.7	1.0	3
2	6338496.9	1805680.8	576.7	570.7		
3	6338586.8	1805745.8	578.3	572.3		
4	6338643.8	1805781.6	578.3	572.3		
5	6338703.0	1805818.1	580.7	574.7		
6	6338761.4	1805846.6	580.7	574.7		
7	6338765.1	1805848.1	582.8	576.8		
8	6338814.8	1805859.8	582.8	576.8		
9	6338819.2	1805860.5	584.2	578.2		

1

BARRIER 6 TYPE(A) S-F Pad Edges cont'd.1

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
9	6338819.2	1805860.5	584.2	578.2	1.0	3
10	6338898.8	1805853.9	584.2	578.2		
11	6338994.5	1805823.2	584.2	578.2		
12	6338998.2	1805822.5	584.5	578.5		

1

BARRIER 7 TYPE(A) S-F Pad Edges cont'd.2

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
12	6338998.2	1805822.5	585.5	578.5	1.0	3
13	6339061.0	1805801.3	585.5	578.5		
14	6339065.4	1805799.9	587.7	580.7		
15	6339173.6	1805762.6	587.7	580.7		
16	6339241.5	1805697.6	587.7	580.7		

1

BARRIER 8 TYPE(A) Elem School Pad Edges

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
40	6339064.2	1804045.1	548.0	548.0	.0	0
41	6339477.3	1804188.3	550.0	550.0		
42	6339517.0	1804198.4	550.2	550.2		
43	6339575.6	1804002.5	552.0	552.0		
44	6339641.2	1803781.3	554.0	554.0		
45	6339706.8	1803560.2	556.0	556.0		
46	6339706.8	1803544.3	556.1	556.1		
48	6339717.2	1803526.8	561.3	561.3		
49	6339762.7	1803371.2	561.5	561.5		
51	6339819.6	1803172.7	562.1	562.1		

1

BARRIER 9 TYPE(A) Park to High Pads

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
51	6339819.6	1803172.7	562.1	562.1	.0	0
53	6339837.0	1803137.7	579.5	579.5		
52	6339709.4	1803101.9	576.9	576.9		

1

BARRIER 10 TYPE(A) High School Pad Edges

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
3-rev	6339854.5	1803141.6	578.0	571.0	1.0	3
53	6339837.0	1803137.7	586.5	579.5		
54	6339875.5	1803030.2	585.6	578.6		
55	6339921.0	1802903.4	585.5	578.5		
56	6339942.8	1802838.7	585.4	578.4		
57	6339950.7	1802716.3	585.0	578.0		
58	6339953.3	1802656.0	584.5	577.5		
59	6339944.6	1802632.3	584.3	577.3		
60a	6339822.2	1802585.1	581.6	574.6		

1

BARRIER 11 TYPE(A) High School Pad Edges cont'd.

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
60a	6339822.2	1802585.1	580.6	574.6	1.0	3
60b	6339807.2	1802441.6	584.7	578.7		
60c	6339785.7	1802288.4	585.1	579.1		
61	6339775.0	1802195.2	586.8	580.8		
62	6339763.6	1802083.2	585.7	579.7		
63	6339781.1	1801897.9	576.4	570.4		
64	6339783.7	1801794.7	576.4	570.4		

1

BARRIER 12 TYPE(A) Theoretical MF Bldg1

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
1	6339509.2	1804187.8	580.0	550.0	.0	0
2	6339454.7	1804173.9	580.0	550.0		
3	6339478.7	1804085.1	580.0	550.0		
4	6339535.1	1804100.8	580.0	550.0		
1	6339509.2	1804187.8	580.0	550.0		

1

BARRIER 13 TYPE(A) Theoretical MF Bldg2

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
1	6339487.0	1804064.7	581.0	551.0	.0	0
2	6339541.6	1804079.5	581.0	551.0		
3	6339566.6	1803991.7	581.0	551.0		
4	6339511.1	1803978.7	581.0	551.0		
1	6339487.0	1804064.7	581.0	551.0		

1

BARRIER 14 TYPE(A) Theoretical MF Bldg3

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
1	6339518.5	1803958.4	582.0	552.0	.0	0
2	6339573.0	1803973.2	582.0	552.0		
3	6339600.8	1803885.3	582.0	552.0		
4	6339543.5	1803870.5	582.0	552.0		
1	6339518.5	1803958.4	582.0	552.0		

1

BARRIER 15 TYPE(A) Theoretical MF Bldg4

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
1	6339550.8	1803851.1	583.0	553.0	.0	0
2	6339604.5	1803865.9	583.0	553.0		
3	6339630.4	1803778.0	583.0	553.0		
4	6339574.0	1803764.1	583.0	553.0		
1	6339550.8	1803851.1	583.0	553.0		

1

BARRIER 16 TYPE(A) Theoretical MF Bldg5

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
1	6339582.3	1803744.7	584.0	554.0	.0	0
2	6339635.9	1803757.7	584.0	554.0		
3	6339663.7	1803669.8	584.0	554.0		
4	6339606.3	1803655.0	584.0	554.0		
1	6339582.3	1803744.7	584.0	554.0		

1

BARRIER 17 TYPE(A) Theoretical MF Bldg6

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
1	6339614.7	1803634.6	585.6	555.6	.0	0
2	6339670.2	1803648.5	585.6	555.6		
3	6339695.1	1803561.6	585.6	555.6		
4	6339638.7	1803545.9	585.6	555.6		
1	6339614.7	1803634.6	585.6	555.6		

1

BARRIER 18 TYPE(A) Theoretical MF Bldg7

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
1	6339660.0	1803474.6	591.3	561.3	.0	0
2	6339713.6	1803489.4	591.3	561.3		
3	6339739.5	1803402.5	591.3	561.3		
4	6339683.1	1803387.7	591.3	561.3		
1	6339660.0	1803474.6	591.3	561.3		

1

BARRIER 19 TYPE(A) Theoretical MF Bldg8

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
1	6339692.4	1803367.3	591.6	561.6	.0	0
2	6339745.1	1803382.1	591.6	561.6		
3	6339772.8	1803294.3	591.6	561.6		
4	6339715.5	1803279.5	591.6	561.6		
1	6339692.4	1803367.3	591.6	561.6		

1

BARRIER 20 TYPE(A) Theoretical MF Bldg9

	COORDINATES					
	X	Y	Z	Z0	DELZ	P
1	6339722.9	1803260.1	592.0	562.0	.0	0
2	6339776.5	1803274.8	592.0	562.0		
3	6339804.3	1803187.9	592.0	562.0		
4	6339746.9	1803172.2	592.0	562.0		
1	6339722.9	1803260.1	592.0	562.0		

1

Second-floor Single&HS Receivers (at 15 feet)

	COORDINATES		
	X	Y	Z
1	6338479.4	1805665.4	585.7
2	6338619.2	1805753.4	587.3
3	6338733.3	1805822.9	589.7
4	6338855.3	1805846.9	593.2
5	6339024.6	1805803.3	593.5
6	6339119.0	1805771.7	595.7
7	6339203.7	1805718.6	595.7
8	6339251.7	1805661.2	594.7
9	6339273.2	1805611.7	594.7
10	6339288.6	1805561.7	593.9
11	6339301.3	1805516.7	593.9
12	6339316.9	1805468.2	592.6
13	6339327.2	1805419.0	592.6
14	6339335.0	1805369.9	591.2
15	6339341.9	1805324.7	591.2
16	6339363.2	1805182.2	588.4
17	6339385.5	1805043.2	587.0
18	6339414.0	1804855.2	583.8
19	6339431.0	1804701.9	580.3
20	6339425.1	1804573.3	578.7
21	6339440.9	1804451.3	578.0
22	6339468.2	1804409.0	578.4
23	6339493.4	1804369.0	578.4
31	6339845.6	1803083.2	593.8
32	6339888.6	1802961.6	593.2
33	6339928.8	1802847.1	593.2
34	6339938.9	1802755.1	592.9
35	6339942.7	1802657.4	592.3
36	6339815.4	1802591.7	589.5
37	6339770.7	1802344.7	587.2
38	6339735.0	1802080.3	585.0
39	6339766.6	1801907.1	584.9

1

ALPHA 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								
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								
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								
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								
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
  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
  7 *   .0  .0  .0  .0  .0  .0  .0  .0  .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  .0  .0  .0  .0  .0  .0  .0  .0
        .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
        .0  .0
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
  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
  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
  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
  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
  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
  7 *   .0  .0  .0  .0  .0  .0  .0  .0  .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  .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
 1            62.2   63.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            54.3
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            52.2 49.3 51.5 49.0 46.4 45.9 44.5 39.6 41.3 39.7

            38.0 37.7 35.3 33.8
    3         1    2    3
            32.3 31.1 29.5
    4         1    2    3
            31.4 31.8 33.4
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            34.7 36.9 38.3 39.8 37.8 44.4 41.0 45.0 45.8 46.2

            49.4 51.0 50.8
    6         1
            53.5
    7         1    2    3    4    5    6    7    8
            21.9 22.0 19.0 18.8 19.9 21.5 21.8 21.2
    8         1    2    3    4    5    6    7    8    9   10

            19.4 17.1 15.9 15.5 14.5 14.0 14.7 16.7 17.7 19.1

1

 RECEIVER    LEQ(H)   L10
 2            63.5   64.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            55.4
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            54.4 51.2 53.0 50.2 46.9 46.2 44.7 40.1 41.7 39.9

            38.3 37.8 35.7 34.4
    3         1    2    3
            33.3 31.8 30.3
    4         1    2    3
            32.3 32.4 34.3
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            35.4 37.4 38.7 40.0 38.5 44.6 41.2 45.3 46.1 47.0

            50.8 52.6 53.0
    6         1
            54.6
    7         1    2    3    4    5    6    7    8
            22.5 23.1 20.6 19.4 20.1 21.4 21.3 21.3
    8         1    2    3    4    5    6    7    8    9   10

            19.2 17.0 15.7 15.3 14.7 14.2 16.6 17.9 18.2 19.6

1

 RECEIVER    LEQ(H)   L10
 3            65.3   66.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            56.4
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            57.2 54.3 55.2 51.2 47.2 46.5 44.9 40.6 42.0 40.3

            38.6 38.2 36.0 35.1
    3         1    2    3
            34.0 33.0 31.9
    4         1    2    3
            33.4 33.5 35.2
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            36.2 38.0 39.3 40.6 38.6 44.8 41.4 45.5 46.3 48.0

            52.1 55.2 56.4
    6         1
            55.3
    7         1    2    3    4    5    6    7    8
            23.1 23.5 21.5 21.3 20.4 21.3 21.2 21.2
    8         1    2    3    4    5    6    7    8    9   10

            18.7 16.9 15.6 15.2 14.9 15.7 17.9 18.5 18.8 20.3

1

 RECEIVER    LEQ(H)   L10
 4            67.5   68.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            57.3
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            58.8 57.6 59.3 52.7 47.8 47.0 45.3 41.1 42.8 40.7

            39.2 38.8 37.0 36.3
    3         1    2    3
            35.1 34.2 32.8
    4         1    2    3
            34.3 34.3 35.8
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            36.7 38.4 39.6 40.9 38.9 45.2 41.8 46.1 46.9 49.4

            55.0 59.3 58.0
    6         1
            56.4
    7         1    2    3    4    5    6    7    8
            23.8 24.1 22.1 22.2 21.5 21.3 21.4 21.3
    8         1    2    3    4    5    6    7    8    9   10

            19.0 17.0 15.7 15.3 16.4 17.4 18.7 19.6 20.1 21.6

1

 RECEIVER    LEQ(H)   L10
 5            69.4   70.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            57.8
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            60.2 59.8 62.4 54.9 49.0 47.9 46.0 41.7 43.6 41.5

            39.7 39.3 37.5 36.7
    3         1    2    3
            35.9 35.0 33.6
    4         1    2    3
            35.0 35.0 36.4
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            37.0 38.8 40.0 41.4 39.4 45.7 42.5 46.7 47.8 51.3

            58.4 61.3 59.3
    6         1
            57.0
    7         1    2    3    4    5    6    7    8
            25.4 25.1 22.9 23.1 22.7 21.5 21.6 21.4
    8         1    2    3    4    5    6    7    8    9   10

            20.8 16.8 16.1 15.6 18.6 18.9 20.2 20.7 20.8 22.2

1

 RECEIVER    LEQ(H)   L10
 6            70.9   72.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

    1        1
            58.0
    2         1    2    3    4    5    6    7    8    9   10

   11        12   13   14
            60.8 61.1 64.9 57.6 49.9 48.6 46.6 42.1 43.9 41.8

            40.0 39.6 37.9 37.3
    3         1    2    3
            36.4 35.7 34.3
    4         1    2    3
            35.1 35.4 36.8
    5         1    2    3    4    5    6    7    8    9   10

   11        12   13
            37.6 39.2 40.3 41.7 39.8 46.2 43.1 47.1 48.9 52.9

            61.3 62.8 59.9
    6         1
            57.2
    7         1    2    3    4    5    6    7    8
            27.6 25.8 23.4 23.7 23.5 21.6 21.6 21.1
    8         1    2    3    4    5    6    7    8    9   10

            21.2 18.6 16.7 17.7 19.7 19.7 20.8 21.3 21.2 22.7

1

 RECEIVER    LEQ(H)   L10
 7            72.1   73.4

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA
```

```
ROADWAY  SEGMENT

   1        1
           57.8
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           60.9 61.8 66.9 59.6 50.9 49.3 47.1 42.6 44.3 42.1

           40.2 39.9 37.9 37.1
   3        1    2    3
           36.3 35.5 34.2
   4        1    2    3
           35.1 34.9 36.3
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           37.5 39.1 40.3 41.8 40.0 46.5 43.2 47.4 50.0 54.4

           63.0 63.9 60.2
   6        1
           57.2
   7        1    2    3    4    5    6    7    8
           28.2 27.2 24.4 24.0 24.1 21.9 21.8 21.3
   8        1    2    3    4    5    6    7    8    9   10

           21.2 19.8 17.1 19.2 20.0 20.6 21.2 21.5 21.4 22.6

1

RECEIVER     LEQ(H)    L10
8             69.5    70.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           55.4
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           57.9 58.5 63.4 60.4 51.7 49.7 47.5 42.9 44.6 42.3

           40.3 39.6 37.8 37.1
   3        1    2    3
           35.8 35.1 33.9
   4        1    2    3
           35.3 35.2 36.5
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           37.1 38.7 40.2 41.8 39.9 46.4 43.3 47.7 50.7 55.3

           60.3 59.9 57.1
   6        1
           54.6
   7        1    2    3    4    5    6    7    8
           28.4 27.4 24.6 24.5 24.4 22.1 22.0 21.4
   8        1    2    3    4    5    6    7    8    9   10

           21.6 19.9 19.4 19.8 20.7 20.7 21.3 21.2 21.2 22.6

1

RECEIVER     LEQ(H)    L10
9             69.1    70.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           52.8
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           55.4 56.3 63.1 61.6 52.3 50.1 47.8 43.2 44.8 42.6

           40.4 39.9 38.0 37.1
   3        1    2    3
           36.0 35.4 34.2
   4        1    2    3
           35.6 35.5 36.7
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           37.4 38.9 40.3 42.0 40.1 46.7 43.7 48.1 51.3 56.1

           60.7 59.2 54.9
   6        1
           52.2
   7        1    2    3    4    5    6    7    8
           28.7 27.6 24.8 24.7 24.7 22.3 22.1 21.6
   8        1    2    3    4    5    6    7    8    9   10

           21.9 20.1 19.6 20.1 21.0 20.9 21.5 21.4 21.4 22.8

1

RECEIVER     LEQ(H)    L10
10            68.9    70.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           51.8
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           54.4 55.4 62.6 62.3 52.8 50.5 48.1 43.5 45.0 42.8

           40.6 40.0 38.1 37.4
   3        1    2    3
           36.0 35.3 34.1
   4        1    2    3
           35.5 35.4 36.7
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           37.3 38.9 40.6 42.1 40.3 46.9 43.9 48.4 51.5 56.3

           60.9 58.5 54.1
   6        1
           51.3
   7        1    2    3    4    5    6    7    8
           28.9 27.8 25.0 24.9 24.9 22.5 22.3 21.7
   8        1    2    3    4    5    6    7    8    9   10

           22.0 20.3 19.7 20.2 21.2 21.1 21.6 21.5 21.5 22.9

1

RECEIVER     LEQ(H)    L10
11            69.0    70.5

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           51.4
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           53.9 54.7 62.1 62.9 53.4 51.0 48.5 43.7 45.3 43.0

           40.9 40.1 38.3 37.6
   3        1    2    3
           36.7 35.4 34.3
   4        1    2    3
           35.7 35.5 36.8
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           37.4 39.2 40.9 42.3 40.5 47.2 44.3 48.8 51.9 56.7

           61.2 58.1 53.7
   6        1
           50.9
   7        1    2    3    4    5    6    7    8
           29.1 28.0 25.2 25.1 25.1 22.6 22.4 21.9
   8        1    2    3    4    5    6    7    8    9   10

           22.1 20.4 19.9 20.4 21.4 21.3 21.8 21.7 21.7 23.1

1

RECEIVER     LEQ(H)    L10
12            68.5    70.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           50.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           53.3 53.7 61.0 62.8 53.9 51.4 48.8 43.9 45.5 43.1

           40.9 40.1 38.2 37.5
   3        1    2    3
           36.7 35.5 34.0
   4        1    2    3
           35.4 35.2 36.5
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           37.2 39.4 40.8 42.3 40.5 47.2 44.4 49.0 52.0 56.5

           60.3 57.2 53.0
   6        1
           50.5
   7        1    2    3    4    5    6    7    8
           29.2 28.1 25.3 25.2 25.2 22.7 22.6 22.1
   8        1    2    3    4    5    6    7    8    9   10

           22.3 20.6 20.0 20.6 21.5 21.3 21.8 21.6 21.6 23.0

1

RECEIVER     LEQ(H)    L10
13            68.2    69.8

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           50.6
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           52.8 53.1 60.2 62.7 54.7 51.9 49.1 44.3 45.8 43.4

           41.2 40.4 38.5 37.8
   3        1    2    3
           36.9 36.2 34.9
   4        1    2    3
           35.5 35.4 37.4
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           38.1 39.8 41.1 42.6 40.8 47.5 44.8 49.6 52.5 57.0

           59.5 56.7 52.6
   6        1
           50.1
   7        1    2    3    4    5    6    7    8
           29.5 28.4 25.5 25.4 25.4 22.9 22.7 22.2
   8        1    2    3    4    5    6    7    8    9   10

           22.4 20.7 20.1 20.7 21.7 21.5 22.2 22.0 21.8 23.2

1

RECEIVER     LEQ(H)    L10
14            67.5    69.1

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

ROADWAY  SEGMENT

   1        1
           50.1
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
           52.1 52.2 58.8 62.0 55.2 52.3 49.4 44.4 45.9 43.4

           41.4 40.6 38.5 37.6
   3        1    2    3
           36.8 36.0 34.7
   4        1    2    3
           35.9 35.8 37.2
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
           38.0 39.6 41.0 42.7 41.2 47.9 44.9 49.7 52.5 57.1

           57.7 55.3 51.9
   6        1
```

```
          49.6
   7        1    2    3    4    5    6    7    8
          29.6 28.5 25.6 25.5 25.5 23.0 22.8 22.3
   8        1    2    3    4    5    6    7    8    9   10

          22.5 20.8 20.3 20.8 21.7 21.6 22.1 22.3 22.1 23.1
1

 RECEIVER     LEQ(H)   L10
 15            67.5   69.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          49.8
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          51.7 51.7 57.7 62.2 56.0 52.9 49.7 44.8 46.2 43.7

          41.6 41.1 39.1 38.3
   3        1    2    3
          37.0 36.2 35.0
   4        1    2    3
          36.2 36.1 37.5
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          38.2 39.8 41.6 43.2 41.6 48.4 45.7 50.2 53.0 58.0

          57.0 54.4 51.5
   6        1
          49.4
   7        1    2    3    4    5    6    7    8
          29.9 28.7 25.9 25.7 25.7 23.2 23.0 22.4
   8        1    2    3    4    5    6    7    8    9   10

          22.6 21.1 20.4 20.9 21.9 21.7 22.3 22.7 22.5 23.8
1

 RECEIVER     LEQ(H)   L10
 16            66.7   68.3

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          48.6
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          50.0 49.0 53.6 60.9 58.4 54.3 50.7 45.5 46.8 44.1

          42.0 41.4 39.4 38.7
   3        1    2    3
          37.8 37.0 35.7
   4        1    2    3
          36.7 36.7 38.1
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          38.9 40.7 42.0 43.8 42.1 49.2 46.7 51.5 54.4 56.8

          55.3 50.8 48.6
   6        1
          47.5
   7        1    2    3    4    5    6    7    8
          30.3 29.2 26.3 26.0 26.0 23.6 23.0 22.5
   8        1    2    3    4    5    6    7    8    9   10

          23.0 21.2 20.4 21.2 21.8 22.0 22.5 22.8 22.8 24.1
1

 RECEIVER     LEQ(H)   L10
 17            67.3   69.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          47.0
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          47.6 46.4 52.1 59.2 61.9 56.1 51.9 46.5 47.6 44.9

          42.6 41.9 39.8 38.9
   3        1    2    3
          38.1 37.3 36.0
   4        1    2    3
          37.2 37.2 38.6
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          39.3 41.1 42.5 44.3 42.8 49.9 47.8 53.4 56.9 57.1

          52.9 50.0 47.5
   6        1
          45.2
   7        1    2    3    4    5    6    7    8
          31.0 29.8 26.9 26.5 26.5 24.0 23.4 22.9
   8        1    2    3    4    5    6    7    8    9   10

          23.3 21.9 18.9 21.4 22.0 22.4 23.0 23.3 23.1 24.5
1

 RECEIVER     LEQ(H)   L10
 18            68.4   70.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          45.5
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          46.1 45.1 49.7 56.5 64.4 59.1 53.6 47.7 48.6 45.6

          43.2 42.3 40.1 39.2
   3        1    2    3
          38.2 37.2 36.0
   4        1    2    3
          37.1 37.1 38.6
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          39.4 41.3 42.9 44.8 43.4 50.8 48.9 54.9 59.2 57.0

          51.4 47.3 45.1
   6        1
          44.2
   7        1    2    3    4    5    6    7    8
          31.8 30.3 27.2 27.0 27.1 24.6 23.8 23.3
   8        1    2    3    4    5    6    7    8    9   10

          23.8 22.0 19.3 21.5 22.4 22.6 23.3 23.5 23.4 24.7
1

 RECEIVER     LEQ(H)   L10
 19            68.0   70.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          43.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.4 43.3 47.7 55.0 62.5 61.8 54.9 48.8 49.5 46.1

          43.6 42.6 40.2 39.1
   3        1    2    3
          38.0 37.0 35.6
   4        1    2    3
          36.7 36.8 38.3
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          39.2 41.3 43.0 45.1 43.8 51.3 49 6 56.0 58.3 54.4

          50.6 47.4 44.6
   6        1
          42.9
   7        1    2    3    4    5    6    7    8
          31.6 29.9 27.5 27.5 27.4 24.9 24.1 23.4
   8        1    2    3    4    5    6    7    8    9   10

          24.4 21.8 19.7 21.1 22.7 22.5 23.6 23.7 23.4 24.6
1

 RECEIVER     LEQ(H)   L10
 20            67.8   69.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          43.6
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          43.9 42.7 46.9 53.8 59.6 63.0 56.6 50.0 50.5 47.2

          44.6 43.2 40.9 39.7
   3        1    2    3
          38.5 37.4 35.9
   4        1    2    3
          37.1 37.2 38.9
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          39.9 42.0 43.9 46.0 44.8 52.4 50.9 57.3 57.6 53.2

          49.7 47.1 44.7
   6        1
          43.0
   7        1    2    3    4    5    6    7    8
          30.8 30.3 27.8 27.8 27.6 25.2 24.3 23.7
   8        1    2    3    4    5    6    7    8    9   10

          24.6 21.2 19.9 20.2 22.7 22.7 23.1 24.1 23.9 25.1
1

 RECEIVER     LEQ(H)   L10
 21            67.9   69.9

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          42.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          43.3 42.1 47.5 53.0 57.6 63.3 58.7 51.2 50.4 47.2

          44.6 43.3 40.7 40.0
   3        1    2    3
          39.1 38.0 36.4
   4        1    2    3
          37.6 37.8 39.5
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          40.6 42.7 44.7 46.9 45.7 53.6 52.5 58.4 56.7 52.3

          49.1 46.6 44.5
   6        1
          43.5
   7        1    2    3    4    5    6    7    8
          31.3 30.8 28.3 28.3 27.9 25.8 24.6 24.0
   8        1    2    3    4    5    6    7    8    9   10

          24.8 21.3 20.3 20.2 23.0 23.0 23.5 23.8 23.7 24.8
1

 RECEIVER     LEQ(H)   L10
 22            68.5   70.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          43.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
```

```
          44.5 43.3 47.8 52.7 57.1 63.9 60.0 52.0 51.0 47.6

          44.8 43.6 41.8 40.7
   3        1    2    3
          39.4 38.1 36.7
   4        1    2    3
          37.9 38.1 39.8
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          40.9 43.0 45.0 47.2 46.1 54.2 53.4 59.1 56.5 52.2

          49.0 46.5 44.3
   6        1
          43.3
   7        1    2    3    4    5    6    7    8
          31.9 31.2 28.7 28.7 28.3 26.0 24.9 24.2
   8        1    2    3    4    5    6    7    8    9   10

          25.2 21.8 20.5 20.9 23.3 23.4 23.8 24.2 24.0 25.1
1

 RECEIVER    LEQ(H)   L10
 23           68.8   71.1

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          43.6
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.2 43.0 47.5 52.4 56.6 64.3 61.4 52.7 51.8 47.9

          45.0 44.2 42.1 40.9
   3        1    2    3
          39.6 38.5 36.9
   4        1    2    3
          38.1 38.3 39.9
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          41.0 43.0 45.1 47.4 46.4 54.7 54.1 59.5 56.1 51.7

          48.7 46.2 44.1
   6        1
          43.1
   7        1    2    3    4    5    6    7    8
          32.3 31.7 29.1 29.0 28.7 26.2 25.1 24.4
   8        1    2    3    4    5    6    7    8    9   10

          25.5 22.0 20.8 21.1 23.8 23.7 24.1 24.5 24.5 26.3
1

 RECEIVER    LEQ(H)   L10
 31           75.3   76.7

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          44.6
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.1 41.9 45.1 47.2 47.4 49.1 51.9 51.7 61.6 69.9

          67.0 61.9 57.3 55.0
   3        1    2    3
          53.1 51.6 49.8
   4        1    2    3
          50.9 51.4 53.4
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          55.2 58.5 62.8 66.9 62.8 62.8 51.1 51.2 48.9 47.5

          46.8 46.1 45.6
   6        1
          45.1
   7        1    2    3    4    5    6    7    8
          54.1 60.9 52.9 48.2 42.1 38.2 36.4 34.9
   8        1    2    3    4    5    6    7    8    9   10

          33.6 32.5 32.3 33.5 34.6 36.5 39.5 40.2 39.7 40.4
1

 RECEIVER    LEQ(H)   L10
 32           75.2   76.6

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          44.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.5 42.0 44.4 46.7 46.9 48.4 50.8 50.3 60.5 67.7

          68.6 63.9 58.6 56.0
   3        1    2    3
          53.9 52.3 50.4
   4        1    2    3
          51.5 52.1 54.2
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          56.1 59.8 64.3 66.5 60.8 61.2 51.2 51.6 48.7 47.5

          47.2 46.6 45.2
   6        1
          44.7
   7        1    2    3    4    5    6    7    8
          52.4 60.7 58.3 52.9 45.4 40.6 37.9 36.0
   8        1    2    3    4    5    6    7    8    9   10

          35.2 33.9 33.9 35.4 36.5 38.2 40.6 41.5 40.8 41.4
1

 RECEIVER    LEQ(H)   L10
 33           75.1   76.5

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          44.5
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          44.6 42.8 46.0 46.6 46.4 47.7 49.9 49.3 59.9 65.1

          68.5 65.8 60.1 57.1
   3        1    2    3
          54.8 52.9 50.9
   4        1    2    3
          52.0 52.8 55.0
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.1 61.0 65.3 65.5 59.1 60.0 51.6 52.8 50.7 49.0

          47.5 46.2 44.8
   6        1
          44.4
   7        1    2    3    4    5    6    7    8
          50.1 56.4 60.8 58.9 54.0 43.6 39.7 37.9
   8        1    2    3    4    5    6    7    8    9   10

          40.8 40.0 39.1 41.5 43.0 43.0 43.3 42.9 42.0 42.4
1

 RECEIVER    LEQ(H)   L10
 34           74.4   75.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          44.3
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          43.6 41.4 44.2 45.5 45.7 47.0 49.2 48.3 55.8 62.7

          66.9 66.5 61.0 57.8
   3        1    2    3
          55.3 53.4 51.3
   4        1    2    3
          52.4 53.2 55.6
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.8 61.7 65.1 64.1 57.8 58.2 48.6 49.9 48.1 46.9

          46.1 45.4 44.6
   6        1
          44.1
   7        1    2    3    4    5    6    7    8
          43.6 50.1 56.9 61.3 57.5 47.3 42.7 41.6
   8        1    2    3    4    5    6    7    8    9   10

          41.7 41.0 41.3 43.1 44.4 44.3 44.5 43.9 42.9 43.2
1

 RECEIVER    LEQ(H)   L10
 35           73.7   75.2

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          41.0
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          40.7 38.8 42.2 44.8 45.0 46.4 48.5 47.3 53.2 60.1

          65.0 66.2 61.8 58.6
   3        1    2    3
          55.9 53.9 51.8
   4        1    2    3
          52.8 53.7 56.1
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          58.4 62.2 64.5 62.5 56.5 54.6 46.0 47.5 45.8 44.4

          43.3 42.3 41.3
   6        1
          41.1
   7        1    2    3    4    5    6    7    8
          41.3 46.5 52.7 58.9 61.8 52.7 47.2 44.3
   8        1    2    3    4    5    6    7    8    9   10

          42.8 42.2 42.7 44.7 46.0 45.9 45.8 45.0 43.8 44.0
1

 RECEIVER    LEQ(H)   L10
 36           69.6   70.8

 ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING    1.0 DBA

 ROADWAY  SEGMENT

   1        1
          38.9
   2        1    2    3    4    5    6    7    8    9   10

  11       12   13   14
          38.8 36.9 40.5 43.2 43.9 45.4 46.9 45.1 51.6 53.5

          55.8 60.2 60.2 57.8
   3        1    2    3
          55.5 53.6 51.6
   4        1    2    3
          52.6 53.3 55.6
   5        1    2    3    4    5    6    7    8    9   10

  11       12   13
          57.5 60.5 58.6 54.9 49.8 52.1 44.5 45.6 44.2 42.8

          41.4 40.2 39.0
   6        1
          38.7
   7        1    2    3    4    5    6    7    8
          37.0 38.5 39.0 42.3 55.9 52.7 47.8 44.7
   8        1    2    3    4    5    6    7    8    9   10

          42.7 42.3 42.8 44.6 45.5 45.0 44.7 43.8 42.8 43.3
```

1

RECEIVER LEQ(H) L10
37 65.6 66.6

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
38.1
2 1 2 3 4 5 6 7 8 9 10

11 12 13 14
38.1 36.2 39.6 42.3 42.8 44.0 45.1 42.8 48.6 49.8

52.7 56.0 55.0 53.5
3 1 2 3
51.5 49.6 47.5
4 1 2 3
48.5 49.3 51.5
5 1 2 3 4 5 6 7 8 9 10

11 12 13
53.1 55.0 54.9 51.8 46.6 49.7 41.9 44.0 42.9 41.7

40.5 39.4 38.3
6 1
38.0
7 1 2 3 4 5 6 7 8
33.3 34.0 34.3 40.6 47.8 50.2 46.9 43.2
8 1 2 3 4 5 6 7 8 9 10

40.3 40.1 40.6 42.2 42.5 41.0 40.2 39.3 38.5 39.2

1

RECEIVER LEQ(H) L10
38 63.3 64.3

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
37.5
2 1 2 3 4 5 6 7 8 9 10

11 12 13 14
37.4 35.6 39.0 41.7 42.3 43.3 43.5 40.9 46.3 47.1

49.7 52.0 51.9 51.6
3 1 2 3
50.5 49.2 47.3
4 1 2 3
48.2 48.6 50.3
5 1 2 3 4 5 6 7 8 9 10

11 12 13
51.1 52.0 51.3 49.3 44.2 47.6 40.2 42.6 41.7 40.7

39.7 38.7 37.6
6 1
37.3
7 1 2 3 4 5 6 7 8
30.4 30.9 31.3 37.0 41.7 44.9 46.2 44.8
8 1 2 3 4 5 6 7 8 9 10

40.5 40.1 39.7 40.4 39.4 37.5 37.0 36.6 36.3 37.4

1

RECEIVER LEQ(H) L10
39 68.3 69.4

ROADWAY SEGMENT SOUND LEVEL CONTRIBUTIONS EXCEEDING 1.0 DBA

ROADWAY SEGMENT

1 1
37.1
2 1 2 3 4 5 6 7 8 9 10

11 12 13 14
36.9 35.0 38.4 41.1 41.7 42.4 42.7 40.1 45.4 46.2

54.5 56.9 57.4 57.8
3 1 2 3
57.1 55.7 53.7
4 1 2 3
54.5 55.0 56.7
5 1 2 3 4 5 6 7 8 9 10

11 12 13
57.1 57.3 56.1 53.7 43.3 46.8 39.5 41.9 41.1 40.1

39.2 38.2 37.1
6 1
36.9
7 1 2 3 4 5 6 7 8
29.4 30.0 35.7 41.5 45.8 48.8 51.1 51.7
8 1 2 3 4 5 6 7 8 9 10

46.7 46.4 45.9 46.0 44.9 43.1 42.7 42.4 42.3 43.9

```
                    *************************
                           OPTIMA-VU1
                    *************************
              BARRIER OPTIMIZATION PROGRAM USING
            PARTIAL SOUND ENERGIES COMPUTED BY THE
                     STAMINA 2.0 PROGRAM
         MODIFIED FROM THE FHWA VAX VERSON -- MARCH 1983

      MODIFIED TO:
        1.  PLACE BARRIER COST DATA IN A DATA FILE CALLED
            OPTCOST.DTA TO ALLOW USER TO USE COSTS OTHER THAN
            THE FHWA NATIONAL AVERAGES.
                    *************************
        MODIFIED FOR IBM-COMPATIBLE PC WITH MATH COPROCESSOR
                        IN JUNE 1991 BY
        VANDERBILT ENGINEERING CENTER FOR TRANSPORTATION
              OPERATIONS AND RESEARCH (VECTOR)
      BOX 96-B, VANDERBILT UNIVERSITY, NASHVILLE, TENNESSEE 37235
                       (615) 322-3683
                    *************************

   PROBLEM TITLE
   *************
Otay Ranch - Village 7: 02/2004

             EFFECTIVENESS/COST RATIO AND BARRIER HEIGHT MATRICES
             ******************************************************
BARRIER SECTION        EFFECTIVENESS/COST                 CORRESPONDING
  NO  IDENT                  RATIO                      BARRIER HEIGHTS(IN
FT)

 HEIGHT INDEX   1  2    3    4    5    6    7    8   1  2  3  4  5  6  7  8
     1   sf-16       *   31.  40.  39.  37.  33.  30.  29.   0.  8.
9.10.11.12.13.14.
     2   6a           *   39.  39.  35.  31.  30.  31.  32.   0.  8.
9.10.11.12.13.14.
     3   6b           *   37.  33.  32.  32.  32.  33.  33.   0.  8.
9.10.11.12.13.14.
     4   6c           *   38.  36.  35.  35.  35.  35.  35.   0.  8.
9.10.11.12.13.14.
     5   7            *   39.  37.  36.  34.  34.  33.  33.   0.  8.
9.10.11.12.13.14.
     6   8          *  36.  35.  35.  34.  34.  32.  31.  0. 5. 6. 7. 8.
9.10.11.
     7   9          *  35.  33.  33.  32.  31.  30.  28.  0. 5. 6. 7. 8.
9.10.11.
     8  10       *  36.  35.  34.  33.  33.  32.  32.  0. 3. 4. 5. 6. 7. 8.
9.
     9  11       *  35.  35.  34.  33.  32.  32.  31.  0. 3. 4. 5. 6. 7. 8.
9.
    10  12       *  35.  35.  34.  33.  33.  32.  32.  0. 3. 4. 5. 6. 7. 8.
9.
    11  13       *  37.  36.  35.  34.  34.  33.  33.  0. 3. 4. 5. 6. 7. 8.
9.
    12  14       *  37.  36.  35.  34.  33.  33.  32.  0. 3. 4. 5. 6. 7. 8.
9.
    13  15       *  37.  37.  35.  34.  34.  33.  33.  0. 3. 4. 5. 6. 7. 8.
9.
    14  16       *  38.  38.  36.  35.  34.  33.  33.  0. 3. 4. 5. 6. 7. 8.
9.
    15  17       *  30.  30.  29.  28.  28.  28.  27.  0. 3. 4. 5. 6. 7. 8.
9.
    16  18       *  25.  26.  25.  25.  25.  24.  24.  0. 3. 4. 5. 6. 7. 8.
9.
    17   19          *   21.  21.  21.  21.  20.  19.  19.   0. 6. 7. 8.
9.10.11.12.
    18   20          *   22.  20.  18.  17.  14.  13.  12.   0. 6. 7. 8.
9.10.11.12.
    19   21          *   25.  23.  21.  20.  18.  17.  17.   0. 6. 7. 8.
9.10.11.12.
    20   22          *   25.  23.  22.  21.  19.  18.  18.   0. 6. 7. 8.
9.10.11.12.
    21   23          *   26.  26.  25.  24.  22.  20.  20.   0. 6. 7. 8.
9.10.11.12.
    22   24          *   23.  25.  26.  27.  24.  21.  20.   0. 6. 7. 8.
9.10.11.12.
    23   2-rev      *  15.  14.  12.  11.  10.   9.   9.   0. 6. 7. 8.
9.10.11.12.
    24   1       *   0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
    25   2       *   0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
    26   3       *   0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
    27   4       *  12.  12.  11.   9.   8.   7.   6.  0. 3. 4. 5. 6. 7. 8.
9.
    28   5       *   0.  15.  17.  15.  14.  12.  11.  0. 3. 4. 5. 6. 7. 8.
9.
    29   6       *  19.  29.  29.  28.  26.  25.  24.  0. 3. 4. 5. 6. 7. 8.
9.
    30   7       *  20.  24.  24.  22.  20.  18.  18.  0. 3. 4. 5. 6. 7. 8.
9.
    31   8       *  26.  26.  23.  21.  20.  19.  18.  0. 3. 4. 5. 6. 7. 8.
9.
    32   9       *  25.  26.  27.  27.  26.  24.  23.  0. 3. 4. 5. 6. 7. 8.
9.
    33   10      *  25.  27.  26.  24.  23.  21.  20.  0. 3. 4. 5. 6. 7. 8.
9.
    34   11      *  22.  22.  20.  18.  17.  15.  14.  0. 3. 4. 5. 6. 7. 8.
9.
    35   12       *  24.  23.  22.  20.  19.  17.  16.  0. 4. 5. 6. 7. 8.
9.10.
    36   13       *  15.  21.  30.  31.  29.  28.  27.  0. 4. 5. 6. 7. 8.
9.10.
    37   14       *  23.  22.  20.  18.  16.  14.  13.  0. 4. 5. 6. 7. 8.
9.10.
    38   15       *  26.  27.  29.  27.  25.  24.  23.  0. 4. 5. 6. 7. 8.
9.10.
    39  40     *  0.                                 0. 0.
    40  41     *  0.                                 0. 0.
    41  42     *  0.                                 0. 0.
    42  43     *  0.                                 0. 0.
    43  44     *  0.                                 0. 0.
    44  45     *  0.                                 0. 0.
    45  46     *  0.                                 0. 0.
    46  48     *  0.                                 0. 0.
    47  49     *  0.                                 0. 0.
    48  51     *  0.                                 0. 0.
    49  53     *  0.                                 0. 0.
    50  3-rev     *  -7.  -7.  -7.  -7.  -6.  -6.  -6.  0. 4. 5. 6. 7. 8.
9.10.
    51  53        *  16.  16.  16.  17.  17.  17.  17.  0. 4. 5. 6. 7. 8.
9.10.
    52  54        *  25.  26.  26.  25.  23.  22.  22.  0. 4. 5. 6. 7. 8.
9.10.
    53  55        *  29.  31.  32.  32.  31.  28.  27.  0. 4. 5. 6. 7. 8.
9.10.
    54  56        *  25.  27.  28.  28.  27.  25.  24.  0. 4. 5. 6. 7. 8.
9.10.
    55  57        *  25.  25.  26.  26.  25.  25.  24.  0. 4. 5. 6. 7. 8.
9.10.
    56  58        *  26.  26.  25.  25.  25.  24   24.  0  4  5. 6  7  8.
9.10.
    57  59        *  18.  19.  20.  20.  18.  16.  15.  0. 4. 5. 6. 7. 8.
9.10.
    58  60a      * -17. -16. -17. -17. -17. -16. -16.  0. 3. 4. 5. 6. 7. 8.
9.
    59  60b      *  28.  37.  35.  29.  26.  27.  29.  0. 3. 4. 5. 6. 7. 8.
9.
    60  60c      *   0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
    61  61       *  27.  23.  26.  27.  27.  26.  26.  0. 3. 4. 5. 6. 7. 8.
9.
    62  62       *  25.  20.  21.  23.  23.  22.  22.  0. 3. 4. 5. 6. 7. 8.
9.
    63  63       *   0.   0.   0.   0.   0.   0.   0.  0. 3. 4. 5. 6. 7. 8.
9.
    64  1       *   0.                                 0.30.
    65  2       *   0.                                 0.30.
    66  3       *   0.                                 0.30.
    67  4       *   0.                                 0.30.
    68  1       *   0.                                 0.30.
    69  2       *   0.                                 0.30.
    70  3       *   0.                                 0.30.
    71  4       *   0.                                 0.30.
    72  1       *   0.                                 0.30.
    73  2       *   0.                                 0.30.
    74  3       *   0.                                 0.30.
    75  4       *   0.                                 0.30.
    76  1       *   0.                                 0.30.
    77  2       *   0.                                 0.30.
    78  3       *   0.                                 0.30.
    79  4       *   0.                                 0.30.
    80  1       *   0.                                 0.30.
    81  2       *   0.                                 0.30.
    82  3       *   0.                                 0.30.
    83  4       *   0.                                 0.30.
    84  1       *   0.                                 0.30.
    85  2       *   0.                                 0.30.
    86  3       *   0.                                 0.30.
    87  4       *   0.                                 0.30.
    88  1       *   0.                                 0.30.
    89  2       *   0.                                 0.30.
    90  3       *   0.                                 0.30.
    91  4       *   0.                                 0.30.
    92  1       *   0.                                 0.30.
    93  2       *   0.                                 0.30.
    94  3       *   0.                                 0.30.
    95  4       *   0.                                 0.30.
    96  1       *   0.                                 0.30.
    97  2       *   0.                                 0.30.
    98  3       *   0.                                 0.30.
    99  4       *   0.                                 0.30.

HEIGHT INDEX  1   2   3   4   5   6   7   8   1  2  3  4  5  6  7  8

Otay Ranch - Village 7: 02/2004

2nd floor s-f&HS receivers, with barriers & m-f bldgs

BARRIER HEIGHT INDEX FOR EACH BARRIER SECTION
  5  7  8  8  7  8  7  8  7  7  7  7  8  8  8  7  3  2  2  2  2  2  1  1  1
  1  1  1  1  2  2  4  4  4  6  6  7  8  1  1  1  1  1  1  1  1  1  1  1  1
  8  8  8  7  7  6  5  3  3  3  3  3  3  2  2  2  2  2  2  2  2  2  2  2  2
  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2  2
CORRESPONDING BARRIER HEIGHTS FOR EACH SECTION
11.13.14.14.13.11.10. 9. 8. 8. 8. 8. 9. 9. 9. 8. 7. 6. 6. 6. 6. 6. 0. 0. 0.
 0. 0. 0. 0. 3. 3. 5. 5. 5. 8. 8. 9.10. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
10.10.10. 9. 9. 8. 7. 4. 4. 4. 4. 4. 4.30.30.30.30.30.30.30.30.30.30.30.30.
30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.30.

    R E S U L T S
    *************

REC     REC ID          LEQ        LEQ(Z(0))       IL
  1      1              62.1        64.8          2.6
  2      2              63.5        66.0          2.4
  3      3              65.4        67.1          1.7
  4      4              67.3        68.3          1.0
  5      5              69.2        70.2          1.0
  6      6              70.8        71.5           .7
  7      7              72.0        72.8           .8
  8      8              69.0        73.6          4.5
  9      9              68.1        73.9          5.9
 10     10              67.6        74.1          6.6
 11     11              67.6        74.3          6.8
 12     12              66.9        74.4          7.5
 13     13              66.7        74.2          7.6
 14     14              65.9        73.3          7.3
 15     15              65.9        72.7          6.8
 16     16              65.2        71.4          6.3
 17     17              65.7        71.5          5.8
 18     18              66.7        72.6          5.9
 19     19              66.2        72.4          6.2
 20     20              65.9        71.8          5.9
 21     21              66.1        71.8          5.7
 22     22              66.4        72.4          5.9
 23     23              66.7        72.9          6.3
 24     31              75.5        75.7           .2
 25     32              75.3        75.4           .1
 26     33              75.1        75.2           .1
 27     34              74.3        74.7           .4
 28     35              73.7        74.1           .4
 29     36              69.4        70.6          1.1
 30     37              68.5        70.1          1.6
 31     38              64.1        68.6          4.6
 32     39              68.3        68.7           .3

BARRIER TYPE          COST                  AREA (SQ. FT.)
FH-BERM                  0.                      0.
FH-MASON            574500.                 116327.
FH-WOOD                  0.                      0.
FH-CONC                  0.                      0.
FH-STEEL                 0.                      0.
************************************************************
 TOTALS:        $   574500.                 116327.

END OF ALL CASES
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