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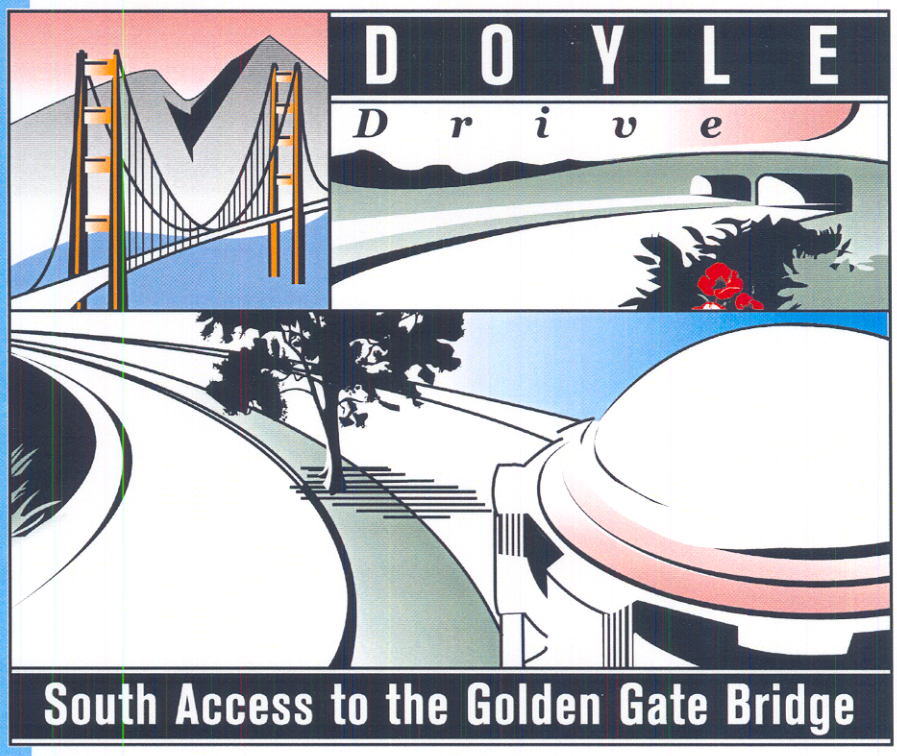


# FINAL
# NOISE AND VIBRATION STUDY
## December 2004

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# EXECUTIVE SUMMARY

This report presents the results of the noise and vibration study conducted for the South Access to the Golden Gate Bridge – Doyle Drive Project (Doyle Drive Project). This report is one of several technical reports prepared in support of the Draft Environmental Impact Report (DEIS/DEIR). The information from this report will be summarized in the DEIS/DEIR.

Doyle Drive is located in the Presidio of San Francisco (the Presidio), in the northern part of the City of San Francisco at the southern approach to the Golden Gate Bridge. The purpose of the project is to replace Doyle Drive to improve the seismic, structural, and traffic safety of the roadway within the setting and context of the Presidio and its purpose as a National Park. The following alternatives were considered:

- Alternative 1: No-Build Alternative,
- Alternative 2: Replace and Widen Alternative, and
- Alternative 5. Presidio Parkway Alternative

The study considered the potential for construction and operational phase impacts of each alternative. The noise analysis was conducted following guidelines in 23 CFR 772 and Caltrans' Traffic Noise Analysis Protocol. Compliance with 23 CFR 772, the Federal Highway Administration's (FHWA) noise standard, satisfies National Environmental Policy Act (NEPA) requirements with respect to traffic noise impacts. The noise and vibration analyses were also conducted following methodologies that are consistent with the California Environmental Quality Act (CEQA). In addition, the analysis also considered City of San Francisco Noise Ordinance requirements.

Traffic noise levels were predicted at receptor sites near the project corridor for existing, year 2010, and year 2030 conditions. Results of the analysis indicate that traffic noise would exceed the FHWA and Caltrans criteria at 37 receptor locations under one or more of the modeled conditions. The abatement measures considered to reduce the predicted traffic noise impacts including traffic management measures, horizontal and vertical shifts in the roadway alignment, noise barriers, retrofit of windows at residences exceeding the FHWA Noise Abatement Criteria (NAC), and the use of alternative paving materials. Although feasible, traffic management, roadway realignment measures, and alternative paving materials are not considered reasonable noise abatement measures.

Construction of noise barriers at receptor locations that are on local streets such as Richardson Avenue, Lyon Street, Marina Boulevard, Mason Street, Lincoln Boulevard, Gorgas Avenue, Montgomery Street, Girard Road and Halleck Street, would not be feasible because driveways would need to be maintained to provide access to those properties. As such, there appear to be no reasonable measures to reduce the predicted traffic noise with the Doyle Drive alternatives at Receptors 1 and 2 (the Palace of Fine Arts Building), Receptors 70 and 72 (Gorgas Avenue Warehouses), Receptors 73 and 74 (YMCA Buildings) and at Receptor 76 (residential area along Lyon Street and Richardson Avenue).

Receptors 10-13 (the Battery area), 17-18 (Armistead Road area), 27 (the Log Cabin area), 29-36 (residences along Storey Avenue) and 43 (the National Cemetery) have the potential to be benefited by the construction of noise barriers along the various alternatives under consideration, depending upon cost and effectiveness considerations. To determine whether noise barriers would be reasonable and feasible for these locations, the Caltrans protocol was applied to a series of noise barrier options for each site.

For the Replace and Widen Alternative, a 278 meter (912 foot) noise barrier 4.27 meters (14 feet) high along the south side shoulder of Doyle Drive from the east end of the high viaduct section eastward to the western end of the National Cemetery could provide noise reduction on the order of 2 to 11 dBA along the frontage area of the National Cemetery. The barrier appears preliminarily to be reasonable and feasible following the Caltrans protocol. Extending the barrier to the vicinity of Building 106 was also investigated to determine if additional impacted receivers would be benefited. A barrier along the shoulder of the viaduct section was tested up to 4.88 meters (16 feet). The results indicate that only Building 128 would receive at least 5 or

more decibels of noise reduction from such a wall design. Due to the additional cost and the design limitations of the viaduct section to be able to support the wind and dead load of such a wall, it was determined that extending the standard masonry block wall was not a reasonable abatement effort. However, a lower cost wall material design (such as wood) could make this wall preliminarily reasonable. If this alternative is selected, coordination with the impacted property owners will be conducted during the design phase to determine if a cost reasonable alternative can be agreed to. Under the Presidio Parkway Alternative, abatement in this section of the Presidio was also investigated. The design of the Parkway within much of this location would be in a cut (depressed) section with a concrete overhang and safety barrier to support the relocated section of Lincoln Boulevard. The overhang would effectively reduce traffic noise from most of this section of Doyle Drive and eliminate the need for additional abatement. Traffic noise from Lincoln Boulevard would be more noticeable in this area than would the noise from Doyle Drive. However, due to space limitations and safety concerns, placement of a noise barrier along Lincoln Boulevard was not considered a viable option.

A noise barrier along the westbound on-ramp from Park Presidio Boulevard to Doyle Drive westward to the Merchant Road area was investigated to determine if abatement would be reasonable and feasible for the areas impacted by both the Presidio Parkway and Replace and Widen Alternatives. A 3.05 meter high (10 foot) noise barrier, 318 meters long (1,043 feet) placed along the edge of the Doyle Drive right-of-way line in this area could provide a noise reduction on the order of 10 dBA to the five impacted residential receptors located north of Doyle Drive in the area along Armistead Road. Following the Caltrans protocol, this barrier would be considered preliminarily to be reasonable and feasible. However, if the Merchant Road Slip Ramp option were to be selected, it is anticipated that most of the noise sensitive residences along this portion of Doyle Drive would be removed and the need for the noise barrier may be eliminated or modified in terms of impacted receptors and the height and length of noise barrier needed. Therefore the reasonableness of constructing this noise barrier would be determined during design once the interchange option (if any) is selected.

A noise barrier along the south side of the eastbound section of Doyle Drive from west of the Log Cabin area that extended partially down the southbound Park Presidio off-ramp was investigated for both the Presidio Parkway and Replace and Widen Alternatives to determine if it might provide relief for the receptors along Storey Avenue (Receptors 27 through 36). Due to the topographic conditions of the area, a shoulder barrier along this section of Doyle Drive for all build alternatives would not be effective. The average reduction to the impacted receptors with a 4.88 meter high (16 foot) wall was only 1.7 dBA, well below the required 5 dBA reduction to be considered feasible. A barrier placed outside of the right-of-way along the top of the ridge bordering Doyle Drive in this area may prove effective but would require additional right-of-way and would most certainly impact the area of the Log Cabin site that contains identified protected plant species that could be adversely impacted. Therefore abatement at this location was not considered reasonable or feasible.

Noise abatement in the form of a noise barrier was also investigated for the Replace and Widen Alternative in the area of Batteries Blaney, Slaughter, Sherwood and Baldwin. A noise barrier extending 380 meter (1,246 feet) along the frontage of the Battery area that is 3.05 meters (10 feet) tall along the shoulder of Doyle Drive would provide a noise reduction in the range of 2 to 11 dBA. Following the Caltrans protocol, this noise barrier concept appears preliminarily to be reasonable and feasible.

Receptors 45-47, 49-51, 53 and 60 within the Main Post area of the Presidio are all considered Category C land uses and had no evidence of frequent human use of exterior areas that would benefit from noise abatement. The use of several of the buildings is for storage and electrical switching equipment, neither of which are noise sensitive. While noise abatement in the form of a noise barrier wall may be feasible for some of these receptors, it does not appear to be a reasonable course of action due to the lack of exterior noise sensitive activities. Interior noise levels would be reduced by the building envelope (generally 20 decibels or more, depending upon the building construction), which would bring all of these sites within the interior NAC.

With the Presidio Parkway Alternative, the use of tunnels would provide substantial traffic noise reduction to a number of receptors along the project corridor, including the Battery area, much of the Main Post area, and some of those along the Mason Street area. An investigation of tunnel portal noise reduction was conducted

for the very same areas that could potentially be impacted by the increase noise levels associated with the combination of traffic noise and the portal noise created by reverberation within the tunnels. The placement of a small length of noise barrier wall along the top of the portal areas that extends away from the portal for a distance of approximately 20 meters (66 feet) and 1.83 meters tall (6 feet) should be more than sufficient to reduce the potential portal noise from impacting the noise sensitive sections of the National Cemetery and the Battery area, thereby maintaining or enhancing the soundscape for both of these areas.

In order to assess the possibility that the vibration generated by vehicles operating in the Doyle Drive tunnels could cause or contribute to cosmetic cracking or building damage, it is necessary to assess the exterior vibration with respect to studies and standards which relate ground vibration to building damage. Exterior vibration is the standard that is generally used since it eliminates the variability of the response of specific building structures and measurement locations within the building. In addition, damage assessment is normally accomplished by evaluating the peak particle velocity of the ground surface, commonly referred to as PPV.

Since the Doyle Drive tunnels would be founded at an elevation well below grade and are expected to be massive structures, it is expected that the groundborne vibration at a location over the top of the tunnels would actually be lower than that measured at the base of the column of the existing elevated structure (Location 1b). Even assuming that the groundborne vibration levels are the same and factoring in a worst case crest factor as discussed above, a conservative estimate of the maximum PPV outside any of the buildings under consideration would be 95 VdB or approximately 1.4 millimeters per second (0.056 inch per second).

Most modern buildings can easily withstand peak particle velocities as high as 51 millimeters per second (2 inches per second) without structural damage. Even for structures that might be considered “ruins or historical monuments,” the limit is a PPV of 0.2 millimeter per second (0.08 inch per second), which is still greater than the maximum PPV conservatively estimated to be generated by vehicular traffic in the future Doyle Drive tunnels.

# SECTION 1: INTRODUCTION

This report presents results of the noise and vibration study conducted for the South Access to the Golden Gate Bridge – Doyle Drive Project (Doyle Drive Project). The report addresses potential noise and vibration impacts from the Doyle Drive Project. The findings of this study will be incorporated into the environmental document prepared for the Doyle Drive Project, as required to meet National Environmental Policy Act of 1969 (NEPA) and California Environmental Quality Act of 1970 (CEQA) standards.

## 1.1 PROJECT DESCRIPTION

Doyle Drive is located in the Presidio of San Francisco (the Presidio), in the northern part of the City of San Francisco at the southern approach to the Golden Gate Bridge (see Figure 1-1). In 1994, when the US Army transferred jurisdiction of the Presidio to the National Park Service (NPS), it became part of the National Park system and Golden Gate National Recreation Area (GGNRA). In 1998, management of the Presidio was divided between two federal agencies: The Presidio Trust (the Trust), the agency responsible for oversight of 80 percent of the Presidio delineated as Area B; and the NPS, which is responsible for management of the coastal portions of the park (the remaining 20 percent) that are delineated as Area A. Doyle Drive lies predominately within the Area B lands managed by the Trust with a small portion at the western end located in Area A on land operated by the Golden Gate Bridge, Highway and Transportation District (GGBHTD). The Presidio has also been designated a National Historic Landmark District (NHLD) since 1962 with the Doyle Drive roadway determined to be a contributing element to that landmark.

Doyle Drive, the southern approach of US 101 to the Golden Gate Bridge, is 2.4 kilometers (1.5 miles) long with six traffic lanes. There are three San Francisco approach ramps which connect to Doyle Drive: one beginning at the intersection of Marina Boulevard and Lyon Street; one at the intersection of Richardson Avenue and Lyon Street; and one where Park Presidio Boulevard (State Route 1) merges into Doyle Drive approximately 1.6 kilometers (one mile) west of the Marina Boulevard approach (see Figure 1-1). Doyle Drive passes through the Presidio on an elevated concrete viaduct (low-viaduct) and transitions to a high steel truss viaduct (high-viaduct) as it approaches the Golden Gate Bridge Toll Plaza.

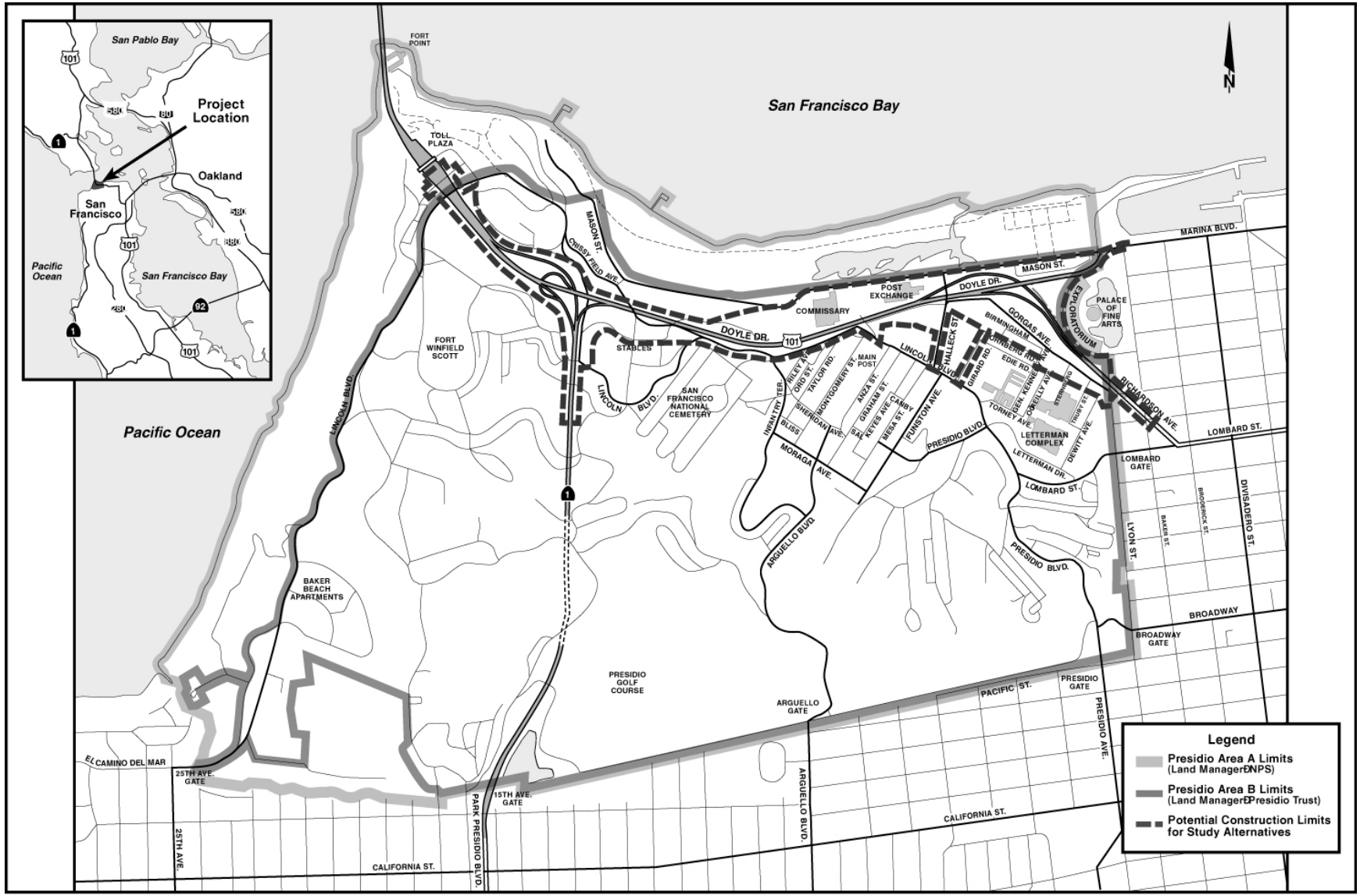
Doyle Drive is nearly 70 years old and it is approaching the end of its useful life, although regular maintenance, seismic retrofit, and partial rehabilitation activities are keeping the structure safe in the short term. However, further structural degradation caused by age and the effects of heavy traffic and exposure to salt air will cause the structures to become seismically and structurally unsafe in the coming years. In addition, the eastern portion of the aging facility is located in a potential liquefaction zone identified on the State of California Seismic Hazard Zones map dated August 2000.

Currently, Doyle Drive has nonstandard design elements, including travel lanes from 2.9 to 3.0 meters (9.5 to 10.0 feet) in width, no fixed median barrier, no shoulders and exit ramps that have tight turning radii. During peak traffic hours, plastic pylons are manually moved to provide a median lane as well as to reverse the direction of traffic flow of several lanes (Project Study Report: Doyle Drive Reconstruction, 1993).

## 1.2 PROJECT PURPOSE

The purpose of the South Access to the Golden Gate Bridge - Doyle Drive Project is to replace Doyle Drive in order to improve the seismic, structural, and traffic safety of the roadway within the setting and context of the Presidio of San Francisco and its purpose as a National Park.

**FIGURE 1-1**
**PROJECT LOCATION**



## 1.3 ALTERNATIVES DEVELOPMENT

The build alternatives for the Doyle Drive Project were developed with input from public scoping and reflected the parkway concept that evolved from previous studies. Through the screening analysis, six alternatives were selected for consideration in the Administrative DEIS/DEIR: Alternative 1, No-Build; Alternative 2, Replace and Widen; Alternatives 3a and 3b, Long Tunnels; and Alternatives 4a and 4b, Short Tunnels.

Subsequent to the Administrative DEIS/DEIR in 2002, a fifth alternative, the Presidio Parkway, was added to the list of alternatives for more detailed study. In comparison to the tunnel alternatives it was determined that Alternative 5, Presidio Parkway, would provide all the benefits and functions of Alternatives 3a, 3b, 4a, and 4b with less cost, construction duration and environmental impact. Hence, in November 2003 the four tunnel alternatives were recommended to be removed from further consideration and analysis in the DEIS/DEIR.

At a public meeting held in February 2004, the public agreed with the decision to drop Alternatives 3a, 3b, 4a, and 4b and retain Alternative 1, No-Build, Alternative 2, Replace and Widen, and Alternative 5, Presidio Parkway for consideration in the DEIS/DEIR.

### 1.3.1 Project Alternatives

This section describes the build alternatives in terms of physical and operating characteristics and a No-Build Alternative. As shown in Figure 1-1, the project limits are from Merchant Road, just south of the Golden Gate Bridge Toll Plaza, to the intersection of Richardson Avenue/Francisco Street and Marina Boulevard/Lyon Street. During the screening process, all alternatives were evaluated for their ability to meet the project's Purpose and Need. Detailed drawings showing the plan and profile of each alternative in addition to the various design options can be found in Appendix A.

#### 1.3.1.1 Alternative 1: No-Build Alternative

The No-Build Alternative represents the future year conditions if no other actions are taken in the study area beyond what is already programmed by the year 2020. The No-Build Alternative provides the baseline for existing environmental conditions and future travel conditions against which all other alternatives are compared.

Doyle Drive would remain in its current configuration, with six traffic lanes ranging in width from 2.9 to 3.0 meters (9.5 to 10 feet) and an overall facility width of 20.4 meters (67 feet) (see Figure 1-2). There are no fixed median barriers or shoulders. The lane configuration is changed by manually moving plastic pylons to increase the number of lanes in the peak direction of traffic. The facility passes through the Presidio on a high steel truss viaduct and a low elevated concrete viaduct with lengths of 463 meters (1,519 feet) and 1,137 meters (3,730 feet), respectively. This alternative does not improve the seismic, structural, or traffic safety of the roadway.

Vehicular access to the Presidio is available from Doyle Drive via the off-ramp to Merchant Road at the Golden Gate Bridge Toll Plaza. Presidio access at the east end of the project will be provided for southbound traffic via a right turn from Richardson Avenue to Gorgas Avenue. Presidio access for northbound traffic will be provided by a slip ramp from Richardson Avenue to Gorgas Avenue, which is currently under construction.

#### 1.3.1.2 Alternative 2: Replace and Widen Alternative

The Replace and Widen Alternative would replace the 463-meter (1,519-foot) high-viaduct and the 1,137-meter (3,730-foot) low-viaduct with wider structures that meet the most current seismic and structural design standards (see Figure 1-3). The new facility would be replaced on the existing alignment and widened to incorporate improvements for increased traffic safety.

**FIGURE 1-2**
**ALTERNATIVE 1: NO-BUILD**

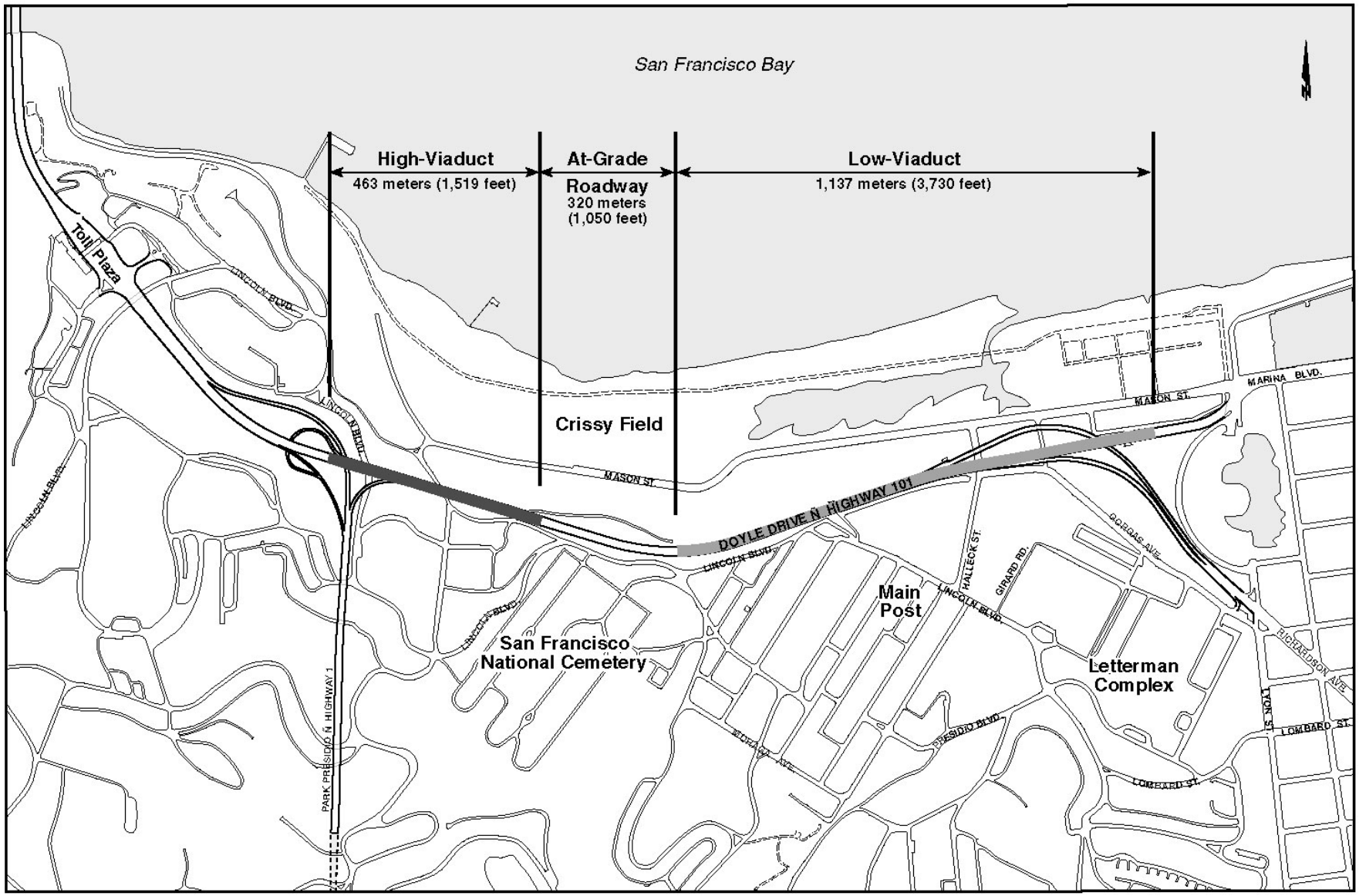
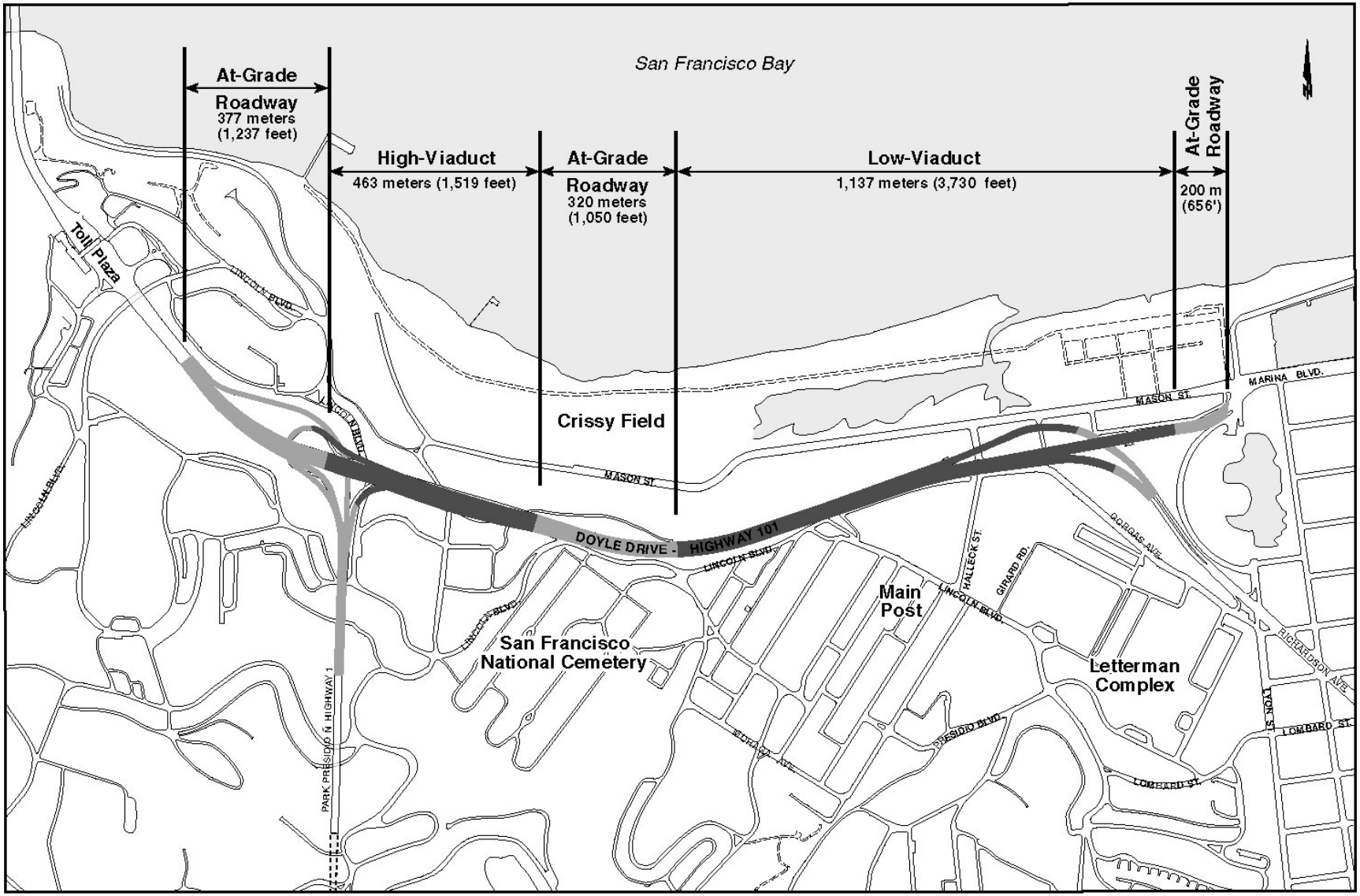


**FIGURE 1-3**
**ALTERNATIVE 2: REPLACE AND WIDEN**



This alternative would include either six 3.6-meter (12-foot) lanes and a 3.6-meter (12-foot) eastbound auxiliary lane with a fixed median barrier or six 3.6-meter (12-foot) lanes with a moveable median barrier. The new facility would have an overall width of 38.0 meters (124 feet). The fixed median barrier option would require localized lane width reduction to 3.3 meters (11 feet) to avoid impacts to the historic batteries and Lincoln Boulevard, reducing the facility width to 32.4 meters (106 feet). Both options would include continuous outside shoulders along the facility. At the Park Presidio interchange, the two ramps connecting eastbound Doyle Drive to Park Presidio Boulevard and the ramp connecting westbound Doyle Drive to southbound Park Presidio Boulevard would be reconfigured to accommodate the wider facility. The Replace and Widen Alternative would operate similar to the existing facility except that there would be a median barrier and shoulders to accommodate disabled vehicles.

The Replace and Widen Alternative includes two options for the construction staging:

No Detour Option – The widened portion of the new facility would be constructed on both sides and above the existing low-viaduct and would maintain traffic on the existing structure. Traffic would be incrementally shifted to the new facility as it is widened over the top of the existing structure. Once all traffic is on the new structure, the existing structure would be demolished and the new portions of the facility would be connected. To allow for the construction staging using the existing facility, the new low-viaduct would be constructed two meters (six feet) higher than the existing low-viaduct structure.

With Detour Option - A 20.4-meter (67-foot) wide temporary detour facility would be constructed to the north of the existing Doyle Drive to maintain traffic through the construction period. Access to Marina Boulevard during construction would be maintained on an elevated temporary structure south of Mason Street. On and off ramps to the mainline detour facility would be located near the Post Exchange (PX) building.

Vehicular access to the Presidio is available from Doyle Drive via the off-ramp to Merchant Road at the Golden Gate Bridge Toll Plaza. Presidio access at the east end of the project will be provided for southbound traffic via a right turn from Richardson Avenue to Gorgas Avenue. There would be no Presidio access for northbound traffic at the east end of Doyle Drive due to geometric constraints and concerns for traffic safety.

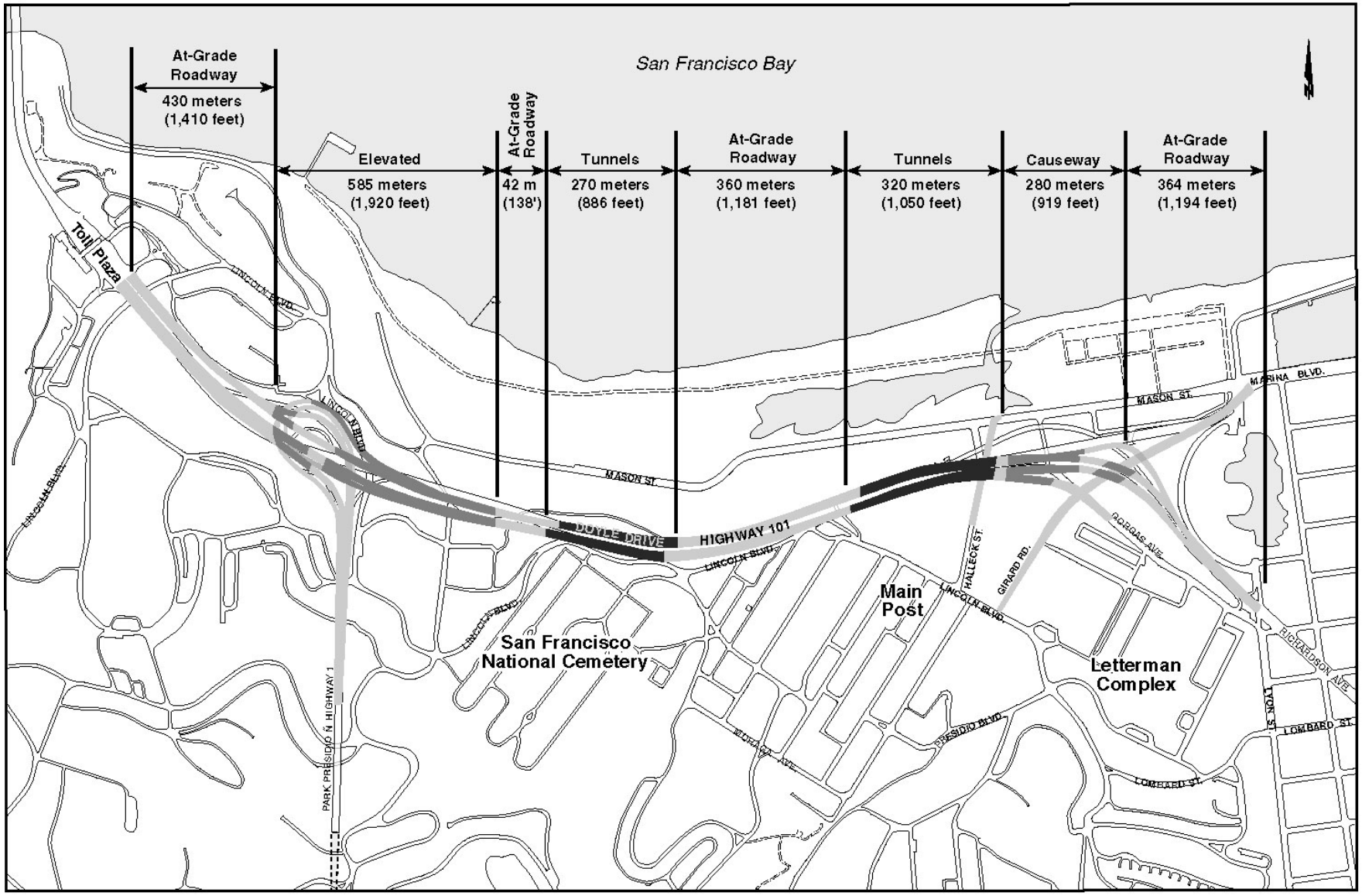
#### 1.3.1.3 Alternative 5: Presidio Parkway Alternative

The Presidio Parkway Alternative would replace the existing facility with a new six-lane facility and an eastbound auxiliary lane between the Park Presidio interchange and the new Presidio access at Girard Road (see Figure 1-4). The new facility would have an overall width of up to 45 meters (148 feet), and would incorporate wide landscaped medians and continuous shoulders. To minimize impacts to the park, the footprint of the new facility would include a large portion of the existing facility's footprint east of the Park Presidio interchange. A 450-meter (1,476-foot) high-viaduct would be constructed between the Park Presidio interchange and the San Francisco National Cemetery. Shallow cut-and-cover tunnels would extend 240 meters (787 feet) past the cemetery to east of Battery Blaney. The facility would then continue towards the Main Post in an open depressed roadway with a wide, heavily landscaped median. From Building 106 (Band Barracks) cut-and-cover tunnels up to 310 meters long (984 feet) would extend to east of Halleck Street. The facility would then rise slightly on a low level causeway 160 meters (525 feet) long over the site of the proposed Tennessee Hollow restoration and a depressed Girard Road. East of Girard Road the facility would return to existing grade north of the Gorgas warehouses and connect to Richardson Avenue.

The Presidio Parkway Alternative would include an underground parking facility at the eastern end of the project corridor between the Mason Street Warehouses, Gorgas Street Warehouses and Palace of Fine Arts. The parking garage would supply approximately 500 spaces to maintain the existing parking supply in the area and improve pedestrian and vehicular access between the Presidio and the Palace of Fine Arts.

At the intersection with Merchant Road, just east of the toll plaza, a design option has been developed for a Merchant Road slip ramp. This option would provide an additional new connection from westbound Doyle

**FIGURE 1-4**
**ALTERNATIVE 5: PRESIDIO PARKWAY**



Drive to Merchant Road. This ramp would provide direct access to the Golden Gate Visitors' Center and alleviate the congested weaving section where northbound Park Presidio Boulevard merges into Doyle Drive.

The Park Presidio interchange would be reconfigured due to the realignment of Doyle Drive to the south. The exit ramp from eastbound Doyle Drive to southbound Park Presidio Boulevard would be replaced with standard exit ramp geometry and widened to two lanes. The loop of the westbound Doyle Drive exit ramp to southbound Park Presidio Boulevard would be improved to provide standard exit ramp geometry. The northbound Park Presidio Boulevard connection to westbound Doyle Drive would be realigned to provide standard entrance ramp geometry. There are two options for the northbound Park Presidio Boulevard ramp to an eastbound Doyle Drive connection:

Option 1: Loop Ramp - Replace the existing ramp with a loop ramp to the left to reduce construction close to the Calvary Stables and provide standard entrance and exit ramp geometry.

Option 2: Hook Ramp - Rebuild the ramp with a similar configuration as the existing ramp with a curve to the right and improved exit and entrance geometry.

The Presidio Parkway Alternative includes two options for direct access to the Presidio and Marina Boulevard at the eastern end of the project:

Diamond Option – Direct access to the Presidio and Marina Boulevard in both directions is provided by the access ramps from Doyle Drive connecting to a grade-separated interchange at Girard Road. East of the new Letterman garage, Gorgas Avenue is a one-way street and connects to Richardson Avenue with access to Palace Drive via a signalized intersection at Lyon Street.

Circle Drive Option – The Circle Drive Option provides direct access to the Presidio and Marina Boulevard for eastbound traffic by access ramps connecting to a grade-separated interchange of Girard Road. Westbound traffic from Richardson Avenue would access the Presidio and Palace Drive through a jug handle intersection with Gorgas Avenue.

# SECTION 2: FUNDAMENTALS OF TRAFFIC NOISE

## 2.1 NOISE PRINCIPLES AND DESCRIPTORS

Noise is defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB). Zero dB is typically the threshold of human hearing and 120 to 140 dB is typically the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA).[1] Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements. Some representative noise sources and their corresponding A-weighted noise levels are shown in Figure 2-1.

This time-varying characteristic of environmental noise is described using various noise descriptors. The most frequently used noise descriptors are summarized below:

Leq: the equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The Leq is the constant sound level that would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

Lmax: the instantaneous maximum noise level for a specified period of time.

L50: the noise level that is equaled or exceeded 50 percent of the specified time period. The L50 represents the median sound level.

L10: the noise level that is equaled or exceeded 10 percent of the specified time period.

DNL: 24-hour day and night A-weighted noise exposure level that accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.

CNEL: similar to the DNL the Community Noise Equivalent Level (CNEL) adds a 5-dBA "penalty" for the evening hours between 7:00 PM and 10:00 PM in addition to a 10-dBA penalty between the hours of 10:00 PM and 7:00 AM.

As a general rule, in areas where the noise environment is dominated by traffic, the Leq during the peak-hour is generally equivalent to the DNL at that location.

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1 All noise levels reported herein reflect A-weighted decibels unless otherwise stated.

**FIGURE 2-1**
**COMPARATIVE SOUND LEVELS**

| Sound Level (dBA, $L_{eq}$) | Common Indoor Sound Levels | Common Outdoor Sound Levels | Description |
|---|---|---|---|
| | Rock Band | | |
| 110 | | | |
| | | Jet Flyover at 305 meters (1,000 feet) | |
| 100 | | | |
| | Inside Subway Train (New York) | | |
| | | Gas Lawn Mower at 0.9 meter (3 feet) | **Very Annoying** |
| 90 | | | **Loss of Hearing with** |
| | Food Blender at 0.9 meter (3 feet) | Diesel Truck at 0.9 meter (3 feet) | **Prolonged Exposure** |
| | Garbage Disposal at 0.9 meter (3 feet) | Noisy Urban Daytime | |
| 80 | | | **Annoying** |
| | Shouting at 0.9 meter (3 feet) | | |
| | Vacuum Cleaner at 0.9 meter (3 feet) | Gas Lawn Mower at 30 meters (100 feet) | |
| 70 | | | |
| | | Commercial Area | **Intrusive** |
| | | Heavy Traffic at 91 meters (300 feet) | |
| 60 | | | |
| | Large Business Office | | |
| 50 | Dishwasher Next Room | Quiet Urban Daytime | **Quiet** |
| | | Quiet Urban Nighttime | |
| 40 | Small Theater | | |
| | Large Conference Room (Background) | | |
| | Library | Quiet Suburban Nighttime | |
| 30 | | | |
| | Concert Hall (Background) | Quiet Rural Nighttime | **Very Quiet** |
| 20 | | | |
| | Broadcast and Recording Studio | | |
| 10 | | | |
| | | | **Threshold of Hearing** |
| 0 | | | |

Sources: Caltrans Transportation Laboratory Noise Manual 1982.

## 2.2 NOISE EXPOSURE AND COMMUNITY NOISE

Noise exposure is a measure of noise over a period of time. A noise level is a measure of noise at a given instant in time or averaged over a defined period of time. The noise levels presented in Figure 3-1 are representative of measured noise at a given instant in time, however, they rarely persist consistently over a long period of time.

Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level gradually changes throughout a typical day corresponding with the addition and

subtraction of distant noise sources with many of the individual contributors unidentifiable. The addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identified, also add to the fluctuations in the community noise levels. Successive addition of sound to the community noise environment varies the community noise level, requiring the measurement of noise exposure over a period of time to evaluate cumulative noise impacts.

## 2.3 EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be placed into three categories:

- subjective effects of annoyance, nuisance, dissatisfaction;
- interference with activities such as speech, sleep, learning;
- and physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no complete satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so called "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise would be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- a change in level of at least 5 dBA is required before any noticeable change in human response would be expected (Peterson, et al.); and
- a 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion, hence the decibel scale is used. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

## 2.4 NOISE ATTENUATION

Traffic noise, which generally behaves as a "line source" of noise, attenuates (lessens) at a rate of 3 to 5 dBA per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and noise barriers (either vegetative or manufactured, etc.). Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate at a rate of 6 to 7.5 dBA per doubling of distance.

Propagation of noise is dependant on several factors including the type of intervening ground surface, meteorological factors and the presence of natural or man-made barriers. Ground surfaces may be characterized as "hard" (i.e., an asphalt parking lot) or "soft" (i.e., rolling grassy hills with vegetation), with hard surfaces serving to more effectively propagate noise with distance.

Vehicle noise emissions are predominantly influenced by the number of vehicles on a given roadway per hour, the speed of the vehicles on that roadway, and the type of vehicles. Generally, a doubling of vehicle traffic volumes would result in an increase of 3 dBA. At a distance of 15 meters (50 feet) noise emissions of passenger automobiles are approximately 60 dBA at a speed of 40 kilometers per hour (25 miles per hour) and increase to approximately 75 dBA at 105 kilometers per hour (65 miles per hour). For heavy trucks the noise-speed relationship proceeds from approximately 79 dBA at a speed of 40 kilometers per hour (25 miles per hour) and increases to approximately 85 dBA at 105 kilometers per hour (65 miles per hour).

# SECTION 3: FEDERAL AND STATE POLICIES AND PROCEDURES FOR NOISE

## 3.1 OPERATIONAL PHASE

### 3.1.1 Federal Requirements

Noise is identified in the National Environmental Policy Act as an area for review in terms of environmental impacts of Federal actions. For the Federal Highway Administration (FHWA), the applicable standard is 23 CFR 772. Compliance with 23 CFR 772 will satisfy National Environmental Policy Act (NEPA) requirements with respect to traffic noise impacts. Under 23 CFR 772, noise abatement must be considered for Type I projects when the project would result in a substantial noise increase, or when the predicted noise levels approach, meet, or exceed the "Noise Abatement Criteria," shown in Table 3-1. Following guidance in the Caltrans Traffic Noise Analysis Protocol, “approach” is defined as being within 1 dBA of the FHWA criteria and a noise increase is substantial when the predicted noise levels with the project exceed existing noise levels by 12 dBA, Leq(h).[2]

**TABLE 3-1**
**ACTIVITY CATEGORIES AND NOISE ABATEMENT CRITERIA (NAC)**

| Activity Category | NAC, Hourly A-Weighted Noise Level (dBA, Leq(h)) | Description of Activities |
|---|---|---|
| A | 57<br>Exterior | Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. |
| B | 67<br>Exterior | Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals. |
| C | 72<br>Exterior | Developed lands, properties, or activities not included in Categories A or B above. |
| D | -- | Undeveloped lands. |
| E | 52<br>Interior | Residences, motels, hotels, public meeting rooms, schools, churches, libraries, and auditoriums. |

Source: 23 CFR 772.

The Presidio Parkway and the Replace and Widen Alternatives are considered to be Type I projects as defined in 23 Code of Federal Regulations (CFR) 772. A Type I project is defined as a proposed Federal or Federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes.

[2] Leq(h) refers to the noisiest one-hour-average noise level over the course of a 24-hour due to motor vehicle traffic. Depending upon average speeds during the peak (traffic) periods, the Leq(h) may or may not coincide with the peak traffic hour.

Operational noise impacts for roadway projects with a Federal Highway Administration (FHWA) nexus are defined in 23 CFR 772. An impact occurs if a project would result in a substantial noise increase, or when the predicted noise levels approach, or exceed the Noise Abatement Criteria (NAC) shown in Table 3-1. The Caltrans' *Traffic Noise Analysis Protocol* defines approach as being within 1 A-weighted decibel (dBA) of the FHWA criteria and a substantial noise increase is when the predicted noise levels with the project exceed existing noise levels by 12 dBA, Leq(h)[3] during the loudest traffic-hour of the day. The FHWA noise abatement criteria represent a balance between what is desirable and what is achievable and are based on speech interference.

For park lands, use determines the appropriate criteria. Category A areas include certain pristine or meditative areas. Category B is applicable to open space used for recreational and educational activities, and is the appropriate designation for much of the outdoor use areas at the Presidio and Palace of Fine Arts. Category C applies to any areas with retail or office use.

The National Park Service (NPS) and the Presidio Trust have a desire to provide additional emphasis on noise within the project corridor that lies within the control of each of these two entities. While there are no existing federal noise standards that are specific to the Presidio or the NPS other than the FHWA criteria noted above, the NPS does have a policy set forth in Director's Order #47 *Soundscape Preservation and Noise Management*, which requires that all park facilities be managed to minimize noise pollution. The Presidio Trust Management Plan Final EIS identifies the FHWA criteria as the appropriate federal criteria to apply to the Presidio Trust lands. The EIS also identifies those areas of the Presidio that the Trust's believes warrant special consideration as noise sensitive areas. Every effort will be made to ensure that these policies are incorporated into all decisions made relative to noise impacts and noise abatement.

### 3.1.2 State and Local Requirements

Under the California Environmental Quality Act (CEQA), a substantial noise increase may result in a significant adverse environmental effect and must be mitigated or identified as a noise impact for which it is likely that no, or only partial abatement measures are available. For the purposes of CEQA analysis, Caltrans considers a noise increase to be substantial when the predicted noise levels with the project exceed existing noise levels by 12 dBA, Leq(h). Further requirements are found in the California Streets and Highway Code Section 216. Caltrans has also established noise analysis policies in the Traffic Noise Analysis Protocol and the Highway Design Manual. Additional guidance from Caltrans can be found in the Technical Noise Supplement of October 1998 (TeNS), Chapter 30 of the Project Development Procedures Manual, and in Chapter 12 of the Standard Environmental References.

## 3.2 CONSTRUCTION PHASE

### 3.2.1 Federal Requirements

FHWA requires that construction noise impacts be addressed consistent with 23 CFR 772.19. The general requirement is to:

- identify potentially impacted land uses or activities which may be affected by noise from construction of the project;
- determine the measures which are needed in the plans and specifications to minimize or eliminate adverse construction noise impacts; and
- incorporate the abatement into the plans and specifications for the project.

[3] Leq(h) is the sound level equivalent to the average sound energy occurring over a one-hour period.

Those portions of the NPS Director's Order #47 and the Presidio Trust Management Plan that relate to construction noise impacts and abatement will be also be used to evaluate the need for and appropriateness of construction noise mitigation.

### 3.2.2 State and Local Requirements

Caltrans protocol require that construction noise impacts be addressed on a case-by-case along with likely abatement measures. It is expected that specifications related to noise may be required for this project. General construction-related noise impact analysis is qualitative in nature and is based on a description of the expected construction phases, including the nature of the construction activity (e.g., such as pile driving) and its duration, the types of equipment that would be used, and proximity to noise-sensitive uses.

Additionally, the Presidio Trust Management Plan Final EIS identifies Title 24 of the California Code of Regulation as a regulatory approach to noise control. The noise standards found in this code are related to interior spaces and apply to all new multifamily residential units (hotels, motels, apartments, condominiums, and other attached dwellings that were permitted after 1974. As part of the Trust compliance process, the Trust would enforce the noise insulation requirements equivalent to the standards of Title 24 with building permit conditions.

Compliance with the San Francisco Noise Ordinance requirements would also be required of this project. Details of the anticipated construction phase noise impacts and abatement considerations are noted in Section 8.

# SECTION 4: NOISE STUDY METHODS AND PROCEDURES

## 4.1 SELECTION OF RECEIVERS AND MEASUREMENT SITES

The selection of receiver points for modeling and locations for conducting field measurements was done in consultation with Caltrans, the Presidio Trust and the National Park Service. The receptor points were selected to represent all of the existing buildings within The Presidio that were or might be considered noise sensitive based on existing or anticipated usage and that might be impacted by traffic or construction noise associated with the Doyle Drive project. Additionally many of the sites were selected in anticipation that they are (or would be) expected to receive the highest noise levels over the life of the project. Representative sites throughout the project corridor were selected in an attempt to insure that all land use categories present in the vicinity of Doyle Drive were identified.

Likewise, field measurement sites were selected based on a number of criteria. One concern was the potential of the site to be impacted by relatively high project traffic and/or construction noise levels. Another goal was to use some of the sites to establish ambient or background noise levels, especially where the location was at a substantial distance from Doyle Drive. It was also a goal of the measurement sites selected to use some of these locations to serve as calibration sites for traffic noise modeling purposes. Where possible, sites were selected that had a consistent traffic flow, a clear view of the roadway of concern, and where terrain features were relatively uniform in nature. Unfortunately this was not often the case along this corridor due to the topographic changes that took place in nearly every segment of the project corridor.

## 4.2 FIELD MEASUREMENT PROCEDURES

Field measurements were generally conducted in accordance with the techniques found in the FHWA document *Measurement of Highway-Related Noise* and the Caltrans TeNS document.

### 4.2.1 Instrumentation and Setup

The basic setup for each field measurement site was as follows. Each site was visually inspected for conditions that might not make it suitable for field measurements such as temporary construction activities in the area, lawn care activities, frequent human passage, or frequent aircraft over flights. It was also inspected for safety concerns, access, and any other conditions that might make the site unsuitable, such as limited sight to the roadway for traffic assessment purposes. Once the visual inspection was completed, physical measurements were taken at each site to include reference points, compass directions, and a site sketch was then prepared. The sketch also includes vegetative features, ground cover type, and other pertinent data that might impact sound level transmission. Topographic data was obtained from elevation data provided as part of the project design information. Equipment used at each site to gather noise levels included a sound level meter, a sound level calibrator, an adjustable tripod on which to mount the meter, and a microphone equipped with a windscreen. Details of the noise gathering equipment, including make, model, calibration data, etc., can be found in Appendix B.

### 4.2.2 Noise Measurements

Noise measurements were generally taken consistent with the protocol established in the TeNS document and the FHWA document *Measurement of Highway-Related Noise*. As appropriate, traffic noise levels were scheduled to be monitored during peak noise hours based on observed traffic conditions and directional flow of the traffic. This allowed the traffic noise levels that were recorded to be “worst case” condition, or as close to it as possible. For those areas were traffic noise was not the primary source of noise, data was gathered during periods of time when conditions appeared to represent normal activity levels for the land use under consideration.

Prior to starting each set of measurements, the equipment was assembled on site and batteries were checked along with meteorological data prior to initiation of the study. Once the sound level meter was installed on the tripod with the microphone 1.5 meters (5 feet) above the ground, it was calibrated using a calibrator that is factory-approved for the specific sound level meter used. After calibration was complete and basic meteorological data had been gathered and noted on field data forms for that purpose, contact was initiated with field staff (when appropriate) that were to collect traffic data. Since some locations were not influenced by traffic noise or where 24 hour counts were taken, correlating traffic data was not generally gather. When it was appropriate to gather traffic information, data gathering for both traffic and noise levels were taken over a simultaneous time period. The time period selected for most of the field measurements taken in 2002 were for 24 hours while those taken in 2004 were for a 10 minute duration with at least two sets of data taken to insure that the consistency required in the TeNS document were meet. All measurements were taken using the slow-response setting on the A-weighing network. Once the measurement period was completed, traffic data (where obtained) was reviewed and logged along with the sound level data. Meteorological data was checked again at the end of each data set along with the status of the batteries in the sound level meter. Then a post-reading calibration check of the sound level meter was completed and the process repeated as often as necessary to meet the protocol requirement or as long as weather conditions allowed.

### 4.2.3 Traffic Counts and Speeds

When taken as part of the field measurements, traffic counts were taken throughout the entire noise measurement period. Traffic counts were taken manually using traffic tallying equipment and recorded on forms established for that purpose. Traffic was counted on both directions and classified into the following categories: cars, medium trucks, heavy trucks, buses, and motorcycles, consistent with the guidance provided by FHWA and Caltrans. Traffic speeds were taken by using a radar speed detection system in a manner prescribed by the manufacturer and recorded manually on a form designed for that purpose. At the end of each run the average speed for each classification was determined and logged on the field measurement data sheet as appropriate.

### 4.2.4 Meteorology

Prior to and following the gathering of all noise data for the 2004 series of measurements, meteorological data was gathered and noted on the field measurement data form. This data included cloud cover, relative humidity, air temperature, wind speed, and wind direction. If wind speeds exceeded 5 meters per second (11 mph), noise level readings were suspended and the data discarded. Humidity levels were also monitored carefully to insure that they did not exceed the manufacturer's recommendations for the sound level meter. Equipment used for this function is listed in Appendix B.

### 4.2.5 Data Reduction

All data gathered as part of the study was recorded on appropriate forms and, in the case of the noise level data, downloaded from the meter into a computer program. The data was then stored on disks and later converted to spreadsheets for analysis purposes. Conversion of traffic data from the 10 minute recording period to a one-hour equivalent was done manually for inclusion in the noise model used to validate the accuracy of the field data gathered at those locations where this activity was appropriate. This conversion was consistent with the procedure found in the TeNS document.

## 4.3 NOISE PREDICTION METHOD

The FHWA Traffic Noise Model (TNM) version 2.5 was used for all future year traffic noise predictions used in this study. This included the calibration of field data as well as the prediction of traffic noise impacts from all alternatives associated with this project. This model was developed for FHWA under the guidance of the Noise Analysis Facility at the Volpe National Transportation Systems Center of the U.S. Department of

Transportation. First released for use by FHWA in March of 1998, the model has undergone a series of updates. The current version (2.5) was released for use in April of 2004 and has replaced all previously approved noise prediction models used on Federal-aid highway projects. TNM propagates sound energy, in one-third octave bands, between highways and receptors (noise sensitive locations) taking the intervening ground's acoustical characteristics and topography into account.

Existing and future noise levels (with and without the improvements to Doyle Drive) were predicted using TNM. To insure that the predictions were as accurate as possible, the computer model was calibrated using measured noise levels at selected receptor locations adjacent to the project corridor.

Input to TNM includes traffic volumes (for the noisiest hour), speeds, vertical and horizontal elevations of roadway segments and receptors, and topographic shielding. Vehicle traffic volumes were input by vehicle type to account for the "noisier" engines and elevated emission points of medium-duty and heavy-duty trucks, buses, and motorcycles. Traffic data prepared by DKS Associates was input into the TNM to predict noise levels within the Doyle Drive project limits (see Appendix C for traffic data summarized for use in the traffic noise model). The motor vehicle fleet used in the analysis for both the existing and future conditions consisted of automobiles, medium trucks (cargo vehicles with two axles and six tires), heavy trucks (cargo vehicles with three or more axles), buses (9 passenger or more), and motorcycles.

# SECTION 5: EXISTING NOISE ENVIRONMENT

## 5.1 EXISTING NOISE SENSITIVE LAND USES

The Doyle Drive corridor lies within a National Park and land uses in the immediate area are not zoned like a typical urban area within the jurisdiction of a city or county. The corridor contains a mix of open space, residential and office land uses as well as a cemetery and institutional uses related to operations of the Presidio Trust, NPS, YMCA and other conservatory agencies.

## 5.2 FUTURE LAND USES

The Presidio Trust recently finalized the Presidio Trust Management Plan and certified the accompanying Environmental Impact Statement (EIS). The Management Plan examines future land use expectations within the Presidio. The document shows locations of planned housing retention, removal and replacement within the Presidio and does not identify any location proposed for conversion to residential use within one mile of the project alignment. The Final EIS identifies traffic-generated noise as the major source of environmental noise. The Final EIS further points out that natural sounds are intrinsic elements of the environment that are inherent components of the Presidio's significant natural, historic, cultural, scenic, and recreational resources to be protected. The Final EIS also identifies specific examples of areas where quiet is of significance. These areas include Crissy Marsh, Tennessee Hollow, the Fort Scott parade ground, the National Cemetery, and the World War II Memorial. It is the intent of the Trust to maintain or enhance the noise environment within the Presidio whenever possible.

## 5.3 SENSITIVE RECEPTORS

Land uses considered to be sensitive to noise and vibration, are referred to as sensitive receptors. Some land uses are considered more sensitive to ambient noise and vibration levels than others, due to the types of activities typically occurring. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, and parks and other outdoor recreation areas generally are more sensitive to noise and vibration than are commercial (other than lodging facilities) and industrial land uses.

Noise sensitive receptors that could be affected by the Doyle Drive Project have been identified through a review of the maps illustrating the build alternatives, a site reconnaissance, and a review of future plans and related traffic analyses for the Presidio as shown in the Final General Management Plan Amendment Environmental Impact Statement (EIS) for the Presidio of San Francisco (U.S. Department of the Interior, 1994) for Area A and in the Presidio Trust Management Plan Final EIS for Area B.

### 5.3.1 Sensitive Receptors within the Doyle Drive Corridor

Sensitive receptors within the Doyle Drive corridor include residential areas along and in the vicinity of Armistead Road (northwest of the junction of Highway 1 and Doyle Drive), Storey Avenue (north of Ruckman Avenue), Riley Avenue, General Kennedy Avenue, and Girard Road. In some cases, these residential areas are in active use. Other residential areas appear to be vacant but are designated as residential and are not slated for removal under the Presidio's General Management Plan Amendment. These areas are presumed to be available for residential purposes in the future. Additional noise-sensitive uses within the Doyle Drive corridor include the National Cemetery and Crissy Field. Representative sensitive receptors within the Doyle Drive corridor are identified as Receptors C through K on Figure 5-1.

**FIGURE 5-1**
**LONG-TERM MONITORING LOCATIONS, 2002**

Ⓐ Noise Monitoring and Assessment Locations

### 5.3.2 Sensitive Receptors East of the Presidio

Sensitive receptors east of the Presidio include the residences immediately east of the Palace of Fine Arts along Baker Street, along the south side of Marina Boulevard, along the east side of Lyon Street north of Lombard, and along both sides of Richardson Avenue. These residential areas are identified as Receptors A and B on Figure 5-1.

## 5.4 EXISTING NOISE LEVELS

The area of analysis for potential noise impacts includes adjacent and off-site areas that could be affected by project-generated construction and operational noise. The existing noise environment in these areas is influenced primarily by vehicle traffic, principally on Doyle Drive / Highway 101, Richardson Avenue, Lincoln Boulevard, Mason Street and Gorgas Avenue. Stationary noise sources affecting the project vicinity include construction activity at the former Letterman Complex, Deliveries to the Post Commissary and air handling equipment common to most buildings. An additional occasional mobile noise source is horns blowing from marine vessels passing through the Golden Gate.

### 5.4.1 Field Measured Results

As part of the 2002 noise study, long-term 24-hour noise measurements were collected at 10 locations identified in consultation with the Presidio Trust, the NPS, a review of the maps illustrating the build alternatives, site reconnaissance, and a review of future plans and related traffic analyses for the Presidio as shown in the Final General Management Plan Amendment EIS for the Presidio of San Francisco (U.S. Department of the Interior, 1994). Monitoring locations in the project vicinity are illustrated on Figure 5-1. Table 5-1 provides a description of the monitoring locations and the measured noise levels at each location. Because of demolition activities occurring at the proposed Letterman site, long term noise monitoring was not conducted.

Additional short-term (10 minute) measurements were collected at 20 locations over a period of five days between June 28 and July 2, 2004. These measurements were taken to establish a general background level within the project area. The measurements at locations 1, 10, 14, 17, 18, 19, 20 and 21 were also used to calibrate the TNM model for the No-Build and Replace and Widen Alternatives, consistent with Caltrans Protocol. Table 5-2 provides a listing of the short-term measurement sites, along with measured noise levels at each of these locations. Figure 5-2 locates these sites for geographic reference, some of which were identical to those used for the long-term measurements.

Topography in the project corridor generally slopes downward from south to north. Between Lyon Street and Halleck Street topography is relatively level on both sides of Doyle Drive and Doyle Drive becomes an elevated structure. East of Halleck Street, however, the elevation on the south side of Doyle Drive increases to as much as 30 meters (100 feet) at Lincoln Boulevard. Between Lincoln Boulevard and Park Presidio, elevations on the south side of Doyle Drive drop and the Doyle Drive structure is a high viaduct span centered at McDowell Avenue. From McDowell Avenue westward, elevations on both sides of Doyle Drive increase in tandem up to 61 meters (200 feet) at Fort Scott towards the toll plaza.

### 5.4.2 Modeled Results

Where sufficient information related to traffic conditions that existed during the time period of each field measurement, the data was input into the TNM model for comparative purposes. The results of this modeling are shown in the following sections.

**TABLE 5-1**
**LONG TERM (24 HOUR) MEASURED NOISE LEVELS[1]**

| Receptor No. | Location or Address[2] | Approximate Distance From Noise Source | Type of Development | Number of Units Represented | Traffic Noise Abatement Category and Criterion[3] | Existing Worst Hour Noise Level Leq(h)[4] |
|---|---|---|---|---|---|---|
| A | 3234 Lyon Street | 15 meters from Richardson Avenue Centerline | Residential | 8 | (B/E) 66 | 76 |
| B | Marina Boulevard at Lyon Street | 13 meters from Marina Boulevard Centerline | Residential | 9 | (B/E) 66 | 74 |
| C | Building 1029 | 130 meters from Doyle Drive Centerline | Residential | 40 | B/E) 66 | 62 |
| D | Main Post Building 106/211 | 15 meters from Doyle Drive Centerline | Commercial | N/A | (C) 71 | 70 |
| E | Crissy Field/Commissary | 130 meters from Doyle Drive Centerline | Open Space | N/A | (B) 66[5] | 63 |
| F | Crissy Field/Stilwell Hall | 50 meters from Doyle Drive Centerline | Open Space | N/A | (B) 66 | 64 |
| G | Crissy Field/USCG | 320 meters from Doyle Drive Centerline | Open Space | N/A | (B) 66 | 63 |
| H | 1251 Armistead Road | 50 meters from Doyle Drive Centerline | Residential | 12 | (B) 66 | 67 |
| I | 1291 Storey Avenue | 50 meters from Doyle Drive Centerline | Residential | 16 | (B) 66 | 61 |
| J | National Cemetery at Lincoln Boulevard | 50 meters from Doyle Drive Centerline | Cemetery | N/A | (B) 66 | 63 |
| K | National Cemetery south end | 460 meters from Doyle Drive Centerline | Cemetery | N/A | (B) 66 | 57 |

Source: Environmental Science Associates, 2002.

Notes: [1]Noise levels measured between September 26, 2001 and April 10, 2002.

[2]See Figure 5-1 for the location of long-term measurement sites.

[3]Reflects Caltrans approach criterion.

[4]Worst hour noise levels represent the peak hourly average noise level for each location as monitored over a 24 to 48 hour period, except for Receptor A, for which monitoring was performed during the peak traffic hour as determined by data from the other monitoring locations.

[5]The land use at this location has changed to commercial use since these noise levels were measurement.

**TABLE 5-2**
**SHORT-TERM FIELD MEASURED NOISE LEVELS[1]**

| Site No. | Location or Address | Approximate Distance From Noise Source | Current Land Use | Number of Units Represented | Traffic Noise Abatement Category and Criterion[2] | Average Measured Noise Level Leq(h)[3] | Measurement Date(s) and Time Period |
|---|---|---|---|---|---|---|---|
| 1 | 3234 Lyon Street | 3 meters from edge of Richardson Ave. | Residential | 8 | (B/E) 66 | 77 | 6/29/04<br>7:32-7:58 |
| 2 | North of Doyle Drive at Building 1188 (Mason Street Warehouse) west of Lyon Street | 17 meters from Doyle Drive Centerline (C/L) | Commercial | 2 | (C) 71 | 81 | 6/28/04<br>15:25-16:26 |
| 3 | Building 1029 (Swords to Plowshares) | 130 meters from Doyle Drive C/L | Residential | 100 | (B/E) 66 | 57 | 7/1/04<br>10:13-10:38 |
| 4 | Main Post Building 103 | 186 meters from edge of Doyle Drive and 8 meters from Montgomery St. C/L | Commercial | N/A | (C) 71 | 74 | 6/28/04<br>9:11-9:37 |
| 5 | NW Corner of Commissary/Sports Basement | 130 meters from Doyle Drive C/L | Commercial | N/A | (C) 71 | 73 | 7/1-2/04<br>15:33-15:59<br>9:05-9:46 |
| 6 | Building 650/Stilwell Hall | 14 meters from Doyle Drive C/L | Lodging | N/A | (B) 66 | 70 | 6/29/04<br>17:01-17:26 |
| 7 | Crissy Field Marsh/Recreation Area | 144 meters from Mason St. C/L | Open Space | N/A | (B) 66 | 80 | 6/28-29/04<br>11:52-12:03<br>9:29-9:54 |
| 8 | 1253 Armistead Road | 48 meters from Doyle Drive C/L | Residential | 12 | (B) 66 | 66 | 7/1/04<br>16:24-16:49 |

| Site No. | Location or Address | Approximate Distance From Noise Source | Current Land Use | Number of Units Represented | Traffic Noise Abatement Category and Criterion[2] | Average Measured Noise Level Leq(h)[3] | Measurement Date(s) and Time Period |
|---|---|---|---|---|---|---|---|
| 9 | 1291 Storey Avenue | 50 meters from Doyle Drive C/L | Residential | 16 | (B) 66 | 66 | 7/1/04<br>7:26-7:51 |
| 10 | National Cemetery at Lincoln Boulevard | 37 meters from Doyle Drive C/L | Cemetery | N/A | (B) 66 | 69 | 6/28 & 7/2/04<br>8:21-8:48<br>8:21-8:48 |
| 11 | Building 682/Cross Cultural Environ-mental Leadership Academy | 35 meters from Park Presidio Blvd. C/L | Educational | N/A | (B) 66 | 66 | 6/30/04<br>9:08-9:35 |
| 12 | Palace of Fine Arts-Baker St. area | 14 meters from Baker St. C/L | Residential | 30 | (B) 66 | 82 | 6/28/04<br>16:54-17:20 |
| 13 | Letterman Area – not available due to construction activities | | | | | | |
| 14 | Building 1169 (Gorgas Avenue Warehouse) | 28 meters from Richardson Rd. C/L | Commercial | NA | (C) 71 | 68 | 6/29/04<br>8:23-9:05 |
| 15 | Buildings 1060/1062 on Thornburg | 37 meters from Gorgas Ave. | Commercial | 2 | (C) 71 | 68 | 6/28/04<br>10:57-11:22 |
| 16 | Crissy Field Center Building 603 | 11 meters from Mason St. C/L | Educational | NA | (B) 66 | 72 | 6/29/04<br>10:15-10:40 |
| 17 | Building 106/Pacific Union office | 20 meters from Doyle Drive C/L and 7 meters from Lincoln Blvd. | Commercial | NA | (C) 71 | 76 | 6/28 & 7/2/04<br>7:31-7:56<br>7:38-8:03 |
| 18 | Building 610/Sports Basement – SE corner of the building | 30 meter from Doyle Drive C/L | Commercial | NA | (C) 71 | 68 | 6/30/04<br>16:41-17:43 |

| Site No. | Location or Address | Approximate Distance From Noise Source | Current Land Use | Number of Units Represented | Traffic Noise Abatement Category and Criterion[2] | Average Measured Noise Level Leq(h)[3] | Measurement Date(s) and Time Period |
|---|---|---|---|---|---|---|---|
| 19 | Cavalry Stable Pen / Building 661 | 99 meters from Doyle Drive C/L | Commercial | NA | (C) 71 | 64 | 6/30/04 15:55-16:21 |
| 20 | Log Cabin Picnic Area | 107 meter from Doyle Drive C/L | Recreational | NA | (B) 66 | 63 | 6/30/04 7:25-8:27 |
| 21 | Battery Baldwin area | 39 meters from Doyle Drive C/L | Recreational | NA | (B) 66 | 71 | 6/29/04 15:34-16:40 |

Source: Environmental Science Associates, 2004.

Notes: [1]Measurements taken between June 28 and July 2, 2004.

[2]Reflects Caltrans approach criterion.

[3]The average of all runs for each site. At least 2 runs (ten minutes per run) were taken for each site consistent with Caltrans procedures.

**FIGURE 5-2**
**SHORT-TERM NOISE MEASUREMENT LOCATIONS, 2004**

9 Noise Measurement Locations

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#### 5.4.2.1 Long-Term Field Measurement Modeled Data

Table 5-3 presents the long-term measured existing noise levels and the predicted existing noise levels for the evaluated noise sensitive sites. With the exception of Receptor G (the United States Coast Guard facility at Crissy Field), differences in the measured and predicted levels are within 3 dBA. This range of difference is not considered unusual considering the generalization of traffic conditions required for the prediction of future traffic noise levels with the Doyle Drive alternatives. The difference in measured versus predicted levels at Receptor No. G is likely a result of an influence from local sound sources other than traffic during the measurement.

**TABLE 5-3**
**LONG-TERM MEASURED/PREDICTED EXISTING NOISE LEVELS**

| Receptor No. | Location or Address | Noise Level Leq(h) | | |
|---|---|---|---|---|
| | | Measured Total | Predicted Traffic* | Difference |
| A | 3234 Lyon Street | 76 | 74 | 2 |
| B | Marina Boulevard at Lyon Street | 74 | 73 | 1 |
| C | Building 1029/Swords to Plowshares | 62 | 61 | 1 |
| D | Main Post Building 106/211 | 70 | 68 | 2 |
| E | Crissy Field/Commissary | 63 | 62 | 1 |
| F | Crissy Field/Stilwell Hall | 64 | 61 | 3 |
| G | Crissy Field/USCG | 63 | 57 | 6 |
| H | 1251 Armistead Road | 67 | 65 | 2 |
| I | 1291 Storey Avenue | 61 | 62 | 1 |
| J | National Cemetery at Lincoln Blvd. | 63 | 63 | 0 |
| K | National Cemetery (south end) | 57 | 59 | 2 |

Source: Environmental Science Associates, 2002.

* The FWHA TNM Version 1.0b was used to predict traffic noise levels for these sites.

#### 5.4.2.2 Short-Term Field Measurement Modeled Data

Table 5-4 presents the short-term measured existing noise levels and the predicted existing noise levels for the evaluated noise sensitive sites. As can be noted, there is often a difference between the measured noise levels and those predicted when using the same traffic volume, mix and speed that was noted during the field measurement period. In most cases the difference can be attributed to activities within the area that are not traffic-related and for which the TNM cannot be programmed to identify. These background sources are difficult to segregate from the traffic noise source of interest, and therefore are incorporated into an overall reading that represents the generalized ambient noise levels for that time and place. While this results in a noise level that may not represent traffic noise alone, it does give an indication of the impact of sources of noise other than traffic within a given area. For the purpose of model calibration, sites with an existing background noise level that substantially increased the overall noise level above that predicted for traffic noise only can not be used. The results of the calibration effort were applied only to the No-Build and

**TABLE 5-4**
**SHORT-TERM MEASURED/PREDICTED EXISTING NOISE LEVELS**

| Site No. | Location or Address | Noise Level Leq(h) | | |
|---|---|---|---|---|
| | | Average Measured Noise Level in dBA[1] | Average Predicted Noise Level in dBA[2] | Difference |
| 1 | 3234 Lyon Street | 77 | 73 | 4 |
| 2 | Building 1188 north of Doyle Drive | 81 | NA | NA |
| 3 | Building 1029/Swords to Plowshares | 57 | NA | NA |
| 4 | Main Post Building 103 | 74 | NA | NA |
| 5 | Commissary/Sports Basement | 73 | NA | NA |
| 6 | Building 650/Stilwell Hall | 70 | NA | NA |
| 7 | Crissy Field Marsh Recreation Area | 80 | NA | NA |
| 8 | 1253 Armistead Road | 66 | NA | NA |
| 9 | 1291 Storey Avenue | 66 | NA | NA |
| 10 | National Cemetery at Lincoln Blvd. | 69 | 72 | 3 |
| 11 | Building 682/Cross Cultural Center | 66 | NA | NA |
| 12 | Palace of Fine Arts/Baker St. Area | 82 | NA | NA |
| 13 | Letterman Area – not available | NA | NA | NA |
| 14 | Building 1169/Gorgas Avenue Warehouse | 68 | 68 | 0 |
| 15 | Buildings 1060/1062/Warehouses | 68 | NA | NA |
| 16 | Building 503/Crissy Field Center | 72 | NA | NA |
| 17 | Building 106/Pacific Life Office | 76 | 74 | 2 |
| 18 | Building 610/Sports Basement | 68 | 66 | 2 |
| 19 | Building 661/Cavalry Stable Pen | 64 | 64 | 0 |
| 20 | Log Cabin Picnic Area | 63 | 64 | 1 |
| 21 | Battery Baldwin Area | 71 | 70 | 1 |

Source: Environmental Science Associates, 2004.

Notes: [1]The average noise level of all measurement sets that were taken.

[2]The average noise level of modeled runs for all sets.

Note: Sites shaded in gray were not used in model calibration for the No-Build and Replace and Widen Alternatives and were used only as background noise level indicators. See text for more explanation.

Replace and Widen Alternatives. Due to the substantially different conditions associated with the Presidio Parkway Alternative (e.g. – tunnels and horizontal alignment shifts), calibration of the model based on field measurements of existing conditions was not possible.

In the case of Site 1, traffic was less than 3.3 meters (10 feet) from the noise meter and the flow of the traffic was interrupted by a traffic signal on Richardson Avenue at Francisco. There was also substantially heavier traffic in the far (south-bound) lanes compared to the near (north-bound lanes), which could also account for some of the difference. Nearby construction activity also were detected during the study although it did not appear to have a substantial impact on the overall traffic noise level. Therefore, Site 1 was used in the calibration of the model.

Site 2 had substantial traffic on the far lanes heading east-bound on to Marina Boulevard, but the traffic was slowing down for the traffic light at Lyon Street and was frequently in a stop and go condition, which could be accounted for by the model. However, a number of cars within the parking lot area near the meter moved in and out of the area during all study sets. Since the noise within the parking lot could not be eliminated, this site was not used as a calibration site.

At Site 3, no traffic counts were taken since this was a background measurement site and very little traffic was present on the local streets.

Site 4 in front of Building 103 on the Main Post was a background level site, with very little traffic on Montgomery Street. The traffic that was noted included medium and heavy trucks, buses, and motorcycles as well as cars. This site was not used in model calibration.

At Site 5, the measurement location was substantially removed from the area of Doyle Drive and influenced by traffic on Mason Street and activities within the area. A substantial amount of pedestrian traffic (joggers, walkers) was present while vehicular traffic was relatively low during the readings, with a number of buses present. Low vehicle speeds (below 40 kph/25 mph) were also noted. Other background noise sources included kids and adults playing in the field area north of Mason Street and the passing of a Coast Guard helicopter. Therefore, Site 5 was not used as a calibration site.

Site 6 at the back of Stilwell Hall was nearly under the high viaduct section of Doyle Drive (within 4.6 meters/15 feet) and had occasional traffic on nearby Crissy Avenue. Noise from traffic passing over the expansion joints in bridge deck of Doyle Drive was also noted. It appears that extraneous sources had a substantial impact on the overall noise level, therefore this site was not used for calibration purposes.

At Site 7 within the Crissy Field Marsh area, the noise levels were dominated by two sources: active human users and the winds across the bay. Although traffic along Mason Street was noted, the noise from active users was far greater than any traffic noise emanating from either Mason Street or Doyle Drive. Joggers, dog walkers, children playing, and other human activities were frequent and constant sources of noise as they passed by the monitoring site. The low volume of traffic on Mason Street and the substantial distance between the traffic on Mason Street and the measurement site rendered this location unsuitable for calibration of Mason Street traffic noise, but it was representative of the ambient noise levels that can be found within the Crissy Field Marsh area as a result of natural and man made noise. Therefore, this site was viewed as a background location that was not strongly influenced by traffic noise.

Site 8, at the residential area along Armistead Road, was strongly influenced by the traffic on Doyle Drive. However there was enough occasional traffic on Armistead Road to increase the ambient measurements because they were physically close to the monitoring location. Therefore, this site was viewed as a background level indicator that was heavily influenced by traffic on Doyle Drive.

Site 9, at 1291 Storey Avenue, was used as a background level site since residential construction rehabilitation was ongoing in the area and strongly influenced the overall noise levels.[4]

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[4] Although not directly associated with this noise study, at the request of staff of the Presidio Trust, a simple set of indoor noise level measurements were also taken in the upstairs area at this location. The readings indicated that an interior reduction of between 15 and 22 dBA was achieved by the building envelope which included newly installed double pane windows.

At Site 10, Doyle Drive was in a partial cut section which may have been effective at reducing the monitored noise levels and for which the model did not fully compensate although the difference between the two was less than 3 dBA. Traffic on Lincoln Boulevard may have also accounted for some of the over-prediction since it was so close to the monitoring site (less than 4 meters/14 feet away). This site was used as a calibration site.

Noise levels at Site 11 were strongly influenced by traffic on Park Presidio Boulevard but the location of the monitor was below the level of the roadway (by as much as 4 meters/14 feet). More importantly, there was some traffic in the parking area near the building and talking among painters working on the building which the model can not duplicate. Therefore, this site was not used as a model calibration location.

Site 12, along Baker Street in the vicinity of the Palace of Fine Arts, was selected as a site that could represent the traffic noise level along the homes on Baker Street. However, the very low traffic volumes and the heavy volume of pedestrian activity in the area created a noise environment that could not be replicated by the model. Background noise included sprinklers, kids playing along the waters edge, and people talking dominated the noise levels (along with a car alarm). Therefore, this site was not used as a model calibration site.

Site 13, originally planned within the Letterman complex, was not accessible due to major construction activities.

Site 14 was selected along Richardson Avenue to represent the traffic noise level for the warehouse area along Richardson Avenue and Gorgas Avenue. Very close correlation between measured and predicted noise levels occurred at this location, which made it possible for this site to be used in model calibration.

Site 15 on Thornburg Road had been selected as a background level check and was not modeled.

Site 16 at the Crissy Field Interpretive Center was designed to serve as a calibration site for traffic noise from Mason Street. The noise from human activity, particularly children going in and out of the Center, was the dominant source of noise. There was also construction noise in the background along with front-end loaders passing by, thereby rendering the site unsuitable for model calibration.

Site 17 was within 3.3 meters of Lincoln Boulevard and influenced by traffic on both Doyle Drive and Lincoln Boulevard. Correlation between modeled and measured noise levels was about 2 dBA. If one of the four sets of field measurements was excluded, the difference between measured and predicted levels would have been about 0.5 dBA. This close correlation allowed the site to be used for model calibration.

Site 18 was used as a calibration site for afternoon traffic on Doyle Drive within the low viaduct section. Correlation was quite close.

Site 19 was selected as a calibration site for Doyle Drive within the high viaduct section. Correlation was within 0.5 dBA difference.

Site 20, at the outdoor picnic area of the Log Cabin, also showed very close correlation between measured and predicted levels, where the average difference was less than 1 dBA. This allowed the site to be used for model calibration.

Finally, Site 21 in the Battery Baldwin area was selected as a calibration site and also to represent the existing noise level in an area where the Presidio Parkway Alternative would enter and leave a tunnel. The correlation between predicted and measured was within 0.5 dBA difference.

In summary, Sites 1, 10, 14, 17, 18, 19, 20 and 21 were used for model calibration for the No-Build and the Replace and Widen Alternatives while the remaining sites were used as indicators of background noise levels related to a variety of noise sources, including highway traffic.

## 5.5 MODEL CALIBRATION

The TNM model was calibrated consistent with the protocol found in the Caltrans TeNS document. The stated purpose of this effort is to “fine tune” the prediction model to actual site conditions which are not adequately accounted for by the model. Since this adjustment is only appropriate for locations where highway traffic noise is the dominant source, such as along Richardson Avenue and Doyle Drive, the application of calibrated noise levels was considerably limited within the project corridor. Since the Caltrans protocol does not specify a set number of sites needed to calibrate the noise model, eight of the short-term measurement sites were used for model calibration.

In general, model calibration is appropriate if site conditions, highway alignment, and profile are not expected to change substantially before and after construction of the project. This means that for the No-Build and Replace and Widen Alternatives, calibration at Sites 1, 10, 14, 17, 18, 19, 20, and 21 would be appear to be appropriate. For the Presidio Parkway Alternative, model calibration was not used since the entire nature of the roadway would be substantially altered from the existing condition. This is also true of the major construction phases since traffic routes and conditions would be very different in most instances compared to the current situation.

Based on the measurements taken at Sites 1, 10, 14, 17, 18, 19, 20 and 21, the modeled noise levels along north-bound Richardson Avenue from Francisco to Doyle Drive would be increased by 3.3 dBA; the segment of Doyle Drive EB and Lincoln Boulevard near the National Cemetery would be decreased by 2.5 dBA; the segment of EB Doyle Drive and Lincoln Boulevard in the vicinity of Building 106 would be increased by 2.2 dBA; the segment along southbound Richardson Avenue from Doyle Drive to Francisco would be increased by 0.3 dBA; the viaduct segment of Doyle Drive in the vicinity of the Sports Basement would be increased by 1.4 dBA; the high viaduct segment of Doyle Drive would be increased by 0.2 dBA; the segment of Doyle Drive between Park Presidio Boulevard and the end of the toll plaza would be increased by 0.7 dBA; and the segment of Doyle Drive in the vicinity of the Batteries would increase by 0.4 dBA.

# SECTION 6: FUTURE NOISE ENVIRONMENT

The future noise environment within the Doyle Drive corridor was predicted using the TNM Version 2.5 model. This FHWA-produced model is now the required model for use in predicting highway traffic noise impacts. Because the study of traffic noise impacts for the Doyle Drive project has been extended over two years, the initial noise predictions were completed using TNM Version 1.0b. The results of the initial field measured and predicted values using TNM Version 1.0b are only used to illustrate the noise levels that were field measured and validated in 2002. All noise level predictions associated with the update of this study use field data and receptor sites gathered in 2004.

## 6.1 MODELING INPUT PARAMETERS

The basic input parameters used in predicting traffic noise levels associated with this study include the following:

- Roadway data included the width of the roadway, the location of the roadway in relation to other physical features via an x, y, z coordinate system, the type of pavement, flow controls (if any), and whether the roadway was on structure or not.
- Traffic data included vehicle classification, vehicle speed, and vehicle counts.
- Receiver data included location by the x, y, z coordinate system, the height of the receiver above ground, the impact criteria applicable to the receiver, existing noise levels (if available), and the number of dwelling units represented by a receiver (if applicable).

Other parameters that were available for consideration included ground cover, tree zones, terrain lines, and shielding, any or all of which may have been used on a location by location basis. For details of the modeling input, see Appendix D.

### 6.1.1 Traffic Assumptions

The basic traffic assumptions used in this study included traffic classification broken down into five (5) vehicle types: autos, medium trucks, heavy trucks, buses, and motorcycles. Each roadway segment was assigned a volume of traffic based on information provided by DKS Associates. Traffic was split directionally for AM and PM peak hour conditions and was classified based on the same variables. Detailed traffic data can be found in Appendix C.

Speed data used in this study was based on existing posted speeds or a generalized speed based on roadway design or ramp configuration. Mainline traffic was generally set at 88 kph (55 mph) while ramp traffic was generally assigned at 56 kph (35 mph). Most local streets, especially the lower volume two lane streets, were set at 32 kph (20 mph). The speeds assigned are consistent with the traffic speeds measured during the gathering of field data at peak and off-peak traffic conditions within the Doyle Drive corridor.

### 6.1.2 Results of Modeling

#### 6.1.2.1 Future Year 2030 Results

To determine the likely impact of the project on traffic noise levels in the vicinity of Doyle Drive, 76 receptor sites (see Figure 6-1) were analyzed using TNM Version 2.5. These receptor locations represent a variety of land uses and physical distances to the Doyle Drive project. Two basic scenarios were evaluated for each alternative: existing conditions and future year 2030 conditions. For each alternative a morning peak and afternoon peak traffic level condition was evaluated to identify if directional splits would alter the impact on a given receiver. Additionally, traffic noise levels associated with the major construction phase for each

**FIGURE 6-1**
**NOISE RECEPTOR PREDICTION LOCATIONS**

9 Noise Receptor Predition Locations

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alternative was also evaluated. Table 6-1 illustrates the predicted noise levels for existing and 2030 traffic (adjusted based on calibration results as appropriate) while Table 6-2 illustrates the traffic noise impacts associated with two design options: the Merchant Road slip ramp option and the Park Presidio interchange design option.

A review of the results shown in Table 6-1 reveals that a total of 37 receptor sites currently are or are expected to approach or exceed the NAC for one or more of the alternatives. These sites include 1, 2, 7, 9-13, 17, 18, 26, 27, 29-37, 40-41, 43-47, 49-51, 53, 70, 72-74, and 76. 26 of these sites are classified as Category B land uses (residential, recreational, etc.) while the remaining 11 are identified as commercial or industrial sites under Category C. Of the 37 sites, 31 already approach or exceed the NAC. Likewise, 32 sites under the No-Build Alternative are expected to approach or exceed the NAC. 34 sites are expected to approach or exceed the NAC under the Replace and Widen Alternative, 25 under the Presidio Parkway Alternative Diamond option, and 24 under the Presidio Parkway Alternative Circle option. Depending upon the alternative, the noise levels for these 37 sites may increase by as much as 6 dBA over the existing levels or decrease by as much as 13 dBA. The typical increase is about 1 dBA over the existing, a change which is typically not detectable to the human ear in an exterior setting. This is a strong indication that the existing noise environment within the Doyle Drive corridor is typical of urban highway corridors. The fact that existing levels already approach or exceed the NAC in many instances is due to the proximity of noise sensitive land uses to the roadways and the increase of traffic over the life of Doyle Drive and other local roads and streets.

Traffic noise levels do vary by alternative as shown in Table 6-1. For the year 2030, noise levels under the No-Build Alternative show a range from 53 to 80 dBA, while the Replace and Widen Alternative has a range from 53 to 81 dBA. The Presidio Parkway Alternative Diamond option shows a range from 54 to 77 dBA while the Presidio Parkway Alternative Circle option has an identical range. In general, the overall traffic noise environment is not expected to change noticeably, regardless of the alternative selected. The impacts are very location specific and tend to be concentrated in the residential areas along Storey Avenue and Armistead Road, the Battery areas, the National Cemetery, and the residential and commercial uses along Richardson Avenue due to the close physical proximity of the roadway to the homes, often less than 6 meters (20 feet).

Table 6-1, when reviewed on a site by site and alternative by alternative basis shows variances that may not be readily apparent. Following is brief explanation of each site and the anticipated traffic noise impacts associated with each alternative:

Site 1, located at the southwest side of the Palace of Fine Arts to represent the noise levels that could be expected at the exterior of the building closest to Richardson Avenue. Under all alternatives, this location is expected to exceed the NAC by 2 to 5 dBA with only a 3 dBA variation among the alternatives.

Site 2, located at the northwest side of the Palace of Fine Arts, represents the noise levels that could be expected at the exterior of the building closest to the Doyle Drive/Girard Road connection to Marina Boulevard. Under the No-Build and Replace and Widen Alternatives this location is expected to equal or exceed the NAC by up to 4 dBA. The Presidio Parkway Alternatives have an expected noise level that would be 5 dBA below the NAC and 8 dBA quieter than the existing condition. This is a direct result of redirecting traffic to Richardson Avenue and having a lower speed on Girard Road traffic emptying into Marina Boulevard.

Site 3, located at the southeast corner of Building 1187/1188 (Mason Street Warehouse), represents an area where exterior noise levels are not expected to have an adverse impact on the facility. Although the NAC would not be exceeded, noise levels would be considerably lower with the Presidio Parkway Alternatives due to the fact that the new roadway would be shifted considerably further south and the speeds on the new access point would be lower.

Site 4, located at the southeast corner of Building 1182 (Mason Street Warehouse), represents an area where exterior noise levels are not expected to have an adverse impact on the facility. Although the NAC would not be exceeded, noise levels would be considerably lower with the Presidio Parkway Alternatives due to the fact that the new roadway would be shifted considerably further south and the speeds on the new access point would be lower.

**TABLE 6-1**
**PREDICTED TRAFFIC NOISE LEVELS**

| Receptor[1] | Site Description | Assumed Future Land Use [2] | NAC Approach[3] | Alternatives | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Existing | No-Build 2030 | Replace & Widen 2030 | Presidio Parkway Diamond 2030 | Presidio Parkway Circle 2030 |
| 1 | Palace of Fine Arts | Educational | 66 | **71*** | **72*** | **71*** | **70*** | **69*** |
| 2 | Palace of Fine Arts | Educational | 66 | **70*** | **71*** | **67*** | 62 | 62 |
| 3 | Mason St. Warehouse Building 1187/ 1188 | Office | 71 | 68 | 69 | 67 | 57 | 58 |
| 4 | Mason St. Warehouse Building 1182 | Office | 71 | 68 | 69 | 64 | 56 | 56 |
| 5 | Mason St. Warehouse Building 1183/ 1186 | Office | 71 | 68 | 68 | 65 | 57 | 57 |
| 6 | Mason St. Warehouse Building 1184/ 1185 | Office | 71 | 69 | 70 | 66 | 60 | 59 |
| 7 | Building 603/Crissy Interpretative Center | Educational | 66 | **68*** | **67*** | **69*** | 56 | 57 |
| 8 | PX Building | Undetermined/ Commercial | 71 | 70 | 70 | 67 | 60 | 60 |
| 9 | Building 610/ Post Commissary | Museum | 71 | 69 | 69 | 66 | **71*** | **71*** |
| 10 | Battery Blaney | Historic | 66 | **75*** | **75*** | **71*** | **70*** | **70*** |
| 11 | Battery Slaughter | Historic | 66 | **79*** | **80*** | **81*** | **66*** | **66*** |
| 12 | Battery Sherwood | Historic | 66 | **77*** | **77*** | **77*** | **66*** | **66*** |
| 13 | Battery Baldwin | Historic | 66 | **66*** | **67*** | 65 | **68*** | **68*** |
| 14 | Building 644/ Unit Motor Pool | Undetermined/ Commercial | 71 | 63 | 64 | 61 | 61 | 61 |
| 15 | Building 649/ Army Reserves | Lodging | 66 | 60 | 61 | 61 | 61 | 61 |
| 16 | Building 650/ Stilwell Hall | Lodging | 66 | 61 | 60 | 60 | 59 | 60 |

| Receptor[1] | Site Description | Assumed Future Land Use [2] | NAC Approach[3] | Alternatives | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Existing | No-Build 2030 | Replace & Widen 2030 | Presidio Parkway Diamond 2030 | Presidio Parkway Circle 2030 |
| 17 | Landrum Court/ Officers Quarters | Residential | 66 | 64 | 65 | **66*** | 65 | 65 |
| 18 | 1253 Armistead Road | Residential | 66 | **71*** | **72*** | **73*** | **77*** | **77*** |
| 19 | Building 969/ Garage | Undetermined/ Commercial | 71 | 52 | 53 | 53 | 59 | 59 |
| 20 | Building 968/ Garage | Undetermined/ Commercial | 71 | 54 | 55 | 55 | 60 | 60 |
| 21 | Building 967/Film Vault | Undetermined/ Commercial | 71 | 56 | 57 | 57 | 65 | 65 |
| 22 | Building 966/Radio Receiver Station | Undetermined/ Commercial | 71 | 56 | 57 | 57 | 66 | 65 |
| 23 | Building 964/ Officer Family Housing | Residential | 66 | 53 | 54 | 55 | 64 | 64 |
| 24 | Building 963/Officer Family Housing | Residential | 66 | 54 | 55 | 55 | 63 | 63 |
| 25 | Building 962/ Officer Family Housing | Residential | 66 | 54 | 55 | 55 | 62 | 62 |
| 26 | Building 1659/ Data Center | Undetermined/ Commercial | 71 | 69 | 70 | 70 | **75*** | **75*** |
| 27 | Log Cabin Picnic Area | Recreational | 66 | **69*** | **69*** | **69*** | **69*** | **69*** |
| 28 | Ft. Scott Chapel | Religious | 66 | 61 | 63 | 62 | 65 | 65 |
| 29 | 1298 Storey Ave./ Enlisted Family Housing | Residential | 66 | **67*** | **68*** | **68*** | **67*** | **67*** |
| 30 | 1297 Storey Ave./Enlisted Family Housing | Residential | 66 | **68*** | **70*** | **69*** | **69*** | **69*** |
| 31 | 1295 Storey Ave./Enlisted Family Housing | Residential | 66 | **70*** | **71*** | **71*** | **71*** | **71*** |
| 32 | 1294 Storey Ave./Enlisted Family Housing | Residential | 66 | **72*** | **73*** | **73*** | **71*** | **71*** |
| 33 | 1293 Storey Ave./Enlisted Family Housing | Residential | 66 | **73*** | **74*** | **75*** | **72*** | **72*** |

| Receptor[1] | Site Description | Assumed Future Land Use [2] | NAC Approach[3] | Alternatives | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Existing | No-Build 2030 | Replace & Widen 2030 | Presidio Parkway Diamond 2030 | Presidio Parkway Circle 2030 |
| 34 | 1291 Storey Ave./Enlisted Family Housing | Residential | 66 | **73*** | **74*** | **75*** | **73*** | **73*** |
| 35 | 1290 Storey Ave./Enlisted Family Housing | Residential | 66 | **73*** | **74*** | **75*** | **74*** | **74*** |
| 36 | 1289 Storey Ave./Enlisted Family Housing | Residential | 66 | **70*** | **71*** | **72*** | **73*** | **73*** |
| 37 | 1263 Storey Ave./Enlisted Family Housing | Residential | 66 | **66*** | **67*** | **68*** | **69*** | **69*** |
| 38 | Building 682/ Cross Cultural Center | Educational | 66 | 63 | 63 | 64 | 65 | 65 |
| 39 | Building 661/ Cavalry Stables | Park Police | 71 | 66 | 67 | 67 | 60 | 60 |
| 40 | Building 662/Cavalry Stables | Cultural/Educational | 66 | 66 | 66 | **67*** | 63 | 63 |
| 41 | Building 663/Cavalry Stables | Cultural/Educational | 66 | 65 | 65 | **66*** | 63 | 63 |
| 42 | Building 667/Cavalry Stables | NPS Archives | 71 | 66 | 67 | 66 | 67 | 67 |
| 43 | National Cemetery Grave Site | Cemetery | 66 | **72*** | **72*** | **73*** | 64 | 65 |
| 44 | Building 129/ Enlisted Family Quarters | Residential | 66 | 65 | 65 | **70*** | 57 | 58 |
| 45 | Building 122/ Gym | Mixed Use | 71 | **74*** | **75*** | **74*** | 62 | 63 |
| 46 | Building 108/ Storage/Electrical Shop | Undetermined/ Commercial | 71 | **74*** | **75*** | **74*** | 63 | 63 |
| 47 | Building 107/ Switching Station | Undetermined/ Commercial | 71 | **76*** | **77*** | **75*** | 68 | 68 |
| 48 | Building 104/ Barracks and Mess Hall | Office | 71 | 70 | 70 | 70 | 59 | 59 |
| 49 | Building 105/ Barracks and Mess Hall | Office | 71 | **76*** | **76*** | **74*** | **74*** | **74*** |

| Receptor[1] | Site Description | Assumed Future Land Use [2] | NAC Approach[3] | Alternatives | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Existing | No-Build 2030 | Replace & Widen 2030 | Presidio Parkway Diamond 2030 | Presidio Parkway Circle 2030 |
| 50 | Building 106/ Band Barracks | Office | 71 | **80*** | **80*** | **75*** | **73*** | **73*** |
| 51 | Building 211/ former Burger King | Restaurant | 71 | **75*** | **76*** | **74*** | 66 | 66 |
| 52 | Building 204/ Exchange Store | Office | 71 | 68 | 69 | 67 | Gone[4] | Gone[4] |
| 53 | Building 210/ Guard House | Bank and Post Office | 71 | **71*** | **71*** | **71*** | 63 | 63 |
| 54 | Building 201/ Exchange Store | Office and Retail | 71 | 65 | 68 | 64 | Gone[4] | Gone[4] |
| 55 | Building 220/ Bakers and Cooks School | Office | 71 | 64 | 65 | 65 | 54 | 54 |
| 56 | Building 231/ Exchange Gas Station | Undetermined/ Commercial | 71 | 66 | 67 | 66 | 66 | 66 |
| 57 | Building 228/ Bakery | Retail | 71 | 65 | 66 | 65 | 62 | 62 |
| 58 | Building 227/ Warehouse | Retail | 71 | 64 | 65 | 64 | 59 | 59 |
| 59 | Building 223/ Warehouse | Office | 71 | 60 | 61 | 61 | 57 | 58 |
| 60 | Building 230/ Warehouse | Retail or other use | 71 | 67 | 68 | 67 | Gone[4] | Gone[4] |
| 61 | Building 1029/ Swords to Plowshares | Residential | 66 | 63 | 64 | 63 | 60 | 60 |
| 62 | Building 1030/ Swords to Plowshares | Residential | 66 | 61 | 62 | 61 | 58 | 58 |
| 63 | Building 1063/ Medical Supply Warehouse | Water Recycling Facility | 71 | 61 | 62 | 62 | 63 | 63 |
| 64 | Building 1062/ Quartermaster Shop | Undetermined/ Commercial | 71 | 59 | 60 | 69 | 60 | 60 |
| 65 | Building 1060/ Medical Supply Warehouse | Undetermined/ Commercial | 71 | 58 | 59 | 59 | 60 | 60 |
| 66 | Building 1167/ Gorgas Warehouse | Office | 71 | 65 | 66 | 66 | 65 | 66 |

| Receptor[1] | Site Description | Assumed Future Land Use [2] | NAC Approach[3] | Alternatives | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Existing | No-Build 2030 | Replace & Widen 2030 | Presidio Parkway Diamond 2030 | Presidio Parkway Circle 2030 |
| 67 | Building 1163/ Gorgas Warehouse | Office | 71 | 64 | 65 | 64 | 65 | 66 |
| 68 | Building 1169/ Gorgas Warehouse | Office | 71 | 66 | 67 | 68 | 65 | 64 |
| 69 | Building 1162/ Gorgas Warehouse | Office | 71 | 62 | 63 | 64 | 63 | 63 |
| 70 | Building 1170/ Gorgas Warehouse | Office | 71 | 70 | 70 | **71*** | **72*** | **72*** |
| 71 | Building 1161/ Gorgas Warehouse | Office | 71 | 66 | 66 | 67 | 67 | 67 |
| 72 | Building 1160/ Gorgas Warehouse | Office | 71 | **72*** | **71*** | **72*** | **72*** | **72*** |
| 73 | Building 1152/ Presidio YMCA Gym | Office | 66 | **71*** | **71*** | **68*** | **72*** | **70*** |
| 74 | Building 1151/ Presidio YMCA Pool | Recreational/ Pool | 66 | **74*** | **73*** | **75*** | **73*** | Gone[4] |
| 75 | Building 1004/ Officers Quarters | Office | 71 | 55 | 56 | 57 | 57 | 57 |
| 76 | 3234 Lyon Street | Residential | 66 | **75*** | **76*** | **76*** | **75*** | **73*** |
| Number of sites approaching or exceeding the NAC | | | | 31 | 32 | 34 | 25 | 24 |

Source: ESA 2004

Notes: [1]For details regarding the receptor location, see Appendix E.

[2]Based on Presidio Trust Management Plan and consultation with Presidio Trust and NPS staff. In cases where future land use was undetermined, the existing land use was assumed for future use.

[3]FHWA noise abatement criterion approach based on anticipated land use, as defined in Footnote 2. Approach is defined by Caltrans as being within one 1dBA of the noise abatement criterion.

[4]Indicates that this building is anticipated to be removed as part of the construction project.

***Bolded*** numbers indicate a noise level that approaches, equals, or exceeds the NAC.

Site 5, located at the southeast corner of Building 1183/1186 (Mason Street Warehouse), represents an area where exterior noise levels are not expected to have an adverse impact on the facility. Although the NAC would not be exceeded, noise levels would be considerably lower with the Presidio Parkway Alternatives due to the fact that the new roadway would be shifted considerably further south and the speeds on the new access point would be lower.

Site 6, located at the southwest corner of Building 1184/1185 (Mason Street Warehouse), represents an area where exterior noise levels are not expected to have an adverse impact on the facility. Although the NAC would not be exceeded, noise levels would be considerably lower with the Presidio Parkway Alternatives due to the fact that the new roadway would be shifted considerably further south and the speeds on the new access point would be lower.

Site 7, located at the southeast corner of Building 603 (Crissy Field Center), represents an area where exterior noise levels are expected to exceed the NAC with the No-Build and Replace and Widen Alternatives by 1 to 3 dBA. Noise levels would be considerably lower with the Presidio Parkway Alternatives due to the fact that Doyle Drive in this area would be enclosed in a tunnel.

Site 8, located at the south side of the PX Building, represents an area where exterior noise levels are not expected to have an adverse impact on the facility. Although the NAC would not be exceeded, noise levels would be considerably lower with the Presidio Parkway Alternatives due to the fact that Doyle Drive is in a tunnel.

Site 9, located at the southeast corner of Building 610/Sports Basement, represents the noise levels that would be expected at the exterior of the building closest to the Doyle Drive. Under the No-Build and Replace and Widen Alternatives this location is not expected to exceed the NAC. Under the Presidio Parkway Alternatives the noise level is expected to equal the NAC. This is a result of the encroachment of the roadway towards the building, resulting in an increase of 2 dBA above the existing level.

Site 10, located at the south side of Battery Blaney, represents the noise levels that would be expected at this outdoor area closest to Doyle Drive. Under all alternatives the NAC would be exceeded by 3 to 8 dBA, with the No-Build Alternative being the highest.

Site 11, located at the south side of Battery Slaughter, represents the noise levels that would be expected at this outdoor area closest to Doyle Drive. The NAC would be approached or exceeded by as much as 10 dBA, with the No-Build and Replace and Widen Alternatives being the highest. The Presidio Parkway Alternatives would be much lower due to the fact that Doyle Drive would be entering a tunnel near this location.

Site 12, located at the south side of Battery Sherwood, represents the noise levels that would be expected at this outdoor area closest to Doyle Drive. The NAC would be approached or exceeded by as much as 10 dBA, with the No-Build and Replace and Widen Alternatives being the highest. The Presidio Parkway Alternatives are much lower due to the fact that Doyle Drive would be entering a tunnel near this location.

Site 13, located at the south side of Battery Baldwin, represents the noise levels that would be expected at this outdoor area closest to Doyle Drive. Under the No-Build and Presidio Parkway Alternatives, the NAC would be equaled or exceeded by as much as 2 dBA.

Site 14, located at the southeast corner of Building 644/Unit Motor Pool, represents the noise levels that would be expected at this area next to Mason Street. The NAC would be not approached or exceeded with any of the alternatives, due to the distance from Doyle Drive and the topography of the area.

Site 15, located at the southwest corner of Building 649/Army Reserves, represents the noise levels that would be expected at this area next to Mason Street. The NAC would be not approached or exceeded with any of the alternatives due to the distance from Doyle Drive and the topography of the area.

Site 16, located at the south side of Building 650/Stilwell Hall, represents the noise levels that could be expected at this area next to Mason Street. The NAC would be not approached or exceeded with any of the alternatives due to the distance from Doyle Drive and the topography of the area.

Site 17, located at the southeast corner of the residential building on Landrum Court, represents the noise levels that would be expected at this area next to Doyle Drive and near the Park Presidio ramp. The NAC

would be approached by the Replace and Widen Alternative only due to the distance from Doyle Drive and the topography of the area.

Site 18, located at the southeast corner of the residential building at 1253 Armistead Road, represents the noise levels that would be expected at this area next to Doyle Drive and near the merge for the Park Presidio northbound on-ramp. The NAC would be exceeded by all of the alternatives by 5 to 10 dBA with the Presidio Parkway Alternatives being the worst due to the shift northward to accommodate the proposed design.

Site 19, located at the southeast corner of Building 969/Garage, represents the noise levels that would be expected at this area at a substantial distance from Doyle Drive. The NAC would be not be approached or exceeded by any of the alternatives due to the distance from Doyle Drive and the topography of the area. This would also be true for residential units in close proximity to this site.

Site 20, located at the southwest corner of Building 968/Garage, represents the noise levels that would be expected at this area at a substantial distance from Doyle Drive. The NAC would be not be approached or exceeded by any of the alternatives, due to the distance from Doyle Drive and the topography of the area. This would also be true for residential units in close proximity to this site.

Site 21, located at the southwest corner of Building 967/Film Vault, represents the noise levels that would be expected at this area at a substantial distance from Doyle Drive. The NAC would be not be approached or exceeded by any of the alternatives, due to the distance from Doyle Drive and the topography of the area. This would also be true for residential units in close proximity to this site.

Site 22, located at the southeast corner of Building 966/Radio Receiver, represents the noise levels that would be expected at this area at a substantial distance from Doyle Drive. The NAC would be not be approached or exceeded by any of the alternatives due to the distance from Doyle Drive and the topography of the area.

Site 23, located at the southwest corner of Building 964/Officer Family residence, represents the noise levels that could be expected at this area at a substantial distance from Doyle Drive. The NAC would be not be approached or exceeded by any of the alternatives due to the distance from Doyle Drive and the topography of the area.

Site 24, located at the southwest corner of Building 963/Officer Family residence, represents the noise levels that would be expected at this area at a substantial distance from Doyle Drive. The NAC would be not be approached or exceeded by any of the alternatives due to the distance from Doyle Drive and the topography of the area.

Site 25, located at the southwest corner of Building 962/Officer Family residence, represents the noise levels that would be expected at this area at a substantial distance from Doyle Drive. The NAC would be not be approached or exceeded by any of the alternatives due to the distance from Doyle Drive and the topography of the area.

Site 26, located at the northeast corner of Building 1659/Data Center, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC is expected to be exceeded by the Presidio Parkway Alternatives by 3 dBA due to a minor shift in the alignment to the south in this area.

Site 27, located at the picnic area of the Log Cabin Building, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC is expected to be exceeded by all alternatives by 2 dBA.

Site 28, located at the northeast corner of Building 1389/Ft. Scott Chapel, represents the noise levels that would be expected at this area at a substantial distance from Doyle Drive. The NAC would be not be approached or exceeded by any of the alternatives due to the distance from Doyle Drive and the topography of the area.

Site 29, located at the northeast corner of the residential building at 1298 Storey Avenue, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC would be approached or exceeded by all alternatives by 1 dBA.

Site 30, located at the northeast corner of the residential building at 1297 Storey Avenue, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC would be exceeded by all alternatives by 1 to 3 dBA.

Site 31, located at the northeast corner of the residential building at 1295 Storey Avenue, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC would be exceeded by all alternatives by 4 dBA.

Site 32, located at the northwest corner of the residential building at 1294 Storey Avenue, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC would be exceeded by all alternatives by 4 to 6 dBA.

Site 33, located at the northeast corner of the residential building at 1293 Storey Avenue, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC would be exceeded by all alternatives by 5 to 8 dBA.

Site 34, located at the northeast corner of the residential building at 1291 Storey Avenue, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC would be exceeded by all alternatives by 6 to 8 dBA.

Site 35, located at the northwest corner of the residential building at 1290 Storey Avenue, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC would be exceeded by all alternatives by 7 to 8 dBA.

Site 36, located at the northwest corner of the residential building at 1289 Storey Avenue, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC would be exceeded by all alternatives by 4 to 6 dBA.

Site 37, located at the southeast corner of the residential building at 1263 Storey Avenue, represents the noise levels that would be expected at this area west of Park Presidio Boulevard. The NAC would be equaled or exceeded by all alternatives by 1 to 2 dBA, primarily from traffic noise along this portion of the Park Presidio Boulevard.

Site 38, located at the southwest corner of Building 682/Cross Cultural Education Center on Schofield Road, represents the noise levels that would be expected at this area east of Park Presidio Boulevard and south of Doyle Drive. The NAC would be not be approached or exceeded by any of the alternatives due primarily to the distance from Doyle Drive and the elevated roadway of both Park Presidio Boulevard and Doyle Drive in this area.

Site 39, located at the northwest corner of the pen area of Building 661/Cavalry Stable, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC would not be approached or exceeded by any of the alternatives although the Presidio Parkway Alternatives are expected to be 7 dBA quieter than the No-Build and Replace and Widen Alternatives, due primarily to the reconfiguration of the ramps to and from Park Presidio Boulevard and Doyle Drive.

Site 40, located at the north side of Building 662/Cavalry Stable, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC would be equaled under the Replace and Widen Alternative. The Presidio Parkway Alternatives are expected to be 3 to 4 dBA quieter than the No-Build and Replace and Widen Alternatives, due primarily to the reconfiguration of the ramps to and from Park Presidio Boulevard and Doyle Drive.

Site 41, located at the northeast corner of Building 663/Cavalry Stable, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC would be approached under the Replace and Widen Alternative. The Presidio Parkway Alternatives are expected to be 2 to 3 dBA quieter than the No-Build and Replace and Widen Alternatives, due primarily to the reconfiguration of the ramps to and from Park Presidio Boulevard and Doyle Drive.

Site 42, located at the northeast corner of Building 667/Cavalry Stable, represents the noise levels that would be expected at this area south of Doyle Drive. The NAC would not be approached or exceeded by any of the alternatives.

Site 43, located at a gravesite in the National Cemetery south of Doyle Drive (near the intersection of Sheridan Avenue and Lincoln Boulevard), represents the noise levels that would be expected near the northern edge of the cemetery. Noise levels are expected to exceed the NAC for all alternatives due to the close proximity of both Doyle Drive and Lincoln Boulevard traffic to the northern boundary of the cemetery. The greatest noise impact is expected with the No-Build and Replace and Widen Alternatives due to the fact that a portion of the Presidio Parkway Alternative would be in a tunnel at this location. Tunnel portal noise would be evidenced only at the extreme western and eastern ends of the cemetery boundary with the Presidio Parkway Alternative.

Site 44, located at the northwest corner of Building 129/Enlisted Family Quarters, represents the noise levels that this residential area south of Doyle Drive and Lincoln Boulevard would expect. The NAC would be approached or exceeded by the Replace and Widen Alternative by 3 dBA. The Presidio Parkway Alternatives are expected to be substantially lower due to the proximity of a tunnel and a slightly depressed roadway in this area.

Site 45, located at the northwest corner of Building 122/Gymnasium (Main Post Community Center), represents the noise levels that this area south of Doyle Drive and Lincoln Boulevard would expect. The NAC would be approached or exceeded by the No-Build and Replace and Widen Alternatives by 2 to 3 dBA. The Presidio Parkway Alternatives are expected to be substantially lower due to the proximity of a tunnel and a slightly depressed roadway in this area.

Site 46, located at the northwest corner of Building 108/Storage-Electrical, represents the noise levels that this area south of Doyle Drive and Lincoln Boulevard would expect. The NAC would be approached or exceeded by the No-Build and Replace and Widen Alternatives by 2 to 3 dBA. The Presidio Parkway Alternatives are expected to be substantially lower due to the proximity of a tunnel and a slightly depressed roadway in this area.

Site 47, located at the northwest corner of Building 107/Switching Station, represents the noise levels that this area south of Doyle Drive and Lincoln Boulevard would expect. The NAC would be approached or exceeded by the No-Build and Replace and Widen Alternatives by 3 to 5 dBA. The Presidio Parkway Alternatives are expected to be substantially lower due to the proximity of a tunnel and a slightly depressed roadway in this area.

Site 48, located at the northwest corner of Building 104/Barracks and Mess Hall, represents the noise levels that this area south of Doyle Drive and Lincoln Boulevard would expect. The NAC would not be approached or exceeded by the No-Build and Replace and Widen Alternatives. The Presidio Parkway Alternatives are expected to be substantially lower due to the proximity of a tunnel and a slightly depressed roadway in this area.

Site 49, located at the northwest corner of Building 105/Barracks and Mess Hall, represents the noise levels that this area south of Doyle Drive and Lincoln Boulevard would expect. The NAC would be exceeded by all alternatives by 2 to 8 dBA with the No-Build Alternative having the greatest noise level.

Site 50, located at the northwest corner of Building 106/Band Barracks (Union Pacific offices), represents the noise levels that this area south of Doyle Drive and Lincoln Boulevard would expect. The NAC would be exceeded by all alternatives by 1 to 8 dBA, with the No-Build Alternative having the greatest noise level.

Site 51, located at the northwest corner of Building 211 (former Burger King), represents the noise levels that this area south of Doyle Drive would expect. The NAC would be exceeded by the No-Build and Replace and Widen Alternatives by 1 to 3 dBA with the No-Build Alternative having the greatest noise level. The Presidio Parkway Alternatives would be substantially quieter due to the fact that a portion of Doyle Drive would be in a tunnel at this location.

Site 52, located at the northwest corner of Building 204/Presidio Thrift Shop, represents the noise levels that this area south of Doyle Drive would expect. The NAC would not be approached or exceeded by any of the alternatives with the Presidio Parkway Alternatives being substantially lower than the other Alternatives due to the fact that a portion of Doyle Drive would be in a tunnel at this location.

Site 53, located at the northwest corner of Building 210/Guard House, represents the noise levels that this area south of Doyle Drive would expect. The NAC would be approached by the No-Build and Replace and Widen Alternatives. The Presidio Parkway Alternatives would be substantially quieter due to the fact that a portion of Doyle Drive would be in a tunnel at this location.

Site 54, located at the northwest corner of Building 201/Exchange Store, represents the noise levels that this area south of Doyle Drive would expect. The NAC would not be approached or exceeded by any of the alternatives and the building would be removed under the Presidio Parkway Alternatives.

Site 55, located at the northwest corner of Building 220/Bakers and Cooks Shop, represents the noise levels that this area south of Doyle Drive would expect. The NAC would not be approached or exceeded by any of the alternatives with the Presidio Parkway Alternatives being substantially lower than the other alternatives due to the fact that a portion of Doyle Drive would be in a tunnel at this location.

Site 56, located at the northwest corner of Building 231/Exchange Gas Service Station, represents the noise levels that this area south of Doyle Drive would expect. The NAC would not be approached or exceeded by any of the alternatives. The noise from the Presidio Parkway Alternatives would be more noticeable as this is beyond the tunnels location.

Site 57, located at the northwest corner of Building 228/Bakery, represents the noise levels that this area south of Doyle Drive would expect. The NAC would not be approached or exceeded by any of the alternatives.

Site 58, located at the northwest corner of Building 227/Warehouse, represents the noise levels that this area south of Doyle Drive would expect. The NAC would not be approached or exceeded by any of the alternatives.

Site 59, located at the northeast corner of Building 223/Warehouse, represents the noise levels that this area south of Doyle Drive would expect. The NAC would not be approached or exceeded by any of the alternatives.

Site 60, located at the northwest corner of Building 230/Warehouse, represents the noise levels that this area south of Doyle Drive would expect. The NAC would be not be approached or exceeded by any of the alternatives. This building would be removed during construction of the Presidio Parkway Alternative.

Site 61, located at the northwest corner of Building 1029/Swords to Plowshares, represents the noise levels that this residential area south of Doyle Drive would expect. The NAC would not be approached or exceeded by any of the alternatives.

Site 62, located at the northwest corner of Building 1030/Swords to Plowshares, represents the noise levels that this residential area south of Doyle Drive would expect. The NAC would not be approached or exceeded by any of the alternatives.

Site 63, located at the northwest corner of Building 1063/Medical Supply, represents the noise levels that this area south of Doyle Drive and west of Gorgas Avenue would expect. The NAC would not be approached or exceeded by any of the alternatives.

Site 64, located at the northwest corner of Building 1062/Quartermaster, represents the noise levels that this area south of Doyle Drive and west of Gorgas Avenue would expect. The NAC would not be approached or exceeded by any of the alternatives.

Site 65, located at the northwest corner of Building 1060/Medical Supply, represents the noise levels that this area south of Doyle Drive and west of Gorgas Avenue would expect. The NAC would not be approached or exceeded by any of the alternatives.

Site 66, located at the northwest corner of Building 1167/Gorgas Avenue Warehouse, represents the noise levels that this area west of Richardson Avenue and east of Gorgas Avenue would expect. The NAC would not be approached or exceeded by any of the alternatives.

Site 67, located at the northwest corner of Building 1163/Gorgas Avenue Warehouse, represents the noise levels that this area west of Richardson Avenue and east of Gorgas Avenue would expect. The NAC would not be approached or exceeded by any of the alternatives.

Site 68, located at the northwest corner of Building 1169/Gorgas Avenue Warehouse, represents the noise levels that this area west of Richardson Avenue and east of Gorgas Avenue would expect. The NAC would not be approached or exceeded by any of the alternatives.

Site 69, located at the northwest corner of Building 1162/Gorgas Avenue Warehouse, represents the noise levels that this area west of Richardson Avenue and east of Gorgas Avenue would expect. The NAC would not be approached or exceeded by any of the alternatives.

Site 70, located on the east side of Building 1170/Gorgas Avenue Warehouse, represents the noise levels that this area west of Richardson Avenue and east of Gorgas Avenue would expect. The NAC would be approached or equaled by the Replace and Widen and Presidio Parkway Alternatives.

Site 71, located on the east side of Building 1161/Gorgas Avenue Warehouse, represents the noise levels that this area west of Richardson Avenue and east of Gorgas Avenue would expect. The NAC would be not be approached or exceeded by any of the alternatives.

Site 72, located at the northeast corner of Building 1160/Gorgas Avenue Warehouse, represents the noise levels that this area west of Richardson Avenue and east of Gorgas Avenue would expect. The NAC would be approached or equaled by all alternatives.

Site 73, located at the northeast corner of Building 1152/Presidio YMCA, represents the noise levels that this area west of Richardson Avenue and east of Gorgas Avenue would expect. The NAC would be approached or equaled by all alternatives.

Site 74, located on the east side of Building 1151/Presidio YMCA, represents the noise levels that this area west of Richardson Avenue and east of Gorgas Avenue would expect. The NAC would be exceeded by 1 to 3 dBA by the No-Build Alternative, Replace and Widen Alternative, and the Presidio Parkway Alternative Diamond option. This building would be removed under the Presidio Parkway Alternative Circle option.

Site 75, located at the southeast corner of Building 1004/Officers Quarters, represents the noise levels that this area west of Richardson Avenue and at the corner of O'Reilly Avenue and Edie Road would expect. The NAC would not be approached or exceeded by any of the alternatives.

Site 76, located at the center of the residential building at 3234 Lyon Street at the corner of Lyon Street and Richardson Avenue, represents the noise levels that this residential area east of Richardson Avenue would expect. The NAC would be exceeded by all alternatives by 1 to 4 dBA.

All buildings and public use areas within the Doyle Drive corridor that could be impacted by traffic noise from the Doyle Drive project were evaluated. Specific concerns related to the impacts on the Crissy Field Center, Stilwell Hall, the National Cemetery, the Cavalry Stables, and Crissy Field were reviewed in detail. The Crissy Field Center is a community environmental facility that offers a wide variety of programs such as workshops and special events. The Center also houses a media lab, arts workshop, urban ecology lab, and resource library and is used for many educational functions such as summer programs. Concerns about the continued operation of the Center during and following construction of any of the "Build" alternatives have been raised. Based on the results of the traffic noise modeling effort completed as part of this study, no basic increase in traffic noise is expected over the No-Build scenario with any build alternative and a predicted decrease with the Presidio Parkway Alternative due to the use of tunnels in the vicinity of the Center. Existing noise levels in the area of the Center were measured at 72 dBA, above those predicted for traffic noise alone. Much of this noise is a direct result of background activities in the area such as active children at play, traffic on Mason Street, and noise coming from the waterfront area, not to mention the high winds that frequently blow through this area of the Bay. Since many of the activities are conducted indoors, the building envelope creates at least a 20 dB reduction over outdoor noise levels. When this level is subtracted from the predicted noise levels it is apparent that interior noise levels generated by traffic would be well below the NAC. Based on field observations of the use of the exterior area of the Center, the area immediately around the Center is not used for substantial periods of time. For the most part, the exterior area is used for parking and is traversed to a crossing of Mason Street to reach the Crissy Field marsh and shoreline areas.

The Crissy Field area north of Mason Street likewise would not be adversely impacted by traffic noise from any of the alternatives related to Doyle Drive. Existing levels in the area of the tidal marsh were measured and found to be quite high, not from traffic noise, but from activities of people and the high winds that frequently occur in this area. It is not anticipated that traffic noise would have any adverse impact on either human or non-human use of the Crissy Field area, especially with the Presidio Parkway Alternatives since much of it would be in a tunnel in this area.

The Cavalry Stables area within the Presidio currently experiences typical traffic noise levels in the 64 dBA range. The predicted noise levels are not expected to have a noticeable increase, and may actually experience a noticeable decrease if the Presidio Parkway Alternative is constructed, depending upon which Park Presidio interchange design is used. An investigation of the potential impact of the Park Presidio interchange options also shows no change in the traffic noise impact even though the on-ramp would be as close as 35 to 50 meters from the stables. Since the existing and future levels are anticipated to be nearly the same, traffic noise impacts are not anticipated.

Like the stables, Stilwell Hall, anticipated to be used for lodging in the future, was a location of concern relative to traffic noise impacts. Noise predictions for all alternatives at the back of Stilwell Hall showed that none of the alternatives are expected to approach or exceed the NAC for the proposed usage. This is largely due to the high viaduct section used to convey Doyle Drive traffic in this area, which tends to serve as a noise barrier for sounds directed to the area immediately adjacent to the structure, such as Stilwell Hall.

As previously identified, the potential noise impact on the National Cemetery by the various build alternatives for Doyle Drive has led to a substantial concern on the part of the NPS and the Trust. Table 6-1 shows that noise impacts can be expected with the No-Build and Replace and Widen Alternatives that would exceed the NAC by 5 to 6 dBA. The construction of the Presidio Parkway Alternative would actually reduce the noise levels over those that currently exist in the area of the cemetery. This is largely due to the fact that a portion of Doyle Drive would be in either a cut section or in a tunnel bordering the cemetery. Potential portal noise impacts are discussed in Section 6.1.3.2.

As seen in Table 6-2, the Merchant Road Slip-Ramp Option would increase the noise level for Receptors 17 and 19-25 in the Armistead Road area by 2 to 4 dBA above the level anticipated to be generated by the Presidio Parkway Alternative Diamond option. This increase can largely be attributed to the reconfiguration which would move traffic further to the north and closer to residences and buildings along Armistead Road. If the Slip-Ramp Option was constructed, it is anticipated that six (6) residential units (four buildings) along Armistead Road would be removed, which would alter the number of impacted sites shown in Table 6-1.

**TABLE 6-2**
**PREDICTED TRAFFIC NOISE LEVELS FOR**
**PRESIDIO PARKWAY DESIGN OPTIONS AT SELECT LOCATIONS**

| Receptor[1] | Site Description | NAC Approach[2] | Alternative | Design Options | |
|---|---|---|---|---|---|
| | | | Presidio Parkway Diamond 2030 | Merchant Road Slip Ramp Option | Park Presidio Hook Ramp |
| | | | | PM[3] | AM[4] |
| 17 | Landrum Ct. | 66 | 65 | **67*** | 65 |
| 18 | 1253 Armistead Rd | 66 | **77*** | **77*** | **77*** |
| 19 | Garage | 71 | 59 | 62 | 58 |
| 20 | Garage | 71 | 60 | 64 | 60 |
| 21 | Film Vault | 71 | 65 | 67 | 65 |
| 22 | Radio Receiver | 71 | 66 | 67 | 65 |
| 23 | Officer Residence | 66 | 64 | **67*** | 64 |
| 24 | Officer Residence | 66 | 63 | **66*** | 63 |
| 25 | Officer Residence | 66 | 62 | **66*** | 62 |
| 26 | Bldg.1659/Data Center | 71 | **75*** | **75*** | **75*** |
| Number of sites approaching or exceeding the NAC based on impact of these design options. | | | 2 | 6 | 2 |

Source: ESA 2004

Notes: [1]For details regarding the receptor location, see Appendix E.

[2]FHWA noise abatement criterion approach based on existing or anticipated land use. Approach is defined by Caltrans as being within one 1dBA of the noise abatement criterion

[3]PM peak traffic chosen to represent the loudest hour based on traffic patterns. Presidio Parkway Alternative Diamond option layout used for this analysis.

[4]AM peak traffic chosen to represent the loudest hour based on traffic patterns. Presidio Parkway Alternative Diamond layout used for this analysis.

***Bolded** numbers indicate a noise level that approaches, equals, or exceeds the NAC.

Note: The number of impacted sites may be reduced for the Merchant Road option due to removal of selected residences for construction.

Until a design option is selected, the number of impacted sites will generally remain as currently shown to avoid confusion.

The Park Presidio Hook Ramp option shows no changes in noise levels predicted between the ramp option and the base alternative, even though the ramp would be physically closer to several receptors, such as the Cavalry Stables. The explanation for this is that the ramp design would alter the height of the ramp compared to the other ramp option and would also not extend as far to the east. There was also a difference in the traffic projections under the two alternative interchange designs that had some influence on the overall noise impact.

Section 7 (Abatement Alternatives) provides a discussion of abatement measures considered for the receptors and alternatives predicted to have noise levels that approach, equal or exceed the NAC.

### 6.1.3 Presidio Parkway Alternative Tunnel Noise Impacts

#### 6.1.3.1 Exhaust Fan Noise

A noise impact of concern related to the operation of either Presidio Parkway Alternative (Diamond or Circle options) was the operation of exhaust fans within the tunnels. After considerable review of fan sizing, location, and operating methods, it has been determined that ceiling-mounted fans that force air in either direction without the need for exhaust vents would most likely be used. This would eliminate the noise associated with typical tunnel exhaust fans since these fans would exhaust directly through the portals. The exhaust fans anticipated for use in the Presidio Parkway Alternative would be placed at locations within the tunnels that would preclude fan noise from being noticeable at the portal areas.

#### 6.1.3.2 Tunnel Portal Noise

A second operational concern related to the Presidio Parkway Alternative is the noise generated at the tunnel portals and its impact on adjacent receptors. After consultation with USDOT and Caltrans technical staff, it was determined that modeling the portal noise impact using TNM is not possible. However, research conducted by Jim O'Conner of the Minnesota Department of Transportation showed that noise levels measured in front of tunnel portals was insignificant beyond 18 to 21 meter (60 to 70 feet). Mr. O'Conner also found that noise levels were insignificant beyond 9 to 12 meters (30 to 40 feet) with receptor locations on top of the tunnel. Therefore, tunnel portal noise is going to be very limited in its impact.

Based on the anticipated tunnel locations associated with the Presidio Parkway Alternatives, very limited areas of the project corridor are anticipated to even notice the portal noise. Those locations are small parts of the National Cemetery, Battery Blaney, and Battery Sherwood and Building 231/Service Station. Calculation of the surface area of each site that would notice portal noise shows that approximately 692 square meters (7,449 square feet) of Building 231(Site 56), Battery Blaney (Site 10), the National Cemetery (Site 43), and Battery Sherwood (Site 12) would receive up to 3 dBA additional traffic noise. No other noise sensitive areas along the proposed Presidio Parkway Alternative are within a 21 meter (70 foot) radius of the portals. Therefore tunnel portal noise is not expected to have a substantial noise impact on the overall traffic noise levels within the Doyle Drive corridor. The potential for abatement of tunnel portal noise is discussed in Section 7.

# SECTION 7: NOISE ABATEMENT ALTERNATIVES

Consistent with 23 CFR 772, noise abatement must be considered for Type I projects when the predicted noise level approaches or exceeds the NAC or when the project results in a substantial noise increase (defined by Caltrans as an increase of 12 dBA or more). Section 6 (Future Noise Environment) identified 35 locations where traffic noise exposure currently is, or is anticipated to approach, equal, or exceed the NAC. Consistent with Caltrans protocol and FHWA requirements, noise abatement is only considered where noise impacts are predicted and where frequent human use occurs and a lowered noise level would be of benefit. This approach gives primary consideration to exterior areas. If there are no exterior activities that are affected by traffic noise, then the interior criterion shown in Category E of the FHWA regulations will be used as the basis for determining whether noise abatement is reasonable and feasible.

The abatement measures considered for the operational phase of all build alternatives to reduce the predicted exterior traffic noise impacts were:

- Traffic management measures,
- Alteration of horizontal and vertical roadway alignment, and
- Noise barriers,
- Retrofitting of windows,
- Alternative paving materials, and.
- Absorptive tunnel linings,

In keeping with the nature of the area surrounding Doyle Drive, every effort was made to incorporate the concepts embodied in the NPS Director's Order #47 dealing with preservation or enhancement of the soundscape within the NPS park system. Therefore, special attention was paid to the reduction of traffic noise to levels below those that currently exist within many areas of the project corridor.

## 7.1 TRAFFIC MANAGEMENT

Traffic management measures that limit motor vehicle speeds and reduce volumes can be effective noise abatement measures. However, the measures also negate a project's ability to accommodate forecast traffic volumes. For example, if the posted speed on Doyle Drive were reduced, the capacity of the roadway to handle the forecast motor vehicle demand would also be reduced. Therefore, reducing traffic speeds and/or traffic volumes is inconsistent with the goal of improving the ability of the roadway to handle the forecast volumes. Although feasible, traffic management measures would not be a reasonable noise abatement measure because it would interfere with the purpose of the project.

## 7.2 ALTERATION OF HORIZONTAL AND VERTICAL ALIGNMENT

Alterations to the horizontal and/or vertical alignment of the roadway would have to be extreme to affect a substantial change in the predicted traffic noise levels at the receptor locations where noise levels approach or exceed the NAC. As such, although feasible, changes in the horizontal and vertical alignment would not be a reasonable noise abatement measure.

## 7.3 NOISE BARRIERS

When evaluating noise barriers, a number of factors must be considered including:

- Lateral clearances (sufficient distances from the traveled way to the barrier),

- Sight distance requirements (providing for sufficient stopping sight distance),
- Access requirements for the properties being protected,
- Barrier dimensions (length and height),
- Construction materials, and
- Aesthetics

Construction of noise barriers at receptor locations that are on local streets such as Richardson Avenue, Lyon Street, Marina Boulevard, Mason Street, Lincoln Boulevard, Gorgas Avenue, Montgomery Street, Girard Road and Halleck Street, would not be feasible because driveways would need to be maintained to provide access to those properties. As such, there appear to be no reasonable measures to reduce the predicted traffic noise with the Doyle Drive alternatives at Receptors 1 and 2 (the Palace of Fine Arts Building), Receptors 70 and 72 (Gorgas Avenue Warehouses, Receptors 73 and 74 (YMCA Buildings) and at Receptor 76 (residential area along Lyon St. and Richardson Avenue).

Receptors 10-13 (the Battery area), 17-18 (Armistead Road area), 27 (the Log Cabin area), 29-36 (residences along Storey Avenue) and 43 (the National Cemetery) have the potential to be benefited by the construction of noise barriers along the various alternatives under consideration, depending upon cost and effectiveness considerations. To determine whether noise barriers would be reasonable and feasible for these locations, the Caltrans protocol was applied to a series of noise barrier options for each site. The Caltrans protocol identifies a reasonable noise barrier as one that provides at least 5 dBA of traffic noise reduction at a reasonable cost. The cost effectiveness of a noise barrier is determined by a base allowance of $17,000 per benefited receiver that is adjusted upwards based on the absolute noise levels predicted to occur, the increase between the Build and No-Build Alternatives, the amount of noise reduction that can be achieved, and the antiquity of the impacted receptors in the project corridor. This provides for a total noise abatement allowance for noise barriers that are considered feasible. This protocol was applied to the noise barrier concepts discussed below.

Since the Caltrans protocol is based on a noise barrier wall design, all noise barriers were treated as though a wall was used. In fact, this may not actually be the final decision as the project progresses towards final design and construction. There are a wide variety of noise barrier options, in terms of both material and design, than can minimize the visual impact as well as reducing the traffic noise level. The primary options include a rigid wall, an earth berm, or a combination of the two. There are also variations of the earth berm concept such as crib walls or living walls, which are typically a concrete structure in a triangular shape filled with soil and planted to resemble a mount of earth. The advantage of this design over an earth berm is that less horizontal space is required to achieve a similar height, which can be important in a limited space environment such as the Doyle Drive corridor.

Within the rigid wall concept, which is probably the most common structural noise abatement method employed, there are a number of combinations of design elements including glass, plastic, metal, concrete, steel, and other materials. The details of the noise abatement option would be coordinated during the design phase for any noise barrier option that is determined to be preliminarily reasonable and feasible. This would give all interested parties the opportunity to provide input into the aesthetics of the barrier as well as the materials to be employed. Due to the constraints that may be placed on noise barrier design such as utility locations, drainage, structural loading limits, and maintenance issues, the specific type of barrier material to be used and the exact placement of the barrier can only be estimated at this time. Where visual impacts could result from the placement of a noise barrier, a decision would have to be made as to what constitutes a reasonable compromise between the two in order to accommodate both desires.

The following is a discussion of where noise abatement, in the form of noise barrier walls, was investigated in detail. Table 7-1 illustrates the results of this effort.

For the Replace and Widen Alternative, a noise barrier 278 meter (912 feet) long and 4.27 meters (14 feet) high along the south side shoulder of Doyle Drive from the east end of the high viaduct section eastward to the western end of the National Cemetery would provide noise reduction on the order of 2 to 11 dBA along

**TABLE 7-1**
**NOISE BARRIER PRELIMINARY REASONABLENESS DETERMINATION**

| Alternative | Location | Length (m) | Height (m) | Preliminary Reasonable Cost Allowance Per Benefited Unit[1] | Number of Benefited Units[2] | Preliminary Reasonable Barrier Total Construction Cost Allowance | Estimated Barrier Construction Cost[3] | Preliminary Reasonable (Yes/No) |
|---|---|---|---|---|---|---|---|---|
| Replace and Widen | National Cemetery Station 12+62 to 15+40[4] | 278 | 4.27 | $33,000 | 8 * | $264,000 | $207,736 | Yes |
| Replace and Widen | National Cemetery area Station 12+62 to 16+60[5] | 398 | 4.88 | $33,000 | 9 * | $297,000 | $339,892 | No / (Yes if a lower cost wall material such as wood were used) |
| Replace and Widen | Armistead Rd. area Station 1+60 to 4+78 | 318 | 3.05 | $35,000 | 7 | $245,000 | $169,733 | Yes |
| Presidio Parkway | Armistead Rd. area Station 1+60 to 4+78 | 318 | 3.05 | $39,000 | 7 | $273,000 | $169,733 | Yes |
| Replace and Widen, and Presidio Parkway | Storey Ave. area Station 2+00 to 7+65 | 565 | 4.88 | $31,000 | 0 | $0 | $482,510 | No |
| Replace and Widen | Battery area Station 11+40 to 15+20 | 380 | 3.05 | $37,000 | 7 * | $259,000 | $202,825 | Yes |

Source: Environmental Science Associates, 2004

Notes: [1]Based on Caltrans TNAP, October 1998 as modified.

[2]Residential units that receive 5 dBA reduction or more.

[3]Barrier cost is based on Caltrans TNAP value of $175/meter$^2$ for a standard masonary block wall.

[4]This barrier designed to protect the frontage area of the National Cemetery only.

[5]This barrier designed to protect the frontage area of the National Cemetery and residential and office buildings located east of the cemetery.

*The number of benefited units is based on a frontage factor of 30.5 meters being equivalent to one residential lot where the area will receive a reduction of 5 dBA or more based on Caltrans TNAP.

the frontage area of the National Cemetery. The barrier would be preliminarily reasonable and feasible following the Caltrans protocol. Extending the barrier to the vicinity of Building 106 was also investigated to determine if additional impacted receivers would be benefited. A barrier along the shoulder of the viaduct section was tested up to 4.88 meters (16 feet). The results indicate that only Building 128 would receive at least 5 or more decibels of noise reduction from such a wall design. Due to the additional cost and the design limitations of the viaduct section to be able to support the wind and dead load of such a wall, it was determined that extending the wall was not a reasonable abatement effort unless a lower cost wall material design (such as wood) was considered. This option would be investigated during the design phase should the Replace and Widen Alternative be selected in conjunction with the impacted property owners. Under the Presidio Parkway Alternative, abatement in this section of the Presidio was also investigated. The design of the Parkway within much of this location would be in a cut (depressed) section with a concrete overhang and safety barrier to support the relocated section of Lincoln Boulevard. The overhang would effectively reduce traffic noise from most of this section of Doyle Drive and eliminate the need for additional abatement. Traffic noise from Lincoln Boulevard would be more noticeable in this area than would the noise from Doyle Drive. However, due to space limitations and safety concerns, placement of a noise barrier along Lincoln Boulevard was not considered a viable option.

A noise barrier along the westbound on-ramp from Park Presidio Boulevard to Doyle Drive westward to the Merchant Road area was investigated to determine if abatement would be reasonable and feasible for the areas impacted by both the Presidio Parkway and Replace and Widen Alternatives. A 3.05 meter high (10 foot) noise barrier, 318 meters long (1,043 feet) placed along the edge of the Doyle Drive right-of-way line in this area could provide a noise reduction on the order of 10 dBA to the five impacted residential receptors located north of Doyle Drive in the area along Armistead Road. Following the Caltrans protocol, this barrier would be considered preliminarily reasonable and feasible. However, if the Merchant Road Slip Ramp option were to be selected, it is anticipated that most of the noise sensitive residences along this portion of Doyle Drive would be removed and the need for the noise barrier may be eliminated or modified in terms of impacted receptors and the height and length of noise barrier needed. Therefore, the reasonableness of constructing this noise barrier would be determined during design once the interchange option (if any) is selected.

A noise barrier along the south side of the eastbound section of Doyle Drive from west of the Log Cabin area that extended partially down the southbound Park Presidio off-ramp was investigated for both the Presidio Parkway and Replace and Widen Alternatives to determine if it might provide relief for the receptors along Storey Avenue (Receptors 27 through 36). Due to the topographic conditions of the area, a shoulder barrier along this section of Doyle Drive for all build alternatives would not be effective. The average reduction to the impacted receptors with a 4.88 meter high (16 foot) wall was only 1.7 dBA, well below the required 5 dBA reduction to be considered feasible. A barrier placed outside of the right-of-way along the top of the ridge bordering Doyle Drive in this area may prove effective but would require additional right-of-way in the area of the Log Cabin site that contains identified protected plant species that could be adversely affected. Therefore, abatement at this location was not considered reasonable or feasible.

Noise abatement in the form of a noise barrier was also investigated for the Replace and Widen Alternative in the area of Battery Blaney, Slaughter, Sherwood and Baldwin. A noise barrier extending 380 meter (1,246 feet) along the frontage of the Battery area that is 3.05 meters (10 feet) tall along the shoulder of Doyle Drive would provide a noise reduction in the range of 2 to 11 dBA. Following the Caltrans protocol, this noise barrier concept is considered to be preliminarily reasonable and feasible.

Receptors 45-47, 49-51, 53 and 60 within the Main Post area of the Presidio are all considered Category C land uses and had no evidence of frequent human use of exterior areas that would benefit from noise abatement. The use of several of the buildings is for storage and electrical switching equipment, neither of which are noise sensitive. While noise abatement in the form of a noise barrier wall may be feasible for some of these receptors, it does not appear to be a reasonable course of action due to the lack of exterior noise sensitive activities. Interior noise levels would be reduced by the building envelope (generally 20 decibels or more, depending upon the building construction), which would bring all of these sites within the interior NAC.

With the Presidio Parkway Alternative, the use of tunnels would provide substantial traffic noise reduction to a number of receptors along the project corridor, including the Battery area, much of the Main Post area, and some of those along the Mason Street area. An investigation of tunnel portal noise reduction was conducted for the very same areas that could potentially be impacted by the increase noise levels associated with the combination of traffic noise and the portal noise created by reverberation within the tunnels. The placement of a small length of noise barrier wall along the top of the portal areas that extends away from the portal for a distance of approximately 20 meters (66 feet) and 1.83 meters tall (6 feet) would be sufficient to reduce the potential portal noise from impacting the noise sensitive sections of the National Cemetery and the Battery area, thereby maintaining or enhancing the soundscape for both of these areas.

The views of the impacted residents and property owners would be a major consideration in reaching a final decision on the reasonableness of abatement measures to be provided. The opinions of these residents and property owners would be obtained through the use of public involvement techniques that may include public hearings, community meetings, or other means as appropriate.

## 7.4 RETROFIT OF WINDOWS AT RESIDENCES EXCEEDING NAC

Many of the residences along Richardson Avenue appear to already have modern windows that likely have a high Sound Transmission Class (STC). As part of the remodeling of residential units along parts of Storey Avenue, double pane windows have been installed, which would improve the interior noise levels. Continued retrofitting of windows for those residences within the Presidio by the Trust that do not have modern windows (similar to what they have completely along portions of Storey Avenue) could result in a beneficial noise reduction to the interior of these homes. However, the federal requirements of 23CFR Part 772.13(c)(6) limit federal participation in the funding of such abatement to public use or nonprofit institutional use. Therefore, residential usage would normally not qualify for federal funding. Caltrans policy states that noise insulation will not normally be provided in private residential dwellings, and only when severe traffic noise impacts are anticipated. None of the residences are expected to receive severe traffic noise as a result of any of the proposed alternatives. In most cases (as shown in Table 6-1) there would be very little increase in residential noise levels over those that currently exist or are expected to occur without the construction of any of the build alternatives.

Three buildings within the Presidio (Nos. 105, 106, and 211) are expected to receive noise levels under one or more alternative that would cause the exterior noise level to equal or exceed 75 dBA. Under Caltrans procedure, these buildings could be considered severely impacted and the preliminary reasonableness of providing noise abatement in the form of insulation was investigated. Since the current use of two of the buildings within the Presidio (Nos. 105 and 211) are not noise sensitive (storage of data and vacant), acoustical retrofit is not appropriate for those buildings. At Building 106, currently used as office space, noise insulation may be considered beneficial. The preliminary reasonableness of providing noise insulation to this building would be discussed with the Trust prior to the development of final plans and estimates. Should the buildings be converted in the future to noise-sensitive National Park Service or non-profit organizational use, it would be appropriate for the NPS or the Trust to evaluate the potential for interior effects and appropriateness of acoustical retrofit.

## 7.5 ALTERNATIVE PAVING MATERIALS

The use of alternative paving materials such as open-graded asphaltic concrete or rubberized asphalt will be considered for application on those roadway segments that are not on structure. FHWA policy demands that these materials cannot be used to obtain credit for noise abatement unless long-term testing determines that the noise reduction characteristics are maintained throughout an extensive period of time. Caltrans is currently conducting several test cases involving the use of alternative paving materials to achieve noise reduction. While reduction up to 4 dBA have been demonstrated by some studies conducted by the Arizona Department of Transportation, there is some speculation regarding the transient longevity of these benefits over time, as the material is slowly eroded away. Pending the results of current studies being conducted under the FHWA Quiet Pavement Pilot Program, the use of alternative paving materials would not be considered a reasonable

abatement option, however they may be considered for use as pavement material during the pavement design analysis conducted as part of the project design phase.

## 7.6 ABSORPTIVE TUNNEL LININGS

The possibility of lining portions of the proposed Presidio Parkway Alternative tunnels is another noise abatement consideration. Typically an absorptive wall surface can be expected to result in a noise level reduction of 3 dBA or more, depending upon the material used, the nature of the traffic, the size of the tunnel, and the distance to the receiver of the traffic noise. Since tunnel noise is a momentary experience for the motorist passing through the tunnel, maintenance issues frequently override the reasonableness of placing absorptive surface material in a tunnel. However, the application of an absorptive surface at the tunnel portals may prove to be an effective method of reducing the reverberation typically occurring at portals and the resultant noise impact of those receptor locations within close proximity to the tunnel portal. Therefore, it is anticipated that the application of a sound absorptive surface will be investigated in detail during the design phase should the Presidio Parkway Alternative be selected.

In addition to the areas identified for noise abatement, a number of areas were identified where noise abatement does not appear to be reasonable or feasible or where circumstances do not warrant abatement consideration. A number of those sites have been previously identified, especially those along Richardson Avenue, Lyon Street, Marina Boulevard, Mason Street, Lincoln Boulevard, Gorgas Avenue, Montgomery Street, Girard Road and Halleck Street. Most of these sites were either not particularly noise sensitive land uses (warehouses, service stations, retail stores, etc.). Two buildings of concern were the Crissy Field Center and the Cross Cultural Environmental Education Center. In both cases, the noise levels anticipated with the proposed project would not be expected to increase more than 1 dBA above the No Build Alternative, and in the case of the Cross Cultural Environmental Education Center, the exterior noise levels are not expected to approach or exceed the NAC. However, due to the educational orientation of both buildings, a look at the potential impact on interior noise levels was also investigated. The nature of the construction of the Crissy Field Center (masonry with limited windows) provides a very effective noise reduction envelope. It is expected that traffic noise levels associated with Doyle Drive would not cause any speech or task interference under any of the alternatives under consideration. This same expectation holds true for the Cross Cultural Environmental Education Center, where the major noise source is traffic on Park Presidio Boulevard, which would not be modified in this area. Therefore, traffic noise abatement is not considered reasonable for either of these locations. Exterior activities at both of these locations would be able to continue as they currently do without any noticeable increase in traffic noise levels from any of the alternatives under consideration.

If pertinent parameters change substantially during the final project design, the preliminary noise abatement design could be changed or eliminated from the final project design. A final decision of the construction of the noise abatement would be made upon completion of the project design.

# SECTION 8: CONSTRUCTION NOISE

The extent of exposure to construction noise would vary depending on the alternative selected and the distance sensitive receivers are from the noise sources. With the exception of the No Build Alternative, all other alternatives would generate construction noise. Construction would be carried out in several reasonably discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. Construction would involve clearing, construction of temporary structures, cut-and-fill activities, demolition of old structures, placing piles (piling) for new foundations and piers, importing fill, constructing new structures, and paving. Maximum noise levels of construction equipment under all build alternatives would be similar to typical maximum construction equipment noise levels presented in Table 8-1. Detour traffic during construction could also temporarily affect nearby receptors.

**TABLE 8-1**
**TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT**

| Construction Equipment | Noise Level (dBA, Leq at 15 meters [49 feet]) |
|---|---|
| Dump Truck | 88 |
| Portable Air Compressor | 81 |
| Scraper | 85 |
| Concrete Mixer (Truck) | 89 |
| Jack Hammer | 88 |
| Dozer | 85 |
| Paver | 89 |
| Generator | 81 |
| Pile Driver | 101 |
| Backhoe | 80 |

Source: U.S. Department of Transportation, 1995.

Construction noise would be intermittent, occurring during a multi-year construction period. Construction noise levels would depend on the type, amount, and location of construction activities.

Construction noise outside of the Presidio is regulated by the City of San Francisco (San Francisco Police Code Article 29, Section 2907). The San Francisco Noise Ordinance regulates construction noise by restricting nighttime construction activity and by establishing noise standards for individual pieces of construction equipment. Except by permit granted by the Director of Public Works, construction work is prohibited between the hours of 8:00 p.m. and 7:00 a.m. if the noise level created is in excess of the ambient noise level by 5 dBA at the nearest property line. No single piece of powered construction equipment is to generate more than 80 dBA at a distance of 30 meters (100 feet).

Generally, construction activities that abide by the noise ordinance do not cause a substantial impact; however, the ordinance does not apply within the Presidio. Temporary construction activities that generate consistently loud conditions over a prolonged period of time in one location can have a negative effect by making it difficult to conduct ordinary activities at that location over the prolonged period. FHWA does not define any construction noise impact criteria, but provides guidance to analyze construction noise using an

8-hour Leq and to minimize impact using mitigation. Noise has been found to cause physiological stress at levels above 90 dBA and appreciable task interference at levels above 75 dBA (EPA, 1971). The FHWA NAC of 67 dBA is based on speech interference between adults conducting a normal conversation. While there is not an established noise impact criteria for temporary construction impact noise, the above information on noise levels support the following observations:

- There is no negative effect for temporary construction noise levels below 67 dBA;
- As noise levels approach 75 dBA, there is potential for negative effects as the duration of the activity increases; and
- Above 90 dBA, there is potential for substantial negative effect from activities of prolonged duration.

Drilled or non-driven pile shafts would be used in place of driven piles in the great majority of proposed construction (see Section 9, Vibration, for more detail on where pile driving would be avoided), substantially reducing maximum noise levels that would result during project construction (Table 8-2). On average, using drilled or non-driven piles reduces noise levels by approximately 15 dBA. With drilled or non-driven piles, piling would not be the loudest construction activity for the Doyle Drive Project. The loudest activities on the Doyle Drive Project would likely be associated with demolition of the existing roadway structures. Pavement breakers, often the loudest piece of equipment during demolition, have been measured with an average Leq of 85 dBA at 15 meters (50 feet) during operation. In areas nearest to sensitive receptors, the viaduct could be broken in sections and moved away from noise sensitive areas for demolition.

**TABLE 8-2**
**NOISE LEVELS ASSOCIATED WITH PILE PLACEMENT**

| Activity | Noise Level (Leq) and Distance |
|---|---|
| Driven Piles[1] | 95-99 dBA (15 meters) |
| Driven Sheet Pile[2] | 105 dBA (5 meters) |
| Bauer BG22 Pile Bore Rig[2] | 90 dBA (5 meters) |
| Impact Pile Driver[3] | 98 dBA (operator location) |
| Drilled Pile[3] | 83 dBA (operator location) |

References: [1]FHWA, 1982; [2]WACEP, 1998; [3]WCBBC, 2000

The land uses most sensitive to noise occur near the eastern and western limits of the Project. Within the areas to the east, there are residential land uses. The Palace of Fine Arts is also located with this area. At the western limits of the Project, residential enclaves are located immediately north and south of the potential construction activity. North of Doyle Drive throughout the construction limits, most of the property includes commercial, warehousing and industrial uses that are less noise sensitive to construction noise. An exception in this area is the Crissy Field Center. The concerns of the Center regarding construction noise has been noted in the past and special consideration of this issue will be taken. With the possible exception of pile driving, most construction noise levels would be in range of 85 to 90 dBA within 15 meters (50 feet). Major concerns are the type of construction activities, the type of equipment to be used, and the duration of the activity. A review of the construction phasing and the need for detour routes for each alternative has revealed that impacts to receptors like the Crissy Field Center would vary greatly in terms of type and duration.

## 8.1 CONSTRUCTION PHASING IMPACTS

### 8.1.1 Construction and Demolition Impacts

Construction activities for the Doyle Drive Project would be completed in stages over several years. Each stage would include various activities localized to portions of the project area. Some stages would also require detour routes for traffic. During each stage of construction, equipment would move as each area is completed. For example, a pile bore rig would operate between a few days and several weeks in the area where each of the viaduct piers are to be constructed, then would move to the next location.

Typical demolition and construction activities might include the following equipment and associated noise levels:

Demolition of existing viaduct structure: pavement breaker (85 dBA at 15 meters [50 feet]), loader (85 dBA at 15 meters [50 feet]), and dump truck (85 dBA at 15 meters [50 feet]). This operation would create a combined noise level of 90 dBA at 15 meters (50 feet) when all three pieces of equipment are operating simultaneously. The noise level would decrease with distance to approximately 84 dBA at 30 meters (100 feet), 76 dBA at 61 meters (200 feet) and 68 dBA at 122 meters (400 feet). At most times, not all equipment would be operating at full speed/throttle; therefore, the average noise level would be less than these values. At any one time, these activities would be occurring in a limited area and would move along the alignment over the duration of the demolition phase; therefore, the noise exposure area at any point in time would be a circle around the operating equipment.

Placement of piles: pile bore rig (80 dBA at 15 meters [50 feet]) and concrete truck/pump (80 dBA at 15 meters [50 feet]). This operation would create a combined noise level of 83 dBA at 15 meters (50 feet) when both pieces of equipment are operating. The noise level would decrease with distance to approximately 76 dBA at 30 meters (100 feet), 69 dBA at 61 meters (200 feet) and 62 dBA at 122 meters (400 feet). At any one time, these activities would be occurring in a limited area and would move from one pier location to the next over the duration of the piling phase.

Construction of new viaduct (placement of girders): two cranes (82 dBA at 15 meters [50 feet] each), pneumatic wrenches or welding machine (70 dBA at 15 meters [50 feet]), and an air compressor (83 dBA at 15 meters [50 feet]). This operation would create a combined noise level of 87 dBA at 15 meters (50 feet) when both pieces of equipment are operating. The noise level would decrease with distance to approximately 80 dBA at 30 meters (100 feet), 73 dBA at 61 meters (200 feet) and 66 dBA at 122 meters (400 feet).

Noise levels inside of buildings would be between 10 and 30 dBA less than the values discussed above, depending if doors and windows are open and the building's style and quality of construction. With closed windows and doors, most buildings would reduce noise levels between 20 and 30 dBA. For example, typical demolition noise levels at a building located 61 meters (200 feet) from a viaduct being demolished would be approximately 75 dBA outside and 56 dBA inside. These noise levels would be experienced for a few weeks while demolition activities are nearest to the building, and would decrease as activities move further from the building.

During the different phases of construction of any of the build alternatives, noise-generating construction activities would vary greatly in terms of type and duration. The generalized impacts for each build alternative are listed below. Methods to eliminate or minimize these impacts are discussed below.

- For the Replace and Widen Alternative, there would be two substantial construction options: Detour Option and No Detour Option. For the Replace and Widen Alternative – No Detour Option, the Stages and Phases within the area from Battery Blaney to Marina Boulevard would follow this general sequence.
- Stage 1, Phase 1 – Construct Doyle Drive by widening the outside structures and construct a minor detour on-ramp from northbound Richardson Avenue on to Doyle Drive to the outside of the existing ramp.

- Stage 2, Phase 2 – This phase would see the construction of a temporary detour from Doyle Drive to Richardson Avenue in the vicinity of the Palace of Fine Arts and the removal of the detour ramp constructed in Phase 1 above once the reconstruction of Doyle Drive was completed in this area.
- Stage 3, Phase 1 – Add a minor detour at the intersection of the detour by the Palace of Fine Arts and Richardson Avenue to include a traffic signal. Complete all work on Doyle Drive in this section.
- Stage 4, Phase 1 – Remove all detours within this section and return traffic to its original pattern.

A discussion of the phasing and impacts associated with the Replace and Widen – with Detour Option includes:

- Stage 1, Phase 1 – Construct Doyle Drive detour structures on the north side from the vicinity of Building 610 westward to the vicinity of Battery Blaney and along the south side in the same area. This activity would have the potential to impact Building 610 (Sports Basement), Battery Blaney, the National Cemetery, and buildings along Lincoln Boulevard. Construction would include the erection of a new viaduct section and would include minor demolition work.
- Stage 1, Phase 2 – This would include demolition of the section of Doyle Drive detoured above in Phase 1 and a shift for traffic to the detour structures. This typically requires the use of jack hammers, pavement breaking equipment, and other related equipment.
- Stage 1, Phase 3 – During this phase the segment of Doyle Drive by-passed by the detours would be reconstructed using normal construction techniques and noise-generating equipment.
- Stage 2, Phase 1 – During this phase the construction of the major detour from Marina Boulevard to Building 610 would occur along with the construction of a new off-on ramp to Richardson Avenue. It is this phase that would potentially be most disruptive to both traffic patterns and to the adjacent land uses. If the detour were built, a number of buildings along Mason Street and Doyle Drive would be removed, including several of the warehouse buildings along Mason Street. Once the detour was constructed the widening of Doyle Drive would take place in this area and the traffic would be shifted on to the detours. (Note: This traffic shift was considered to be the most extensive and was used as the basis for construction traffic noise impacts in the modeling effort.)
- Stage 3, Phase 1 – During this phase the existing Doyle Drive from Marina Boulevard to Building 610 would be demolished and traffic along Richardson Avenue, Halleck Street and Marshall Street would be altered considerably.
- Stage 4, Phase 1 – Construct the remaining portions of Doyle Drive in the area and shift traffic to the new section once it is complete. Then the detour segments would be removed.

For both Replace and Widen options, staging and phasing on the western end of the project would be identical.

- Stage 1, Phase 1 – During this stage reconstruction of Doyle Drive from the Park Presidio Boulevard interchange eastward to the Battery Blaney area would take place along the eastbound segments of Doyle Drive. A minor detour along the eastbound Doyle Drive off-ramp to Park Presidio would be constructed.
- Stage 2, Phase 1 – All traffic would be returned to the reconstructed Doyle Drive and ramp demolition at Park Presidio would take place.
- Stage 2, Phase 2 – During this phase reconstruction of the interchange at Park Presidio Boulevard would proceed and some reconstruction of eastbound Doyle Drive would continue in the vicinity of the Batteries.
- Stage 3, Phase 1 – Construction of temporary detours for westbound Doyle Drive in this segment of the project would take place.
- Stage 3, Phase 2 – Reconstruction of westbound Doyle Drive would take place and the ramp to Park Presidio would be completed.
- Stage 4, Phase 1 – Remove all detours and return traffic to its original pattern.

For the Presidio Parkway Alternative, the process would be substantially different to those listed for the Replace and Widen options noted below. Details on the construction process anticipated for this alternative are outlined in the *SPUR Alternative Feasibility Study*.

- Stage 1 – Existing Doyle Drive is maintained in its existing state and temporary detour construction takes place in the vicinity of the Park Presidio interchange and in the Richardson Avenue and Girard Road areas. Permanent construction of segments of the Presidio Parkway begin.
- Stage 2 – Construction of the permanent segments of the Presidio Parkway continue, especially in the vicinity of the Park Presidio interchange and the Girard Road intersection. Demolition of segments of the Richardson Avenue on and off-ramps takes place as well as ramps at the Park Presidio interchange. Some temporary construction takes place adjacent to westbound Doyle Drive west of the Park Presidio interchange.
- Stage 3 – Construction continues, primarily in the area west of the Park Presidio area and temporary detour and demolition work at both ends of the project.
- Stage 4 – Construction activities are focused on the two interchange areas on either end of the project.
- Stage 5 – Construction activities continue to focus on the two interchanges with traffic patterns changed at both interchanges to begin using the newly constructed segments of the Presidio Parkway. Minor demolition work also takes place along with some minor detour work at both interchanges.
- Stage 6 – Major shifts of traffic on to newly constructed segments of eastbound Doyle Drive takes place with most new construction taking place to the east of the Park Presidio interchange area.
- Stage 7 – Major construction of the westbound tunnels take place during this stage and westbound traffic is diverted to the top of the eastbound Battery Tunnel. The connection to Marina Boulevard is constructed as well has ramps on Girard Road and Richardson Avenue.
- Stage 8 – All remaining new construction on Doyle Drive is completed during this stage and demolition of some detours takes place as well as the removal of some of the original Doyle Drive roadway and structures that remain.
- Stage 9 - Demolition of the remaining segments of the original Doyle Drive takes place along with the removal of temporary detours and Halleck Street is constructed over the top of the eastern-most tunnel. All traffic is diverted to the new roadway.

As noted above, the equipment used, the duration of the activity, and the location, would all influence the level of construction noise impact for any receptor along the project alignment. While specific levels cannot be expressed for each receptor, a generalized level in the mid to upper 80 dBA at various times during the construction period can be expected for those receptors within 30 meters (100 feet) of the project construction limits. Although there are some residential uses within this area, most of the property in close proximity to the construction activity is sparsely developed. Based on the equipment noise levels presented in Table 8-1, residences along Richardson Avenue and Marina Boulevard could be exposed to construction noise in excess of 89 dBA while activities are conducted at the eastern end of the alignment during construction of the build alternatives.

Several specific sites have been identified where construction noise impacts are of special concern. One of those sites is the Crissy Field marsh and shoreline areas. Due to the distance from most construction activities and the active nature of the use of this site, any potential construction noise impacts would be of short duration and can be minimized or eliminated by the application of abatement options shown in the listing of abatement options in this section. Vibration concerns likewise are addressed in the Vibration section of this report and are not anticipated to create conditions which would adversely impact the area.

At the Crissy Field Center, construction noise impacts are not expected to adversely impact the use and function of the center unless pile driving activities take place. Since numerous options exist to eliminate the need for pile driving, no extended duration impacts are anticipated. No other sources of construction noise impacts are anticipated in this area although short-term impacts could occur. Coordination between the

management of the Crissy Field Center and the Construction Contractor can aid in reducing or eliminating potential noise impacts.

Potential construction impacts at the Cavalry Stables area would vary greatly depending upon the alternative selected and the construction methods employed. As noted above, pile driving is not anticipated to be part of the project although demolition activities could create short term higher noise levels that could cause a startle reaction in the horses. To minimize this potential, the Contractor may be required to use quieter removal techniques during the demolition process.

Finally, the area around Stilwell Hall was identified as an area where construction noise impacts would be of concern. Located in the vicinity of the Cavalry Stables, any special efforts to reduce construction or demolition noise for the stables would have a positive benefit for the area around Stilwell Hall. Because of the close proximity of construction activities to the building, care will be taken to ensure that the use of Stilwell Hall can be maintained throughout the construction phase.

### 8.1.2 Construction Equipment Staging Area Noise

Construction equipment staging is anticipated to take place at various locations within the project area and would have an influence on the noise levels in the immediate vicinity of the sites. Currently two primary areas are envisioned, all located at the eastern end of the project. For the Replace and Widen Alternative – No Detour Option, the two proposed staging areas are:

- The parking lot of between Building 610/Post Commissary/Sports Basement and the PX Building on the north side of Doyle Drive, and
- The parking lot west of Gorgas Avenue.

For the Replace and Widen Alternative – with Detour Option, the two proposed staging areas are:

- The space between where Building 610/Post Commissary/Sports Basement was (it is to be removed) and Building 603/Crissy Field Center (with the PX Building to be removed) on the north side of Doyle Drive, and
- The parking lot west of Gorgas Avenue.

For the Presidio Parkway Alternative, the two proposed staging areas are:

- The parking lot of between Building 610/Post Commissary/Sports Basement and Building 603/Crissy Field Center (with the PX Building to be removed) on the north side of Doyle Drive, and
- The parking lot west of Gorgas Avenue.

The various equipment staging options would have the greatest potential to impact the Crissy Field Center and the Post Commissary/Sports Basement, especially in terms of the loss of parking and the noise and dust would be part of the activities. Back up alarms could be one of, if not the most annoying noise source, and for which there are limited control options due to legal requirements. Should this become a substantial issue, the Contractor may be required to use alternatives to the standard alarm systems.

A detailed construction noise abatement plan will be developed as part of the plans, specifications, and estimate package prior to construction authorization. This plan will highlight the requirements of the San Francisco Noise Ordinance, the NPS Director's Order #47, and the key elements of the Presidio Trust Management Plan. It may also contain special provisions that the Contractor will have to adhere to, such as limits on equipment noise levels, methods of demolition, use of pile driving, and similar controls. Until the preferred alternative is selected and the design features of the project are clearly defined, detailed noise abatement techniques for construction control are premature and subject to extensive modification. Close coordination between the design of the project and the requirements of the noise ordinance, Order 47, and the PTMP will result in a design and construction package that will ensure that construction noise is limited to the extent that is reasonable.

Potential noise impacts to wildlife are an additional important consideration that is addressed in the Natural Environment Study (NES). Please refer to that study for a discussion of noise impacts on natural resources.

### 8.1.3 Operational Traffic Noise Levels during the 2010 Construction Phases

During the construction phases of the Doyle Drive project, traffic patterns would be altered considerably from time to time. In an attempt to depict the types of noise impacts these pattern shifts could have on operational noise levels, a representative construction phase was selected for each build alternative and compared with the No-Build Alternative for the same time period. In each case, a phase was selected that appears to represent a condition where traffic noise impacts would have the greatest potential to increase for many of the receptor locations. Construction phase operations would be temporary and occur only while the detour facilities are in use. Table 8-3 illustrates the operational traffic noise impacts during the major construction phase. As seen in Table 8-3, a number of sites would experience noticeable shifts in traffic noise during the peak construction phase of the various alternatives, sometimes increasing and sometimes decreasing. For instance, under the Replace and Widen Alternative with detours, a number of receptors would be removed to make way for the construction of the detours. In other cases, the same shift of alignment to provide the temporary detour route would bring the traffic closer to other receptors and increase their noise level. This temporary noise impact would be highly dependent upon the final alternative that is selected.

### 8.1.4 Measures to Minimize Construction Noise

A number of measures could be taken to reduce construction noise exposure at noise sensitive sites and to meet appropriate requirements. These measures would be consistent with Caltrans and NPS policies, and could include the following:

- Equipment used for construction activities should not exceed 86 dBA (Lmax) at a distance of 15 meters (50 feet) based on the Caltrans Traffic Noise Analysis Protocol, and no piece of construction equipment should exceed 80 dBA at a distance of 30 meters (100 feet) based on the San Francisco Noise Ordinance.
- Impact tools and equipment should be equipped with intake and exhaust mufflers recommended by manufacturers and approved by the City of San Francisco Department of Public Works (based on the San Francisco Noise Ordinance).
- Pavement breakers and jackhammers should be equipped with acoustically attenuating shields or shrouds recommended by the manufacturers and approved by the City of San Francisco Department of Public Works.
- Construction activity between the hours of 8:00 p.m. and 7:00 a.m. should be prohibited if the noise level created is greater than 5 dBA above the ambient at the nearest property line. It should be noted that under certain circumstances, a special permit could be granted by the City of San Francisco Department of Public Works if nighttime construction is required.
- The Contractor shall coordinate with facility users, such as the Crissy Field Center, to identify times and dates when especially noise sensitive construction activities might take place so that schedules can be adjusted as appropriate.
- To the extent feasible, demolition activities in the vicinity of the Cavalry Stables and Stilwell Hall may take advantage of noise reduction methods for demolition, such as cutting and removal techniques rather than blasting or the use of jack hammers or hoe rams.

To minimize noise impacts from pile driving and other construction equipment, consideration is being given to the use of alternate construction methods when near sensitive receptor locations. Examples are pre-drilling of pile holes, avoiding cracking and seating methods for resurfacing concrete near sensitive receptors, and the use of rubber tired as opposed to tracked vehicles.

**TABLE 8-3**
**PREDICTED OPERATIONAL TRAFFIC NOISE LEVELS DURING THE CONSTRUCTION PHASE**

| Receptor[1] | Site Description | NAC Approach[2] | Alternatives | | | |
|---|---|---|---|---|---|---|
| | | | No Build 2010 | Replace & Widen with Detour 2010 | Presidio Parkway Diamond 2030 | Presidio Parkway Circle 2030 |
| 1 | Palace of Fine Arts | 66 | **71*** | 62 | **69*** | **68*** |
| 2 | Palace of Fine Arts | 66 | **68*** | 58 | 61 | 61 |
| 3 | Mason St. Warehouse Building 1187/1188 | 71 | 68 | Gone[3] | 56 | 56 |
| 4 | Mason St. Warehouse Building 1182 | 71 | 65 | Gone | 55 | 55 |
| 5 | Mason St. Warehouse Building 1183/1186 | 71 | 63 | Gone | 56 | 56 |
| 6 | Mason St. Warehouse Building 1184/1185 | 71 | 68 | 60 | 59 | 58 |
| 7 | Building 603/Crissy Interpretative Center | 66 | 68 | 60 | 56 | 56 |
| 8 | PX Building | 71 | 70 | Gone | 58 | 59 |
| 9 | Building 610/Post Commissary | 71 | 69 | 65 | 69 | 70 |
| 10 | Battery Blaney | 66 | **75*** | **70*** | **69*** | **68*** |
| 11 | Battery Slaughter | 66 | **80*** | **79*** | 65 | 65 |
| 12 | Battery Sherwood | 66 | **77*** | **75*** | 64 | 65 |
| 13 | Battery Baldwin | 66 | **67*** | 64 | **67*** | **67*** |
| 14 | Building 644/Unit Motor Pool | 71 | 63 | 60 | 59 | 60 |
| 15 | Building 649/Army Reserves | 66 | 61 | 60 | 60 | 60 |
| 16 | Building 650/Stilwell Hall | 66 | 61 | 59 | 59 | 58 |
| 17 | Landrum Court/ Officers Quarters | 66 | 64 | 65 | 64 | 64 |

| Receptor[1] | Site Description | NAC Approach[2] | Alternatives | | | |
|---|---|---|---|---|---|---|
| | | | No Build 2010 | Replace & Widen with Detour 2010 | Presidio Parkway Diamond 2030 | Presidio Parkway Circle 2030 |
| 18 | 1253 Armistead Road | 66 | **71*** | **72*** | **76*** | **76*** |
| 19 | Building 969/Garage | 71 | 53 | 52 | 58 | 58 |
| 20 | Building 968/Garage | 71 | 54 | 54 | 59 | 59 |
| 21 | Building 967/Film Vault | 71 | 56 | 56 | 65 | 65 |
| 22 | Building 966/Radio Receiver Station | 71 | 56 | 56 | 65 | 65 |
| 23 | Building 964/Officer Family Housing | 66 | 54 | 54 | 63 | 63 |
| 24 | Building 963/Officer Family Housing | 66 | 55 | 55 | 63 | 62 |
| 25 | Building 962/Officer Family Housing | 66 | 54 | 54 | 62 | 61 |
| 26 | Building 1659/Data Center | 71 | 56 | 57 | **74*** | **74*** |
| 27 | Log Cabin Picnic Area | 66 | **69*** | **68*** | **68*** | **68*** |
| 28 | Ft. Scott Chapel | 66 | 62 | 62 | 67 | 67 |
| 29 | 1298 Storey Ave./ Enlisted Family Housing | 66 | **68*** | **67*** | **66*** | **66*** |
| 30 | 1297 Storey Ave./ Enlisted Family Housing | 66 | **71*** | **68*** | **68*** | **68*** |
| 31 | 1295 Storey Ave./ Enlisted Family Housing | 66 | **70*** | **70*** | **70*** | **70*** |
| 32 | 1294 Storey Ave./ Enlisted Family Housing | 66 | **72*** | **72*** | **71*** | **70*** |
| 33 | 1293 Storey Ave./ Enlisted Family Housing | 66 | **73*** | **73*** | **72*** | **71*** |

| Receptor[1] | Site Description | NAC Approach[2] | Alternatives | | | |
|---|---|---|---|---|---|---|
| | | | No Build 2010 | Replace & Widen with Detour 2010 | Presidio Parkway Diamond 2030 | Presidio Parkway Circle 2030 |
| 34 | 1291 Storey Ave./ Enlisted Family Housing | 66 | **74*** | **73*** | **72*** | **72*** |
| 35 | 1290 Storey Ave./ Enlisted Family Housing | 66 | **73*** | **73*** | **73*** | **74*** |
| 36 | 1289 Storey Ave./Enlisted Family Housing | 66 | **71*** | **71*** | **72*** | **73*** |
| 37 | 1263 Storey Ave./ Enlisted Family Housing | 66 | **66*** | **67*** | **68*** | **69*** |
| 38 | Building 682/Cross Cultural Center | 66 | 63 | 63 | 64 | 65 |
| 39 | Building 661/Cavalry Stables | 71 | 66 | 65 | 60 | 60 |
| 40 | Building 662/Cavalry Stables | 66 | **66*** | 65 | 62 | 62 |
| 41 | Building 663/Cavalry Stables | 66 | 65 | 65 | 63 | 63 |
| 42 | Building 667/Cavalry Stables | 71 | 66 | 64 | 67 | 67 |
| 43 | National Cemetery Grave Site | 66 | **72*** | **74*** | 63 | 64 |
| 44 | Building 129/Enlisted Family Quarters | 66 | 65 | 60 | 57 | 58 |
| 45 | Building 122/Gym | 71 | **74*** | **70*** | 61 | 62 |
| 46 | Building 108/Storage/ Electrical Shop | 71 | **75*** | 68 | 61 | 62 |
| 47 | Building 107/ Switching Station | 71 | **76*** | 67 | 66 | 67 |
| 48 | Building 104/Barracks and Mess Hall | 71 | 70 | 64 | 58 | 58 |

| Receptor[1] | Site Description | NAC Approach[2] | Alternatives | | | |
|---|---|---|---|---|---|---|
| | | | No Build 2010 | Replace & Widen with Detour 2010 | Presidio Parkway Diamond 2030 | Presidio Parkway Circle 2030 |
| 49 | Building 105/Barracks and Mess Hall | 71 | **76*** | 67 | **72*** | **73*** |
| 50 | Building 106/Band Barracks | 71 | **80*** | 65 | **71*** | **72*** |
| 51 | Building 211/former Burger King | 71 | **75*** | 66 | 65 | 65 |
| 52 | Building 204/ Exchange Store | 71 | 69 | 64 | 58 | 59 |
| 53 | Building 210/Guard House | 71 | **71*** | 63 | 61 | 62 |
| 54 | Building 201/ Exchange Store | 71 | 66 | 64 | Gone[3] | Gone[3] |
| 55 | Building 220/Bakers and Cooks School | 71 | 64 | 60 | 54 | 54 |
| 56 | Building 231/ Exchange Gas Station | 71 | 66 | 62 | 66 | 66 |
| 57 | Building 228/Bakery | 71 | 65 | 61 | 63 | 63 |
| 58 | Building 227/ Warehouse | 71 | 64 | 60 | 61 | 61 |
| 59 | Building 223/ Warehouse | 71 | 59 | 58 | 58 | 58 |
| 60 | Building 230/ Warehouse | 71 | 66 | 63 | Gone[3] | Gone[3] |
| 61 | Building 1029/Swords to Plowshares | 66 | 63 | 59 | 60 | 60 |
| 62 | Building 1030/Swords to Plowshares | 66 | 61 | 58 | 57 | 57 |
| 63 | Building 1063/Medical Supply Warehouse | 71 | 61 | 60 | 61 | 69 |
| 64 | Building 1062/ Quartermaster Shop | 71 | 59 | 58 | 58 | 58 |

| Receptor[1] | Site Description | NAC Approach[2] | Alternatives | | | |
|---|---|---|---|---|---|---|
| | | | No Build 2010 | Replace & Widen with Detour 2010 | Presidio Parkway Diamond 2030 | Presidio Parkway Circle 2030 |
| 65 | Building 1060/Medical Supply Warehouse | 71 | 58 | 58 | 58 | 58 |
| 66 | Building 1167/Gorgas Warehouse | 71 | 64 | 59 | 64 | 64 |
| 67 | Building 1163/Gorgas Warehouse | 71 | 62 | 61 | 64 | 64 |
| 68 | Building 1169/Gorgas Warehouse | 71 | 65 | 60 | 64 | 64 |
| 69 | Building 1162/Gorgas Warehouse | 71 | 62 | 61 | 62 | 62 |
| 70 | Building 1170/Gorgas Warehouse | 71 | 68 | 63 | **71*** | **71*** |
| 71 | Building 1161/Gorgas Warehouse | 71 | 65 | 67 | 66 | 66 |
| 72 | Building 1160/Gorgas Warehouse | 71 | **71*** | **73*** | **71*** | **71*** |
| 73 | Building 1152/Presidio YMCA Gym | 66 | **70*** | **70*** | **71*** | **70*** |
| 74 | Building 1151/Presidio YMCA Pool | 66 | **73*** | **72*** | **72*** | Gone[3] |
| 75 | Building 1004/Officers Quarters | 71 | 55 | 56 | 56 | 56 |
| 76 | 3234 Lyon Street | 66 | **75*** | **72*** | **74*** | **72*** |
| Number of sites approaching or exceeding the NAC | | | 30 | 20 | 22 | 21 |

Source: ESA, 2004.

Notes: [1]For details regarding the receptor location, see Appendix E.

[2]FHWA noise abatement criterion approach based on anticipated land use. Approach is defined by Caltrans as being within one 1dBA of the noise abatement criterion.

[3]Indicates that this building is anticipated to be removed as part of the construction project.

*__Bolded__ numbers indicate noise levels that approach, equal, or exceed the NAC.

# SECTION 9: VIBRATION

## 9.1 STUDY METHODOLOGY

### 9.1.1 Methodology

This vibration impact assessment was completed by Wilson, Ihrig & Associates (WIA). The assessment has considered the potential disturbance and potential structural damage issues due to vibration generated by construction activities, and vibration generated by future traffic on Doyle Drive and other roadways in the study area.

The assessment was based on reviews of the plans of the existing Doyle Drive alignment, the preliminary plans of the Modified Replace and Widen and the Presidio Parkway Alternatives, and the proposed temporary construction route options. Existing and projected future traffic volumes on Doyle Drive and other roadways within the study area for the alternatives was also reviewed. Site visits were carried out to view the study area and potentially affected structures.

The assessment of vibration impacts due to future traffic on Doyle Drive was based in part on vibration data obtained during the 2002 study into existing vibration levels near historical buildings in the Presidio, and on published traffic-generated vibration data and file data. The 2002 study found that the existing vibration levels at one of the historical buildings close to Doyle Drive marginally exceeded the threshold of human perception but were well below the levels that could cause even cosmetic building damage.

The assessment of vibration impacts due to the construction procedures that are likely to be utilized on the project were based on discussions with the project design team, and on published construction vibration data and file data. Preliminary, conservative buffer distances from impact pile driving, based on minimizing the risk of damage to the many historical buildings in the Presidio, were developed during the initial stages of the study. Based on this information, the lead consultants concluded that conventional impact pile-driving procedures would only find limited application on this project, and that alternate pile-driving procedures producing lower vibration would need to be utilized in most areas

### 9.1.2 Regulatory Setting

#### 9.1.2.1 Building Damage Criteria

There are no specific City or State regulations or standards for ground vibration due to construction or transportation sources. However, City and State agencies, such as the Department of Public Works and Caltrans, normally include vibration limits in their construction contracts to minimize the risk of damage to potentially affected buildings and civil structures. These limits are usually presented in terms of the Peak Particle Velocity (PPV).

PPV is the term for the highest velocity attained during a vibratory event. The velocity of open ground near a structure has traditionally been used as the basis for measuring the PPV and evaluating the likelihood of building damage. The measurement of exterior vibration eliminates the variability of the response of specific building structures and the variability of results that can be obtained at different measurement locations within a building.

The use of particle velocity as the basis for damage criteria, which was first proposed around 1960, was firmly established in 1971 with the publication of the Bureau of Mines study “Blasting Vibrations and Their Effects on Structures.” In this investigation, the researchers examined a pool of damage data from several different studies and concluded that the particle velocity for a given degree of damage is constant over a

significantly broad frequency range. In contrast, equivalent acceleration or displacement measures depend on the frequency of the vibration. The report investigators recommended 50 millimeters per second (mm/sec) [2.0 inches per second (in/sec)] as a safe (threshold of damage) blasting criterion.

The 50 mm/sec (2.0 in/sec) criterion put forth by the Bureau of Mines in 1971 was widely adopted by the mining and construction industries. However, over the past several decades these industries have moved towards progressively lower limits to ensure a very small probability of even cosmetic damage, which is defined as:

> *The formation of hairline cracks on drywall surfaces, or the growth of existing cracks in plaster or drywall surfaces, or the formation of hairline cracks in mortar joints of brick/concrete block construction.*

A 1984 U. S. Bureau of Mines study (Stagg et al.) reported measurements of wall strains in a test house due to the effects of environmental and everyday activities. This study found that environmental changes (temperature and humidity) alone correlated with PPV of 30 to 75 mm/sec (1.2 to 3.0 in/sec). Walking and heel drops were found to correspond to a PPV of 0.8 mm/sec (0.03 in/sec), while that for jumping was 7 mm/sec (0.28 in/sec), slamming a door was 13 mm/sec (0.50 in./sec) and pounding nails was found to be 22 mm/sec (0.88 in/sec). Thus, typical interior activities or environmental factors can either generate relatively high, localized vibration levels, or produce similar effects.

Another U. S. Bureau of Mines study (Siskind et al., 1980) indicated a lower limit of 13 mm/sec (0.5 in/sec) PPV, below which no cosmetic cracking had been observed. Other vibration damage standards developed by the Germans (DIN 4150 – Part 3: 1986) indicate that with the exception of “ruins, historic monuments in poor state of repair or buildings of historic interest,” the limit to avoid all potential damage is a PPV of 5 mm/sec (0.2 in/sec). These damage thresholds are typically much more restrictive than the damage thresholds actually observed or predicted, undoubtedly to provide a “margin of safety.” For structures that might be considered “ruins or historical monuments,” the limit is a PPV of 2 mm/sec 0.08 in/sec. These limits of 5 mm/sec (0.2 in/sec PPV) for conventional buildings and 2 mm/sec (0.08 in/sec) for historical buildings are consistent with those used by Caltrans in evaluating the potential effects of continuous vibration, including vibration generated by road traffic and by most construction activities.

#### 9.1.2.2 Human Comfort Criteria

The actual perception of motion or vibration may not, in itself, be disturbing or annoying. A person’s response to the perception of whether the vibration is “normal” or “abnormal” depends very strongly on previous experience and expectations. For example, the vibration that a person responds to as “normal” in an automobile, bus or train is considerably higher than what is perceived as “normal” in an office or home.

Building damage assessment is normally accomplished by evaluating the PPV of the ground surface. For assessment of people’s response to vibration, the root-mean-square or RMS vibration velocity level is generally used and most instrumentation for these types of analyses are RMS responding devices. Depending on the nature of the vibration, the PPV is almost always greater than the RMS velocity. The RMS vibration velocity level in decibels, or dB (re $10^{-6}$ in/sec) is a metric commonly used in the measurement and assessment of “feelable” vibration, with a vibration velocity level of about 65 to 70 dB considered to be the threshold of most people’s perception. The threshold of people’s perception in terms of PPV is on the order of approximately 0.15 mm/sec (0.006 in/sec).

The levels of building vibration that start to cause disturbance to people vary considerably depending on people’s activities, their location and their attitude toward the source of the vibration. People in their homes tend to be disturbed by almost any vibration that they can feel, which corresponds to vibration velocity levels of slightly above 70 dB. In an office environment people tend to be slightly more tolerant of building vibration than they would be at home, and in public buildings (such as shopping centers) or on structures such as pedestrian bridges, people are far more tolerant of vibration.

#### 9.1.2.3 Comparison of Building Damage and Human Comfort Criteria

Human sensitivity is such that vibrations can be felt by the occupants of buildings and produce complaints even though no physical damage is caused. This phenomenon is evident from the data in Table 9-1, which provides a summary of the effect of continuous vibrations on people and building structures (developed from research carried out by the Transport and Road Research Laboratory in England). These criteria indicate that the vibration can become unpleasant and lead to major complaints well before there is any substantial risk of even superficial structural damage to most buildings.

**TABLE 9-1**
**REACTION OF PEOPLE AND EFFECT ON BUILDINGS DUE TO CONTINUOUS VIBRATION**

| Vibration Level (Peak Particle Velocity) mm/s | in/sec | Human Reaction | Effect on Buildings |
|---|---|---|---|
| 0.15 – 0.30 | 0.006 – 0.019 | Threshold of perception; possibility of intrusion | Vibrations unlikely to cause damage of any type. |
| 2.0 | 0.08 | Vibrations readily perceptible | Recommended upper level of the vibration to which ruins and ancient monuments should be subjected. |
| 2.5 | 0.10 | Level at which continuous vibrations begin to annoy people | Virtually no risk of "architectural" damage to normal buildings. |
| 5.0 | 0.20 | Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations) | Threshold at which there is a risk of "architectural" damage to normal dwelling – houses with plastered walls and ceilings.<br>Special types of finish such as lining of walls, flexible ceiling treatments, etc., would minimize "architectural" damage. |
| 10-15 | 0.4 – 0.6 | Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges | Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage. |

Source: "A Survey of Traffic-induced Vibrations" by Whiffen and Leonard, Transport and Road Research Laboratory, RRL Report LR418, Crowthorne, Berkshire, England, 1971.

Note: The vibration levels are based on peak particle velocity in the vertical direction. Where human reactions are concerned, the value is at the point at which the person is situated. For buildings, the value refers to the ground motion. No allowance is included for the amplifying effect, if any, of structural components.

The criteria in Table 9-1 are also used by Caltrans to assess the severity of road traffic and construction vibration. Caltrans notes that the 2 mm/sec (0.08 in/sec) criterion included in Table 9-1 for ruins and historical monuments could also be applied to the buildings of historic interest. This 2 mm/sec (0.08 in/sec) criterion could therefore be applied to the historical buildings in the Presidio, particularly those that are more susceptible to damage, such as the buildings of masonry construction. A 2 mm/sec (0.08 in/sec) criterion is still very conservative in terms of structural damage risk, particularly for intermittent events (including sustained pile-driving). However ground vibration of this magnitude could produce building floor vibration levels high enough to cause disturbance to the occupants. Thus, a ground vibration velocity not exceeding 2 mm/sec (0.08 in/sec) PPV was used to establish preliminary buffer distances from impact pile driving.

## 9.2 ENVIRONMENTAL SETTING

### 9.2.1 Vibration Measurement Procedure

Measurements of existing vibration levels were obtained on Thursday, April 11, 2002 in the early afternoon during a period when traffic was freely flowing on both Doyle Drive and Park Presidio.

The first measurement location was chosen to characterize the existing vibration in the vicinity of the historical wood-frame buildings immediately adjacent to the existing Doyle Drive, near Halleck Street. These buildings are identified as Buildings 201, 204 and 230. The second measurement location was chosen to characterize the existing vibration in the vicinity of the historic brick buildings at the Main Post. These buildings are identified as Buildings 105, 106 and 107. The third measurement location was immediately above the existing Park Presidio tunnel on Washington Boulevard. Two vibration measurement locations spaced 15 m (50 ft) apart were used over the top of the tunnel to ensure that maximum levels of vibration were obtained. The measured data were similar and have been averaged for presentation in this report.

Table 9-2 provides descriptions of these measurement locations.

**TABLE 9-2**
**MEASUREMENT LOCATION DESCRIPTIONS**

| Designation | Description |
|---|---|
| Location 1A | At the foundation base of the northwest corner of Building 201, approximately 8 m (27 ft) from the curb of Halleck Street and approximately 17 m (55 ft) from the nearest support column of Doyle Drive. |
| Location 1B | At the base of a southern support column of Doyle Drive, approximately 17 m (55 ft) north of Location 1a. |
| Location 2 | At the foundation base of the northeast corner of Building 105, approximately 5 m (15 ft) from the curb of Lincoln Boulevard, immediately west of Doyle Drive. |
| Location 3 | On the concrete curb of Washington Boulevard, directly over the top of the Park Presidio Tunnel. |

The vibration data were recorded by means of a calibrated multi-channel digital audio tape (DAT) recorder equipped with one or two piezoelectric accelerometers for measuring vertical vibration, along with an associated amplification system. The tape recordings were later statistically analyzed in the WIA laboratory to obtain overall vibration velocity levels and 1/3-octave band levels of vibration velocity.

### 9.2.2 Measurement Results

Ambient vibration measurements were obtained for a period of 15 minutes at each measurement location. As indicated, the ambient vibration data were statistically analyzed over the measurement period where $L_X$ indicates the level exceeded X% of time. Thus $L_1$ represents the level exceeded 1% of the time and is usually referred to as the typical maximum level. For a 15-minute sample the $L_1$ represents the level exceeded for a total of 9 seconds. Figures 9-1 through 9-4 present the statistically analyzed RMS vibration velocity data in terms of 1/3-octave band levels. These figures also present the statistically analyzed overall RMS vibration velocity levels on the left side of the graph in each figure. Summarizing, the typical maximum RMS vibration velocity level at each measurement location was: Location 1A = 71 dB; Location 1B = 76 dB; Location 2 = 61 dB and Location 3 = 57 dB. Overall RMS vibration velocity levels that are approximately 70 dB are generally barely feelable.

Thus, the only locations where the $L_1$ vibration levels approached or exceeded the threshold of human perception were at the base of the Doyle Drive support column (Location 1B) and at the NW corner of Building 201 (Location 1A). The highest PPV recorded at Location 1B was approximately 2 mm/sec (0.09 in/sec). The highest PPV recorded at Location 1A was approximately 0.5 mm/sec (0.02 in/sec), well below the conservative 2 mm/sec (0.08 in/sec) threshold damage limit for historical buildings.

These findings are consistent with those of other studies, including extensive investigations carried out by Caltrans, which has determined that traffic-generated ground vibration is not normally of sufficient magnitude to cause any appreciable risk of structural damage to adjacent buildings. Figure 9-5 is a plot showing maximum ground vibration levels generated by highway truck traffic versus the distance from the centerline of the near lane of at-grade freeways. The graph shows the maximum values recorded from previous Caltrans studies. It indicates that the highest PPV measured on the freeway shoulders (5 meters, or approximately 5 m (16-½ ft) from the center of the near lane) have never exceeded the 2 mm/sec (0.8 in/sec) limit for historical buildings with the worst combinations of heavy trucks. Experience with elevated rapid transit system structures and elevated freeway structures indicates that the ground vibration is generally lower at a given distance from the elevated structure than it would be from an at-grade alignment.

## 9.3 IMPACTS AND MITIGATION MEASURES

### 9.3.1 Construction Related Vibration Impacts to Structures

Construction activities can result in substantial levels of ground vibration, depending on the equipment and the construction procedures utilized and the distance to the observer. Buildings in the vicinity of the construction activities respond to the vibration with varying results, ranging from no perceptible effects at the lowest levels, feelable vibrations at moderate levels, and the possibility of slight damage at generally far higher levels.

Criteria relating to both feelable vibration and potential structural damage due to building vibration are presented in Section 9.1.2 of the report. Based on the criteria discussed in Section 9.1.2, a ground vibration PPV of 2 mm/sec (0.08 in/sec) would be a conservative, but appropriate limit for the historical buildings that are more susceptible to damage, including those in a poor structural condition and those of masonry construction. The buildings in the Main Post area of the Presidio are mostly of masonry construction and would therefore fall into this category. In addition, visual observation of the buildings under consideration in this study indicates some existing differential settlement and cracks in the facades of the brick buildings (Figure 9-6). However, most of the other historical buildings in the Presidio are wood-framed structures, which are substantially less susceptible to damage from vibration. For most of these buildings, a higher PPV of 5 mm/sec (0.2 in/sec) would be an appropriate, conservative limit for construction vibration. The exterior facades of some of these wood-framed buildings (such as the Mason Street warehouses) are in a poor condition (Figure 9-7), although it is understood that these buildings are structurally sound.

**FIGURE 9-1**
**VIBRATION VELOCITY LEVELS AT LOCATION 1A**
**15-MINUTE SAMPLE BEGINNING AT 12:20 PM – 4/11/02**

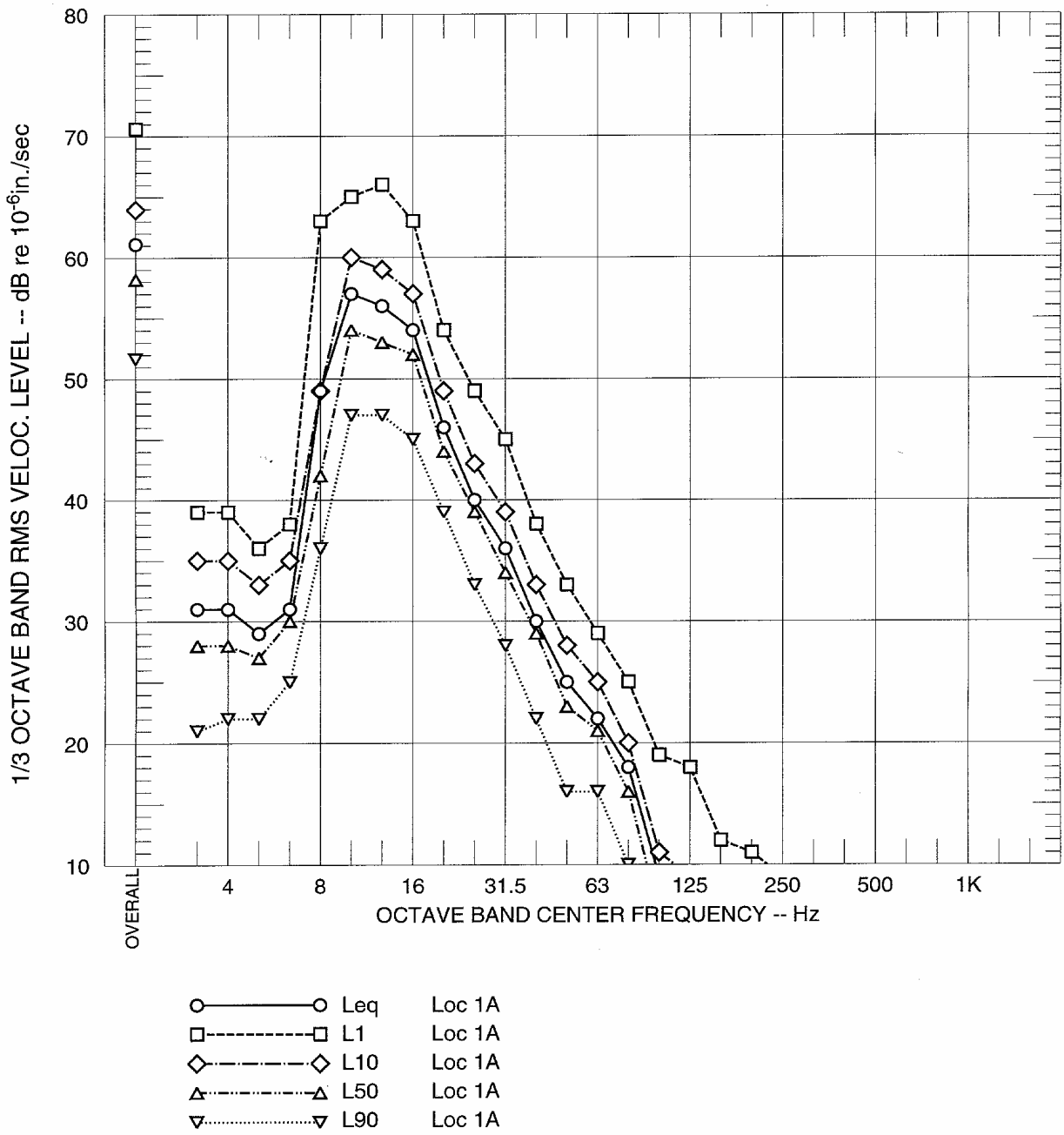


**FIGURE 9-2**
**VIBRATION VELOCITY LEVELS AT LOCATION 1B**
**15-MINUTE SAMPLE BEGINNING AT 12:20 PM – 4/11/02**

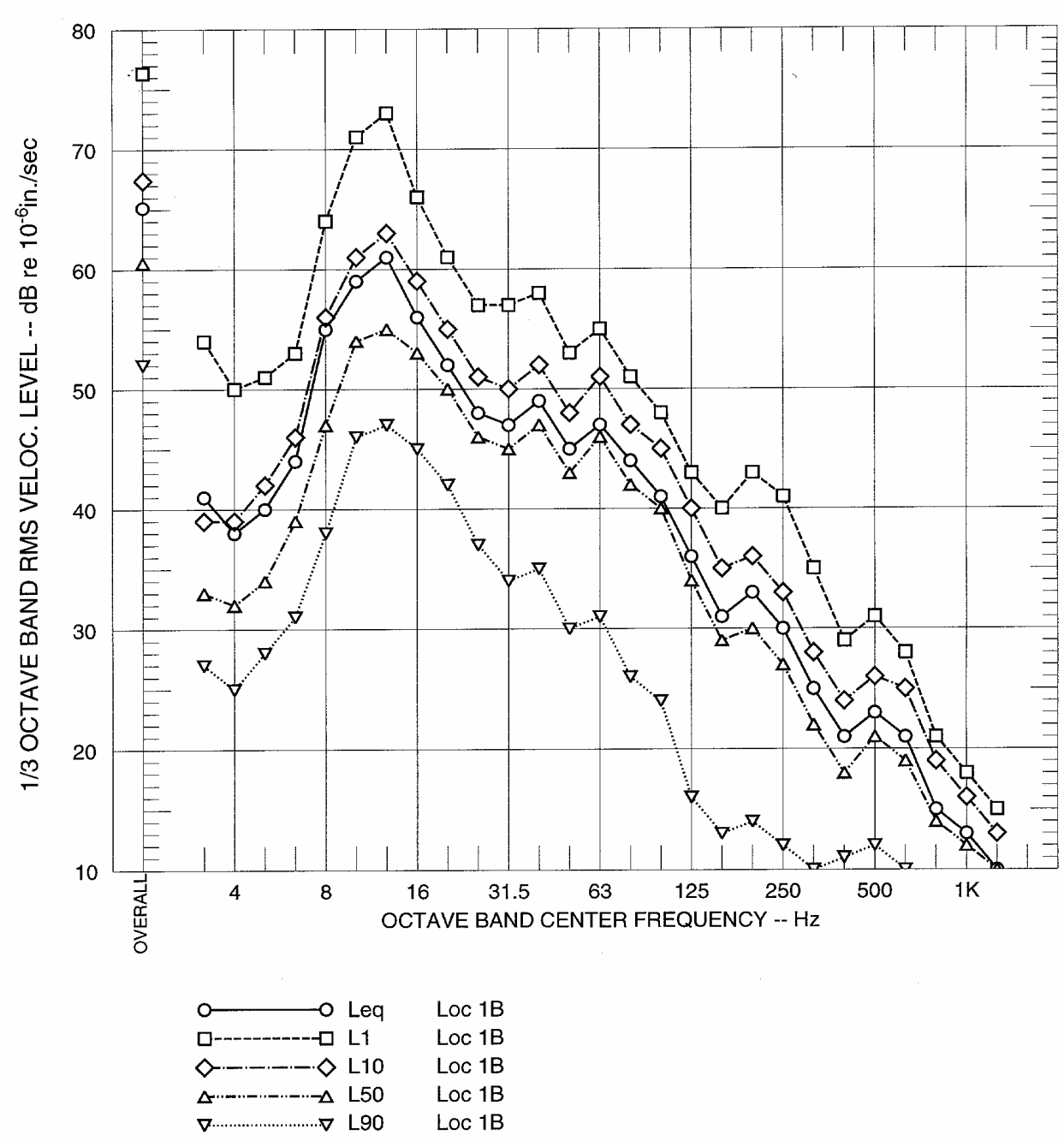


**FIGURE 9-3**
**VIBRATION VELOCITY LEVELS AT LOCATION 2**
**15-MINUTE SAMPLE BEGINNING AT 1:21 PM – 4/11/02**

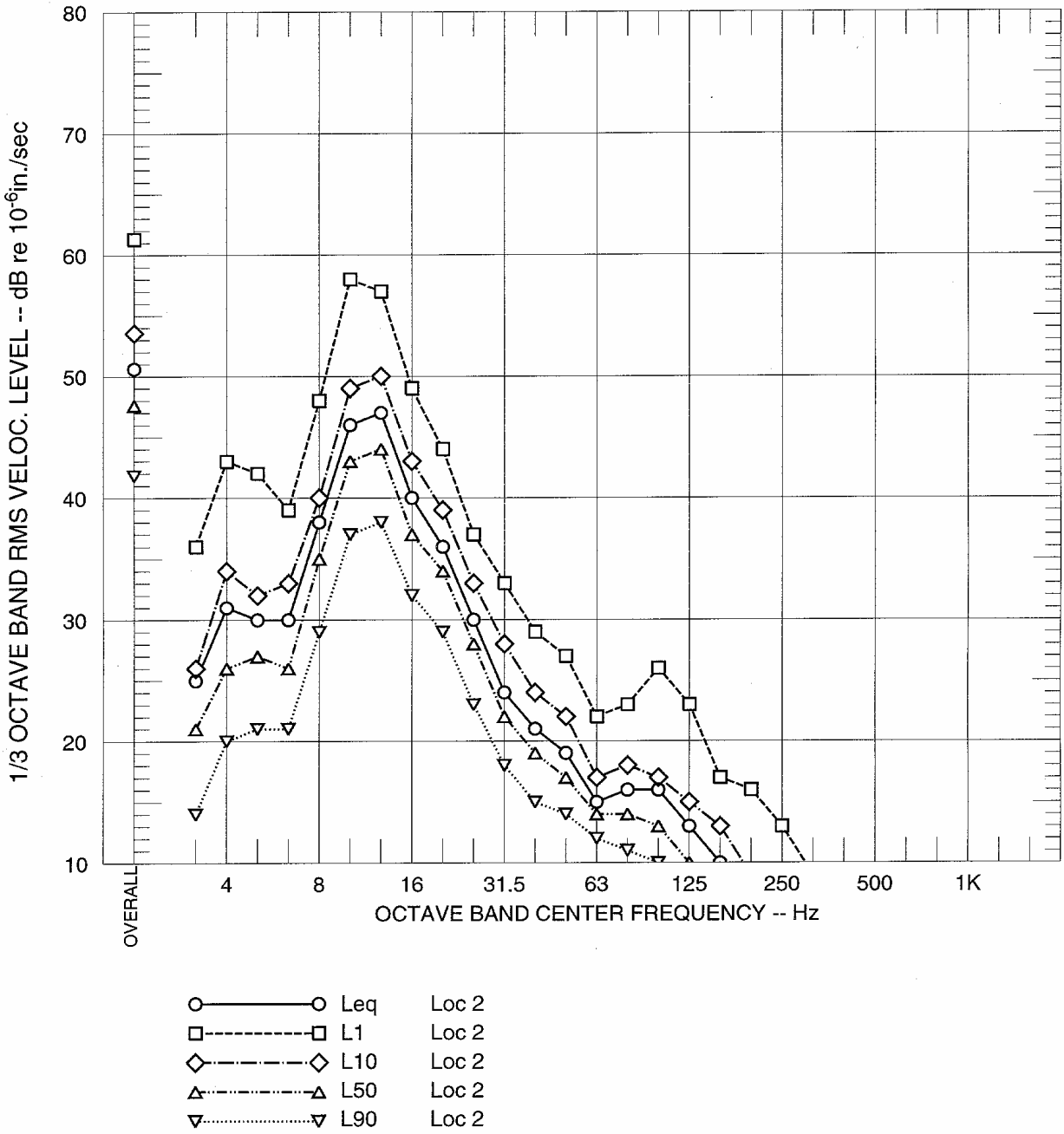


**FIGURE 9-4**
**VIBRATION VELOCITY LEVELS AT LOCATION 3**
**15-MINUTE SAMPLE BEGINNING AT 2:04 PM – 4/11/02**

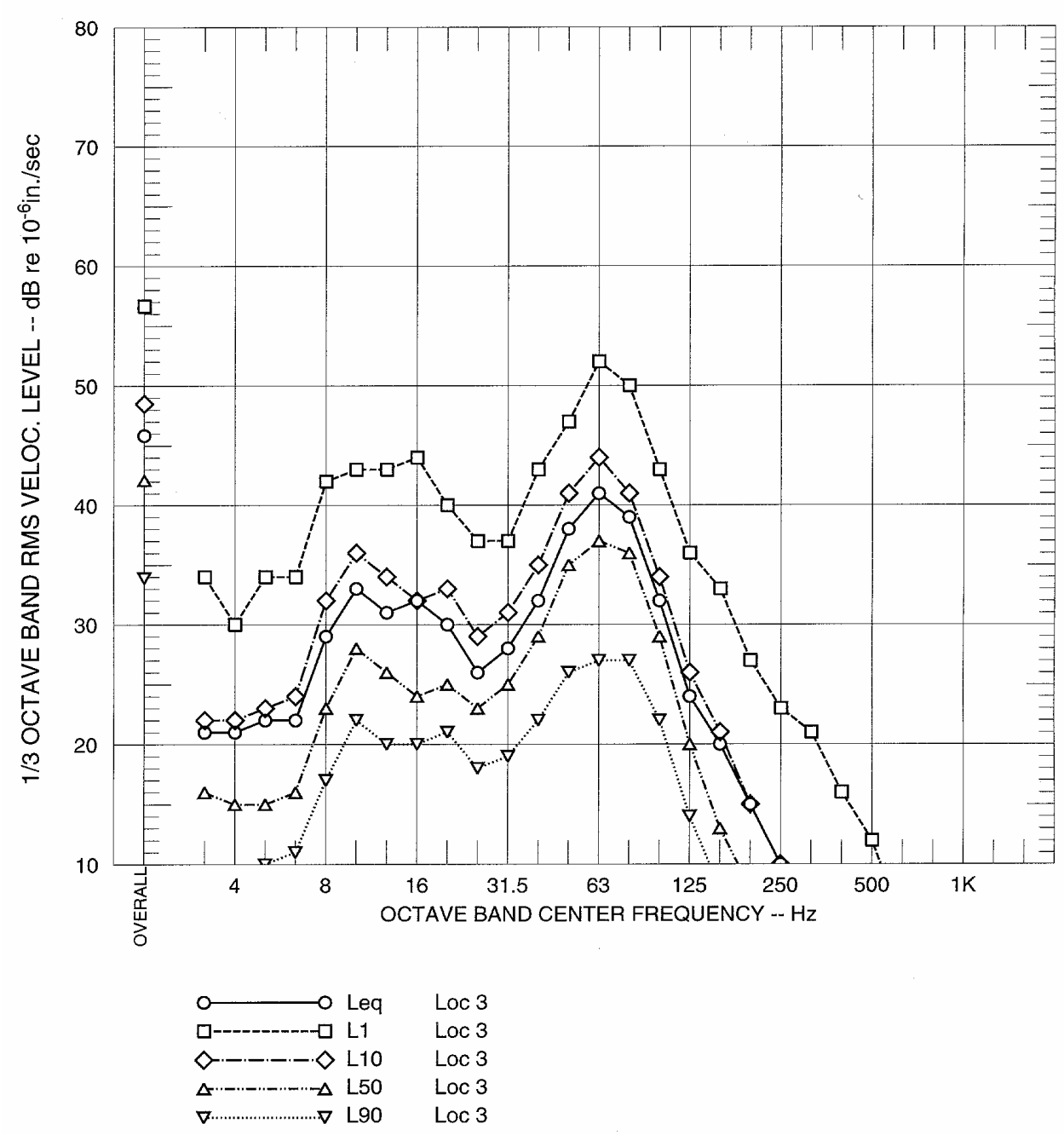
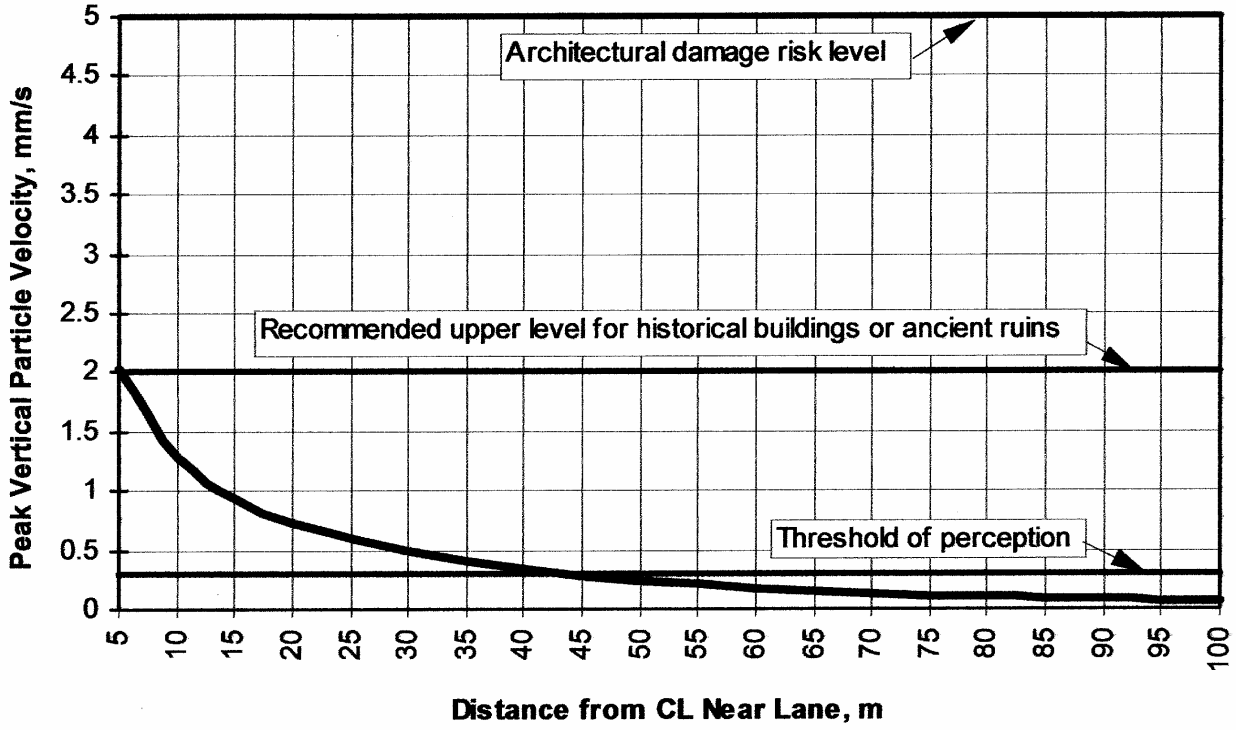


**FIGURE 9-5**
**MAXIMUM HIGHWAY TRUCK VIBRATION LEVELS VERSUS DISTANCE**




Source: Caltrans Technical Advisory, Vibration, TAV-02-01-R9601, "Transportation Related Earthborne Vibrations (Caltrans Experiences)," February 20, 2002.

The construction vibration activities that typically generate the highest levels of ground vibration are blasting, impact pile driving, and dynamic compaction. Pile driving would be required along much of the route, including the section of tunnel adjacent to the Main Post, proposed by the Presidio Parkway Alternative. The tunnel road structure would need to be supported by piles, and sheet piling would be installed during the excavation of the tunnel adjacent to the Main Post. The proposed underground parking garage near the Mason Street Warehouses would also need piles to support the floor slab.

Dynamic compaction of the road surfaces using vibratory rollers would also be required along much of the route. Compaction would be required where existing roads are reconstructed as part of the Presidio Parkway Alternative, including Palace Drive (adjacent to the Palace of Fine Arts), Halleck Street, Girard Road and Gorgas Avenue, and in the formation of temporary construction (haul) roads. A number of other existing roads, including Lincoln Boulevard and Crissy Field Avenue, would also be reconstructed.

It is understood that a decision has not yet been made on whether blasting would be permitted on this project. Blasting is generally a more cost-effective means of breaking rock and can reduce the duration of exposure to the noise otherwise produced by alternate means of rock breaking. If it is permitted, blasting might be used in the area of the Park Presidio interchange. If that is the case, the blast weights and blast design would need to be based on achieving compliance with conservative ground vibration limits at the closest buildings. Vibration monitoring should be carried out during preliminary test blasts, using low charge weights, to assist in the blast design. Vibration monitoring should also be carried out during the subsequent blasting, as well as pre-construction and post-construction surveys of potentially affected structures. If blasting is not permitted, some form of mechanical means of rock breaking and extraction would be utilized in the Park Presidio interchange area.

**FIGURE 9-6**
**BUILDING 106 (MAIN POST) SHOWING TYPICAL EXISTING CRACKS IN EXTERIOR WALLS**

**(PHOTOS TAKEN 8/28/04)**

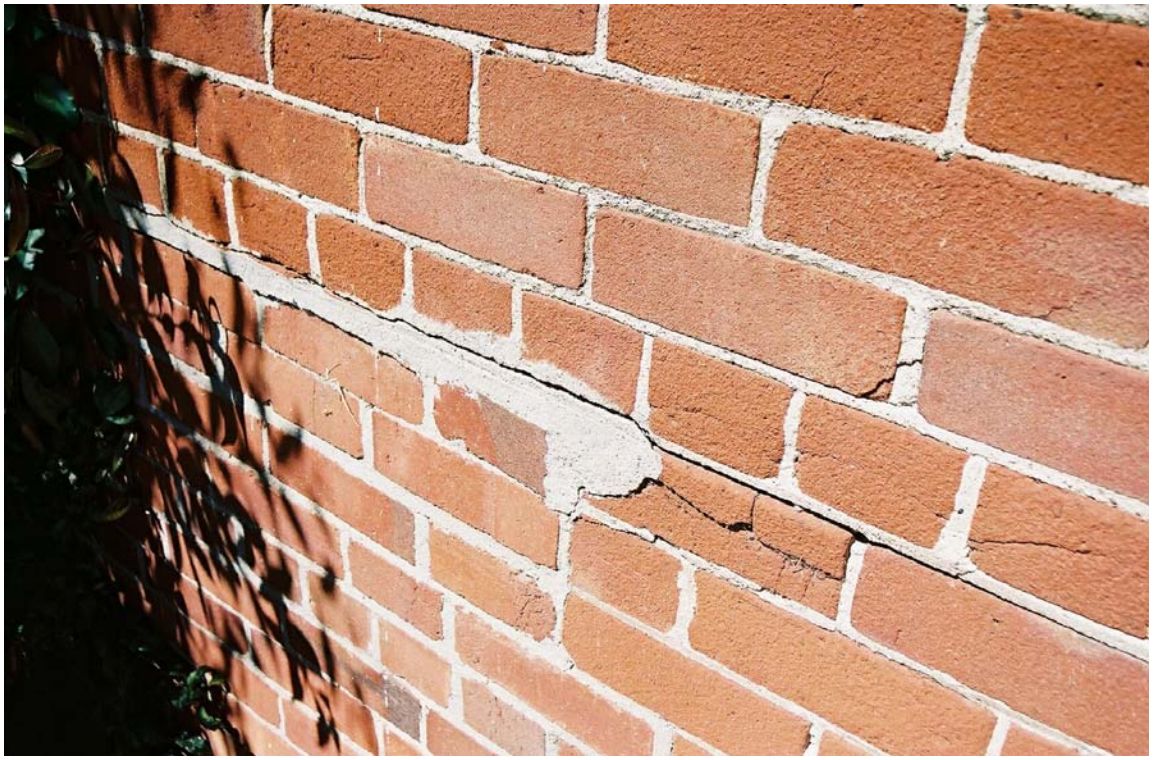


**FIGURE 9-7**
**BUILDING 1184 - ONE OF THE MASON STREET WAREHOUSES CLOSEST TO DOYLE DRIVE**

**(PHOTOS TAKEN 8/28/04)**

Table 9-3 provides a summary of typical ground vibration levels at 7.5 m (25 ft) from various items of construction equipment. Although the table generally gives one level for each item of equipment, there is considerable variation in reported ground vibration levels from construction activities in practice.

**TABLE 9-3**
**VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT**

| **Equipment** | | **PPV at 7.5 m (25 ft) [in mm/sec in/sec]** | **Approximate $L_v^*$ at 7.5 m (25 ft)** |
|---|---|---|---|
| Pile Driver (impact) | upper range | 38.6 (1.518) | 112 |
| | typical | 16.4 (0.644) | 104 |
| Pile Driver (sonic) | upper range | 18.6 (0.734) | 105 |
| | typical | 4.3 (0.170) | 93 |
| Clam shovel drop (slurry wall) | | 5.1 (0.202) | 94 |
| Hydromill (slurry wall) | in soil | 0.2 (0.008) | 66 |
| | in rock | 0.4 (0.017) | 75 |
| Large bulldozer | | 2.3 (0.089) | 87 |
| Caisson drilling | | 2.3 (0.089) | 87 |
| Loaded trucks | | 1.9 (0.076) | 86 |
| Jackhammer | | 0.9 (0.035) | 79 |
| Small bulldozer | | 0.08 (0.003) | 58 |

Source: "Transit Noise and Vibration Impact Assessment," Final Report, prepared by Harris Miller Miller and Hanson Inc. for the Federal Transit Administration, US Department of Transportation, April 1995.

Note: $*L_V$ is the Vibration Velocity Level in dB re $10^{-6}$ in/sec.

Based on this information and file data, the expected worst-case ground vibration velocity from impact pile driving is less than 2 mm/sec (0.08 in/sec) PPV at a distance of 60 m (200 ft), and less than 5 mm/sec (0.2 in/sec) PPV at 30 m (100 ft), even allowing for soil conditions that tend to assist the vibration propagation. This information was provided to the project design team during the initial stages of the study.

Alternate means of pile driving would be used within a 60 m (200 ft) buffer zone from the historical buildings within the Presidio. These alternate measures would include vibratory piling, use of drilled piles, and pile jacking (where the piles are pressed into the ground by means of a hydraulic system, resulting in far less vibration). Although vibratory pile driving generally produces less vibration than conventional impact pile driving, file data indicate that vibratory pile driving could still generate ground vibration levels exceeding 2 mm/sec (0.08 in/sec) within about 30 m (100 feet), and could exceed 5 mm/sec (0.2 in/sec) within about 15 m (50 feet). Vibratory pile drivers usually generate the highest vibration levels during start-up and shut-down. "Resonant-Free" (or variable eccentric moment) vibrators avoid this problem, by shifting the eccentric weights out of phase during start-up and shut-down and shifting the weights into phase after the vibrator reaches full speed, and might therefore find application on this project in situations where impact or standard vibratory pile driving cannot be used due to vibration.

Where drilled piles are utilized, steel casings would first need to be put in place to prevent or minimize groundwater seepage, and that the casings would be installed by a vibratory process or by jacking. Where drilled piles are utilized due to vibration considerations, it is recommended that the steel casings be put in place by jacking rather than a standard vibratory process.

By the nature of their operation, vibratory rollers can also give rise to relatively high levels of ground vibration. The maximum expected levels range up to about 2 mm/sec (0.08 in/sec) at distances of 20 m (70 ft). The highest levels of vibration usually occur as the roller is brought to rest and the frequency of the centrifugal forces passes through the natural frequency of the roller/ground/structure. Higher levels could occur at closer distances, however no damage would be expected for any building at distances greater than approximately 20 m (70 ft) (from a medium-to-heavy roller). In areas where soil compaction is required adjacent to any of the historical buildings more susceptible to damage (i.e., the masonry structures or buildings in a poor structural condition) at distances closer than about 20 m (70 ft), particularly with a heavy roller, vibration monitoring at those structures should be carried out and consideration given to the use of a lighter roller. To avoid resonance effects, vibratory rollers should not be stopped or started in proximity to sensitive premises.

Other activities that could generate relatively high levels of vibration include the demolition of the existing elevated roadway structures. Demolition techniques that are being considered for the low viaduct area involve cutting the structure into sections that would be progressively dropped to the ground, resulting in high levels of vibration. Operations of this type might need to be modified (e.g., lowering by crane rather than dropping the components to the ground) if they occur in close proximity to the historical buildings more susceptible to damage. Measures to reduce the impacts, such as dropping the components onto earthen "cushions," could be considered but this type of approach would not necessarily attenuate the low frequency ground vibration generated by the impacts. Before demolition procedures such as this are carried out in close proximity to historical buildings, measurements could be carried out in less sensitive areas of the project to evaluate the vibration from dropping sections of the structure onto the ground (with and without an earthen cushion).

Breaking up the existing reinforced concrete structures on the ground by using hoe rams or other hydraulic breakers could also produce substantial vibration, although the vibration levels are likely to be appreciably lower than those generated by dropping the components onto the ground in the first place. In areas close to historical buildings where it might be necessary to lower the components to the ground by crane, the components should be placed as far as possible from the buildings before they are broken up. Alternately, if earthen cushions are found to be effective in mitigating the vibration from dropping the reinforced concrete structures onto the ground, they might also be effective in reducing the vibration from subsequently breaking up these components on the ground.

The data in Table 9-3 indicate that vibration from bulldozers and other earthmoving equipment involved in excavating the tunnels, and from jackhammers and similar equipment used to break up miscellaneous existing reinforced concrete structures such as retaining walls, curbs and gutters, should not generally be an issue in terms of potential structural damage.

The vibration from the hydraulic power units associated with the pile driving equipment, and from other continuously operating mechanical equipment such as compressors, should not be an issue in terms of potential structural damage, particularly since such equipment can be strategically located to reduce both noise and vibration at sensitive buildings.

Figure 9-5 indicates that the ground vibration adjacent to truck movements on temporary construction routes (at distances of greater than about 5 m (15 ft) from the center of the near lane, or greater than about 3 m (10 ft) from the edge of the road) would not normally give rise to any substantial risk of vibration-induced damage to adjacent historical buildings, although the vibration might be quite noticeable to the building occupants. However, the vibration levels can be very substantially increased if there are discontinuities in the road pavement due to poorly maintained surfaces. It will therefore be important to maintain the surfaces of roads used as temporary construction routes in good condition.

With respect to which alternative has the greatest potential impacts in terms of construction vibration, the Presidio Parkway Alternative would have the greatest potential impacts in areas to the south of Doyle Drive (such as the Main Post), due to the general shift in alignment towards the south. It is likely that several existing historical buildings to the south of Doyle Drive – namely Buildings 670, 204, 201, 230, and 1151 – would in fact be demolished as part of the Presidio Parkway Alternative. The Presidio Parkway Alternative

also involves more work on other roads in the study area, particularly near the east end of the project. Nonetheless, implementing appropriate vibration management procedures - as discussed in the following section - can minimize the risk of structural damage to the historical buildings, although the Presidio Parkway Alternative would likely require more extensive vibration mitigation measures than the Replace and Widen Alternative.

### 9.3.2 Construction Related Vibration Impacts to Soils

Construction vibration can cause soil liquefaction phenomena and soil settlement, and can therefore indirectly result in structural damage due to these effects. The project geotechnical engineers have provided the following assessment indicating vibration-induced settlement is unlikely to be a substantial adverse issue:

> "*Vibration induced settlements arising out of pile driving has been discussed in NCHRP Synthesis 253 (Dynamic Effects of Pile Installations on Adjacent Structures) published in 1997. This publication indicates that settlement of loose sands during pile driving is clearly a problem and that settlements in cohesive soils are unlikely, except under special circumstances. The publication further states that simple methods of estimating the magnitude of settlement are not available. Several examples of pile driving induced settlements are presented. Though by no means definitive, significant settlements are not likely to occur beyond 200 feet from the pile location even for most adverse soil conditions. Settlements are also likely to increase when a large number of piles are driven in the vicinity, as well as when a sized (high energy) hammer is used.*
>
> *The loose deposits of the Historic Tidal Marsh between Stations 17+00 and 28+00 are possibly the only soils at the project site vulnerable to pile driving induced settlements. A more definitive assessment of the vibration induced settlement issue may be made during Final Design. At that time, the construction plans will be finalized; therefore, the locations of the foundation, including the number and type of piles to be driven at each location will be established. The type of hammer, including hammer energy will be known, and improved information on the distribution of the loose sandy soils and their properties will be available."*

The Final Preliminary Geotechnical Report, 2004 contains a full discussion of all project-related geotechnical and soil impacts.

### 9.3.3 Construction Vibration Mitigation Measures

Provided appropriate vibration limits are incorporated in the construction contracts and the vibration levels are controlled to within those limits by utilizing alternate demolition and construction procedures where necessary (as described in Section 9.3.1), there would be minimal risk of damage to the historical buildings within the Presidio due to construction-induced building vibration.

The following vibration management measures will be required to reduce vibration to acceptable levels:

1. Appropriate construction vibration limits shall be incorporated in the construction documents. The recommended ground vibration limits are a PPV not exceeding 5 mm/sec (0.20 in/sec) adjacent to the closest facades of wood-framed historical buildings in good condition, and a PPV not exceeding 0.08 in/sec adjacent to the closest facades of historical buildings more susceptible to damage (buildings of masonry construction, and other buildings in a poor structural condition).

2. Impact pile driving shall not be used within 60 meters (200 feet) of fragile historic structures.

3. In areas where soil compaction is required adjacent to any of the historical buildings more susceptible to damage (i.e., the masonry structures or buildings in poor structural condition) at distances closer than about 20 m (65 feet), particularly with a heavy roller, vibration monitoring at those structures shall be

carried out and consideration given to the use of a lighter roller. To avoid resonance effects, vibratory rollers shall not be stopped or started in proximity to sensitive premises.

4. To reduce potential vibration impacts in close proximity to the historical buildings from the dropping demolished viaduct structures onto the ground, the demolition operations shall modified as necessary. Alternative approaches include lowering demolished viaduct structures by crane (as opposed to dropping), or the use of earthen cushions. If earthen cushions are used, their effectiveness in reducing vibration would first be evaluated in less sensitive areas of the project site.

5. To reduce potential vibration impacts to historic buildings from breaking up reinforced concrete structures on the ground, the components shall be placed as far as possible from the buildings before they are broken up.

6. Pre-construction surveys of potentially affected buildings shall be carried out prior to the commencement of any demolition or construction activities that might affect the structural integrity of the buildings. The surveys shall be thoroughly document the existing conditions of the building foundation, floors, walls, ceilings, roof, and other building elements, and shall record any internal and external cracks, settlement, leakage, and other deficiencies. Existing cracks found in buildings shall be measured by ruler and photographed by means of still photographs and video recordings. Crack monitors shall be installed where any substantial existing cosmetic or structural cracks are found in the pre-construction surveys, and shall be regularly checked as construction proceeds. Post-construction surveys shall also be carried out immediately after the completion of the construction activities that might affect specific buildings. It may also be necessary to carry out more than one pre-construction (and post-construction) survey in each building, particularly when there are substantial periods of time between different construction activities that might affect a given building.

7. Ground vibration monitoring shall be carried out adjacent to the closest facades of potentially affected historical buildings, by independent consultants, before and during construction activities generating potentially high levels of ground vibration. The vibration monitoring shall be carried out using calibrated seismographs providing electronic or paper recordings of the maximum PPV recorded in each of three orthogonal directions, over intervals not exceeding one minute. The seismograph sensors shall be firmly set in undisturbed soil or firmly mounted on at-grade concrete slabs or asphalt pavement. The seismographs shall also be capable of activating immediate audible or visual alarms or electronic transmission if the vibration exceeds a pre-set limit, thus alerting the Contractor's representative of any exceedences of the vibration limit. If the limits are exceeded, the construction work causing the exceedences must immediately cease. The Contractor would then be required to investigate modifications to the construction procedure or alternate procedures to reduce vibration, before the work is permitted to re-start.

8. If blasting is permitted, the blast weights and blast design shall be based on achieving compliance with conservative ground vibration limits at the closest buildings. Vibration monitoring shall be carried out during preliminary test blasts, using low charge weights, to assist in the blast design. Vibration monitoring shall also be carried out during the subsequent blasting, as well as pre-construction and post-construction surveys of potentially affected structures.

In addition, the Presidio Trust and the occupants of potentially affected buildings (particularly people living in the Riley Avenue and Ruckmann Avenue residential areas) shall be fully informed about the construction schedule, its progress, and the hours of work. Residents and building occupants shall be given adequate advance notice before work is carried out in their vicinity. They shall be advised that they might experience some disruptions due to construction noise and "feelable" vibration, but that extensive measures have been taken to carefully monitor and control the vibration to below the levels that could cause any damage to the buildings.

### 9.3.3 Long-Term (Permanent) Impacts

This section of the report considers the potential disturbance to building occupants and the potential risk of structural damage due to any increased ground and building vibration resulting from increased future traffic on Doyle Drive and other roads on the study area. The effects of moving the elevated roadway support columns closer to some of the historical buildings with the Replace and Widen Alternative, and changing the alignment with the Presidio Parkway Alternative, have also been considered.

Table 9-4 summarizes the existing two-way morning and afternoon peak traffic volumes at representative locations on Doyle Drive, and the projected future morning and afternoon peak-hour traffic volumes for the No Build, Replace and Widen, and Presidio Parkway Alternatives (including the Diamond and Circle options).

**TABLE 9-4**
**EXISTING AND FUTURE AM AND PM PEAK HOUR TRAFFIC VOLUMES ON DOYLE DRIVE**

| Location | Time | Base Case (2000) | No Build (2030) | Replace & Widen (2030) | Presidio Parkway Circle (2030) | Presidio Parkway Diamond (2030) |
|---|---|---|---|---|---|---|
| Toll Plaza to Park Presidio | AM Peak Hour | 9,140 | 11,460 | 11,430 | 11,650 | 11,640 |
| Toll Plaza to Park Presidio | PM Peak Hour | 8,770 | 11,290 | 12,000 | 11,700 | 12,060 |
| Park Presidio to Richardson Avenue | AM Peak Hour | 7,250 | 7,930 | 7,980 | 7,840 | 7,950 |
| Park Presidio to Richardson Avenue | PM Peak Hour | 7,230 | 8,400 | 8,650 | 8,630 | 8,710 |

Source: DKS Associates, 2004

Note: Traffic volumes shown in the table are two-way (i.e., Eastbound and Westbound)

The data indicate that there would be relatively modest increases in traffic volumes on Doyle Drive from the present time to 2030, with little difference between the No Build scenario and the build alternatives. Assuming that the traffic mix (i.e., percentage of trucks and other heavy vehicles) is much the same, there would not be any substantial changes in traffic-induced vibration due to increased future traffic.

Due to their weight, trucks are the main cause of the maximum vibration levels experienced adjacent to freeways. Caltrans Technical Advisory TAV-02-01-R9601 notes:

> "Because of the rapid dropoffs with distance, even trucks traveling close together often do not increase peak vibration levels substantially. In general, more trucks will show up as more peaks, not necessarily higher peaks. Wavefronts emanating from several trucks close together may either cancel or partially cancel (destructive interference) or reinforce or partially reinforce (constructive interference) each other, depending on their phases and frequencies. Since traffic vibrations can be considered random, the probabilities of total destructive or constructive interference are extremely small. Coupled with the fact that two trucks cannot occupy the same space and the rapid drop-off rates, it is understandable that two or more trucks normally do not contribute significantly to each other's peaks."

With the No Build scenario, even if future traffic volumes on Doyle Drive substantially increased above the current levels, it is unlikely that there would be any substantial increases in the maximum vibration levels, although the number of the higher-level vibration events could increase in proportion with the traffic volumes. Thus, increased traffic is by itself unlikely to substantially increase the maximum vibration levels.

Moving the elevated roadway support columns closer to some of the historical buildings with the Replace and Widen Alternative, or moving the whole alignment closer with the Presidio Parkway Alternative, could

increase the resulting building vibration levels in some areas. As a guide to the increases that could be expected, a halving in distance (e.g., from 50 ft to 25 ft) could approximately double the maximum ground vibration PPV generated by a given truck. Another factor that could increase the resulting vibration levels in some areas is changing the current elevated alignments to at-grade alignments with the Presidio Parkway Alternative. Thus, the levels of vibration experienced in the closer buildings might increase in some areas, particularly with the Presidio Parkway Alternative, but the vibration would remain well below conservative criteria based on minimizing the risk of structural damage.

It is difficult to predict whether the Replace and Widen or Presidio Parkway Alternatives would lead to any substantial adverse impacts in terms of “feelable” vibration, without knowledge of the final design. The current levels of ground vibration outside the historical buildings close to Doyle Drive are unlikely to be of sufficient magnitude to cause “feelable” floor vibration inside the buildings. Thus increased future ground vibration would not necessarily result in noticeable vibration within the buildings.

The closest building in the Main Post area to the Presidio Parkway Alternative alignment is Building 106, which will continue to be used as offices. The preliminary plans of the Presidio Parkway Alternative indicate that the closest corner of Building 106 would be about 8 meters horizontal distance from the center of the nearest traffic lane, although the near lanes would be at least 4 meters below grade. The values plotted in Figure 9-5 indicate that the worst-case ground vibration velocity could be up to about 1.4 mm/sec (0.06 in./sec) PPV at 8 meters from the center of the nearest freeway lane; this substantially exceeds the threshold of perception. However, Figure 9-5 is based on the highest values that have ever been recorded in Caltrans’ studies, and are thus are very conservative predictions. Provided the road surface is smooth (i.e., there are no substantial irregularities), the ground vibration produced by trucks is unlikely to substantially exceed 0.5 mm/sec (0.02 in./sec) PPV near the closest corner of the building. Older, heavier buildings like Building 106 exhibit higher coupling losses and react less to the vibration than the lighter, more modern structures. The floor vibration levels inside Building 106 would be substantially lower than the ground vibration levels outside the closest corner of the building. Even if the vibration is at times “feelable,” it is expected that the vibration velocity level in the areas within Building 106 closest to Doyle Drive would comply with the Federal Transit Administration’s 75 dB (re $10^{-6}$ in/sec) criterion used for assessing the acceptability of frequent vibration events in institutional and “quiet” office buildings.

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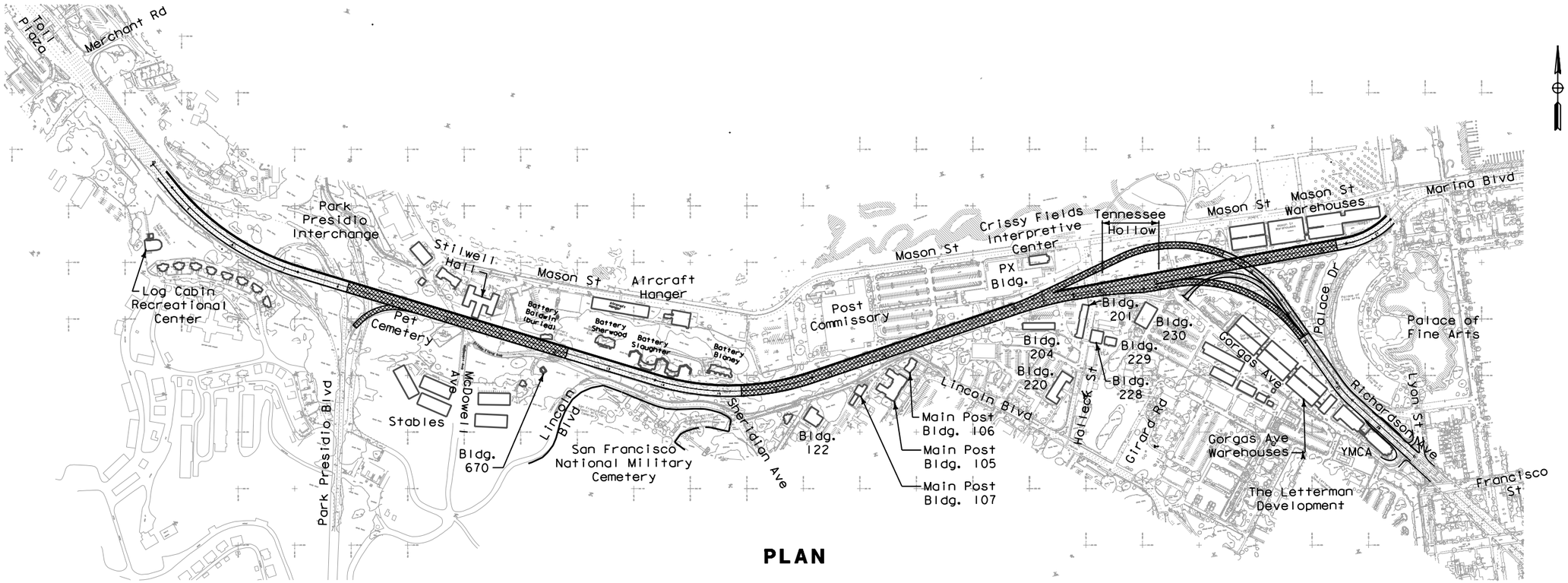
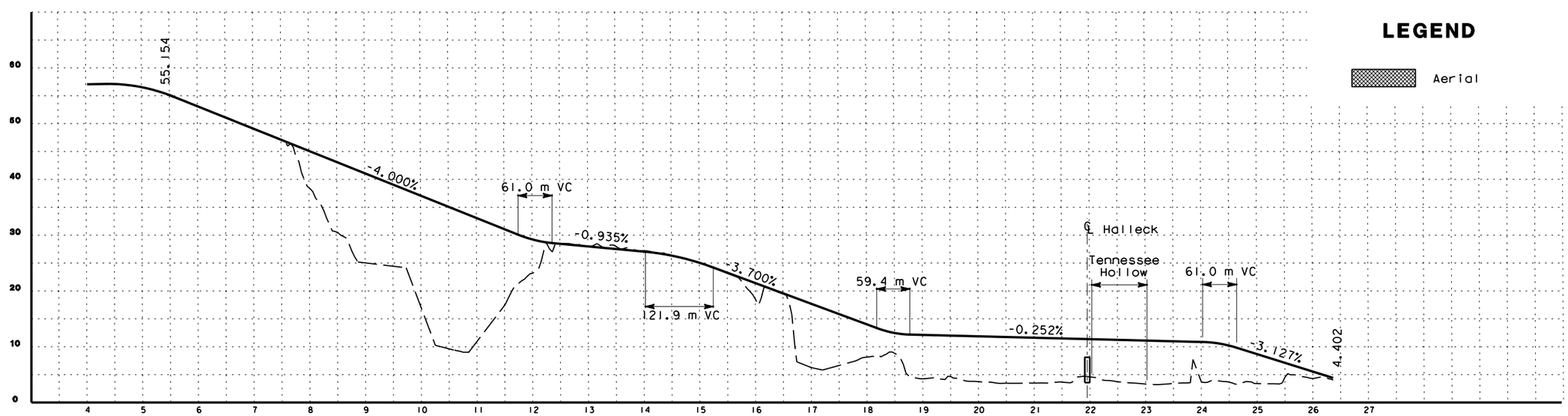
# APPENDIX A

# DETAILED ALTERNATIVE AND DESIGN OPTION DRAWINGS

# 1. No Build




PLAN




PROFILE

**LEGEND**

Aerial

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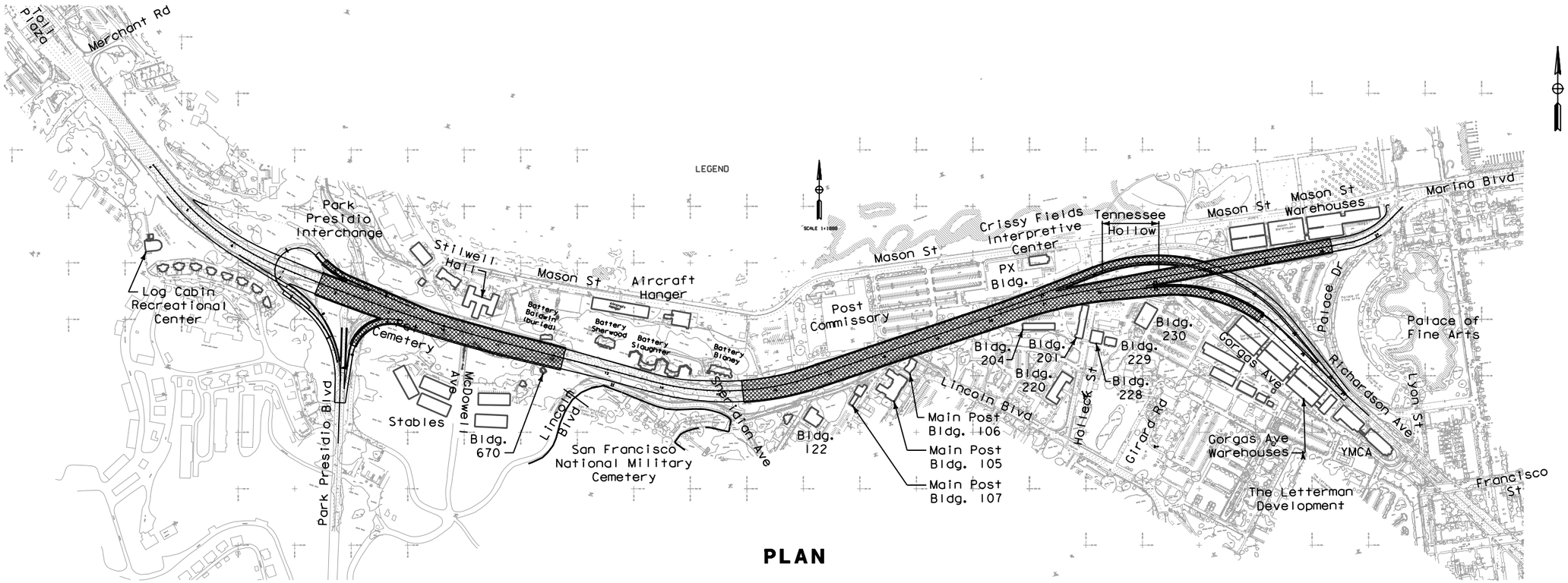
# 2. Replace and Widen - No Detour

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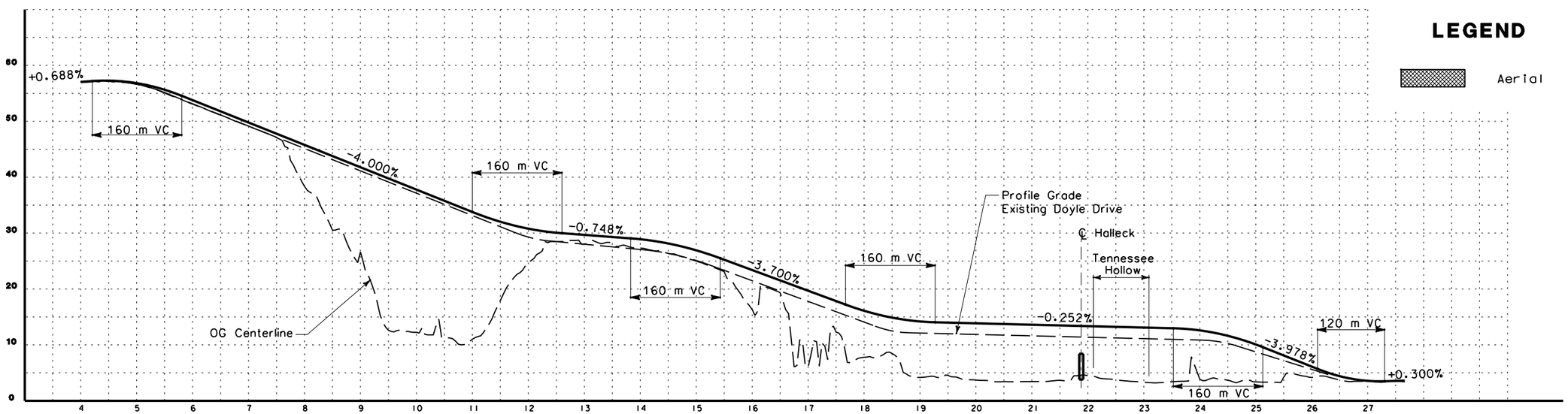


PROFILE

**LEGEND**

Aerial

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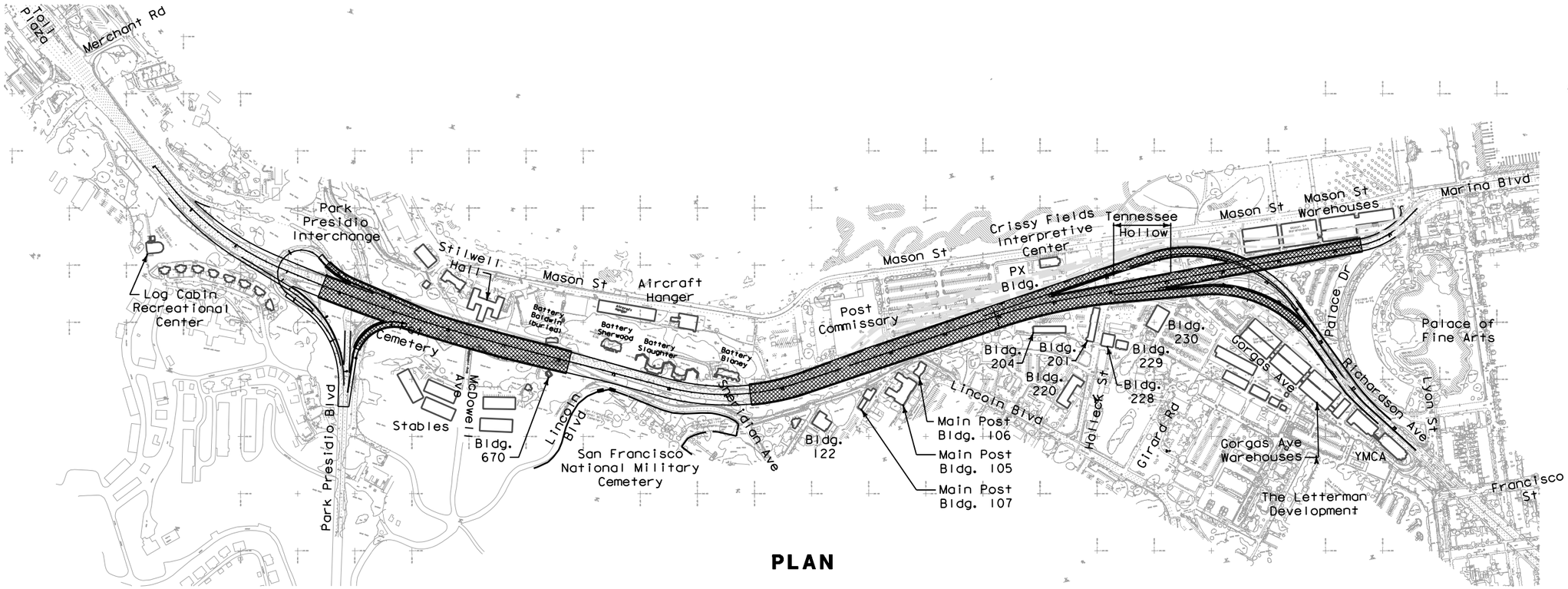
# 2. Replace and Widen - With Detour

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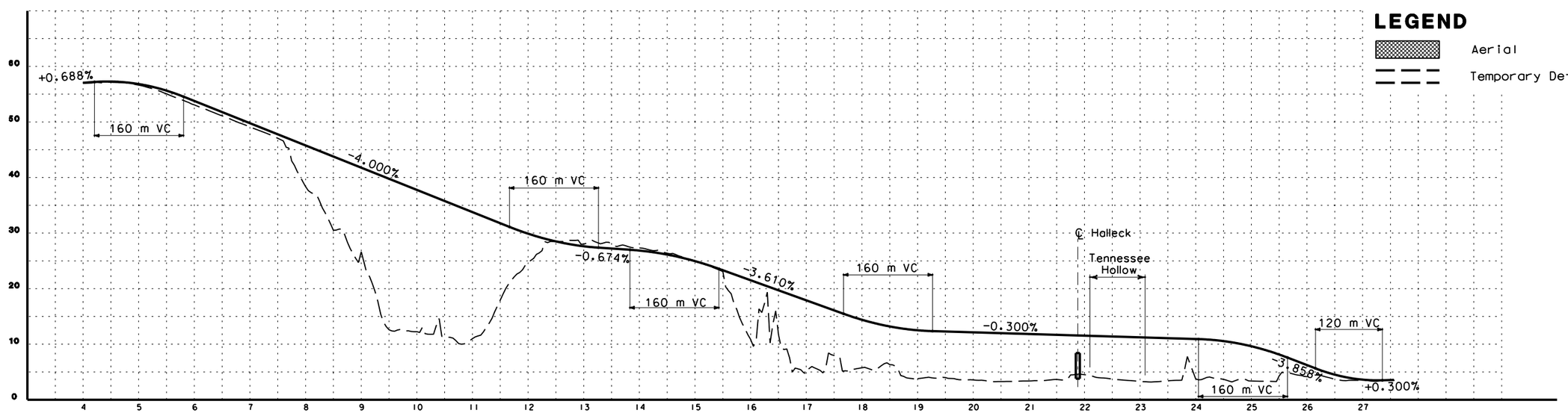


PROFILE

**LEGEND**

Aerial

Temporary Detour

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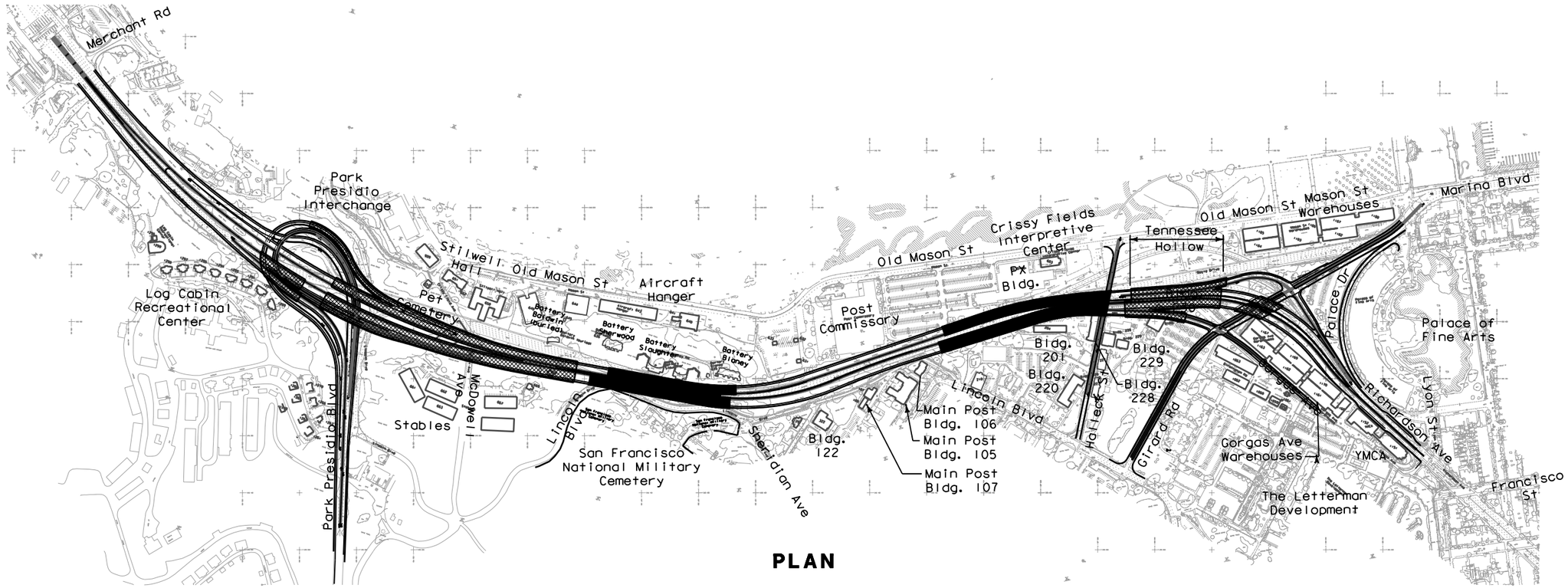
# 5. Presidio Parkway

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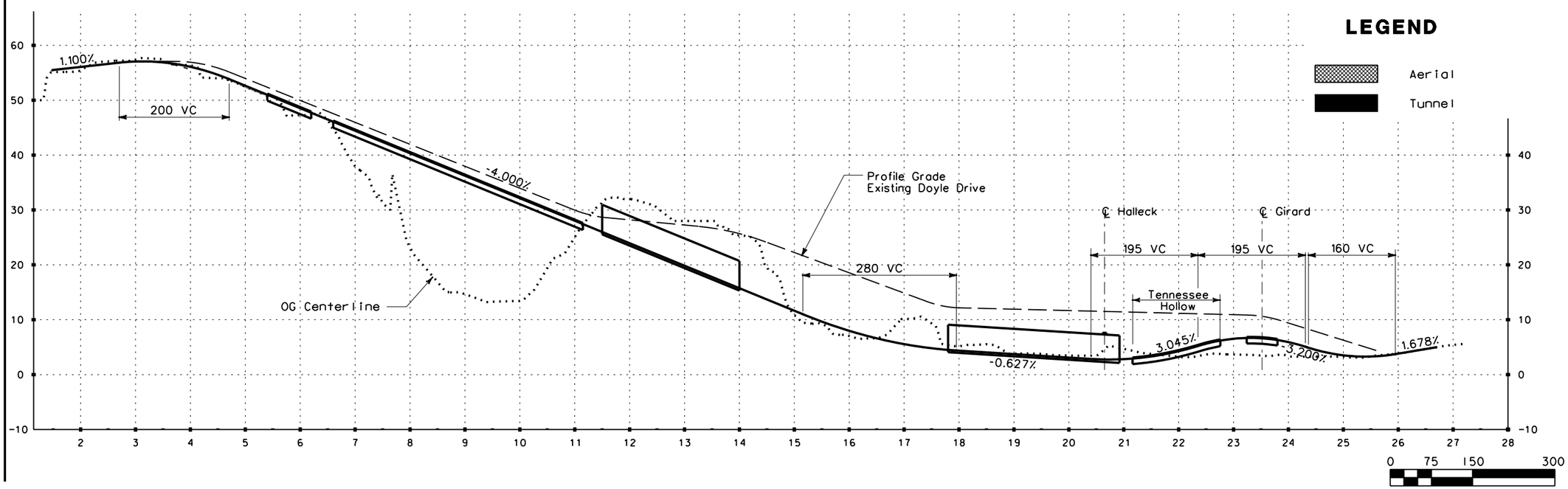


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SURFACE PARKING

LIMITS OF UNDERGROUND PARKING

UNDERGROUND PARKING ENTRANCE AND EXIT No. 2

DOWN RAMP

MAIN POST TUNNEL - NORTHBOUND

MAIN POST TUNNEL - SOUTHBOUND

BUS PARKING LOADING & UNLOADING

PEDESTRIAN OVERCROSSING

LIMITS OF UNDERGROUND PARKING

AUTO PARKING

UNDERGROUND PARKING

UNDERGROUND PARKING ENTRANCE AND EXIT No. 1

UNDERGROUND PARKING ENTRANCE AND EXIT No. 3 OPTIONAL

PALACE OF FINE ARTS

Palace of Fine Arts

Mason St Greenhouses

Gorgas Ave Warehouses

The Letterman Development

BUS BAY - 35m

BUS BAY - 80m

BUS BAY - 70m

RICHARDSON AVENUE

GORGAS AVENUE

GIRARD ROAD

LYON STREET

| No. of PARKING SPACES | |
|---|---|
| SURFACE PARKING: | 218 |
| UNDERGROUND PARKING: | 415 |
| TOTAL: | 633 |

KEY:

- GARAGE ACCESS
- BUS FLOW
- VIADUCT
- RETAINING WALL
- UNDERGROUND PARKING
- SURFACE PARKING

NOTES.

1. AUTO PARKING ESTIMATE IS BASED ON THE GUIDLINE OF 32.5 m2 per VEHICLE.
2. VEHICLE CLEARANCE:

1m Structure

3m Min

| Issue | Date | By | Chkd | Appd |
|---|---|---|---|---|

Job Title

ALTERNATIVE 5
PRESIDIO PARKWAY

Drawing Title

LAYOUT PLAN
DIAMOND OPTION
EAST END
PARKING & CIRCULATION

Scale: 1:1000

File Name SFSK-052.DGN

Drawing Status DRAFT

| Job No | Drawing No | Issue |
|---|---|---|
| 130168-00 | SFSK-052 | - |

19/64 Ove Arup Partnership Ltd

SURFACE PARKING

LIMITS OF UNDERGROUND PARKING

UNDERGROUND PARKING ENTRANCE AND EXIT No. 2

DOWN RAMP

BUS PARKING LOADING & UNLOADING

PEDESTRIAN OVERCROSSING

LIMITS OF UNDERGROUND PARKING

AUTO PARKING

PALACE OF FINE ARTS

LYON STREET

BUS BAY - 35m

BUS BAY - 80m

PARKING LANE

UNDERGROUND PARKING

RICHARDSON AVENUE

BUS BAY - 80m

MAIN POST TUNNEL - NORTHBOUND

MAIN POST TUNNEL - SOUTHBOUND

UNDERGROUND PARKING ENTRANCE AND EXIT No. 1

UNDERGROUND PARKING ENTRANCE AND EXIT No. 3 OPTIONAL

GORGAS AVENUE

GIRARD ROAD

| No. of PARKING SPACES | |
|---|---|
| SURFACE PARKING: | 218 |
| UNDERGROUND PARKING: | 415 |
| TOTAL: | 633 |

KEY:

- GARAGE ACCESS
- BUS FLOW
- VIADUCT
- RETAINING WALL
- UNDERGROUND PARKING
- SURFACE PARKING

NOTES.

1. AUTO PARKING ESTIMATE IS BASED ON THE GUIDLINE OF 32.5 m2 per VEHICLE.
2. VEHICLE CLEARANCE:

1m Structure

3m Min

| Issue | Date | By | Chkd | Appd |
|---|---|---|---|---|

Job Title

ALTERNATIVE 5
PRESIDIO PARKWAY

Drawing Title

LAYOUT PLAN
CIRCLE DRIVE
EAST END
PARKING & CIRCULATION

Scale: 1:1000

File Name SFSK-051.DGN

Drawing Status DRAFT

| Job No | Drawing No | Issue |
|---|---|---|
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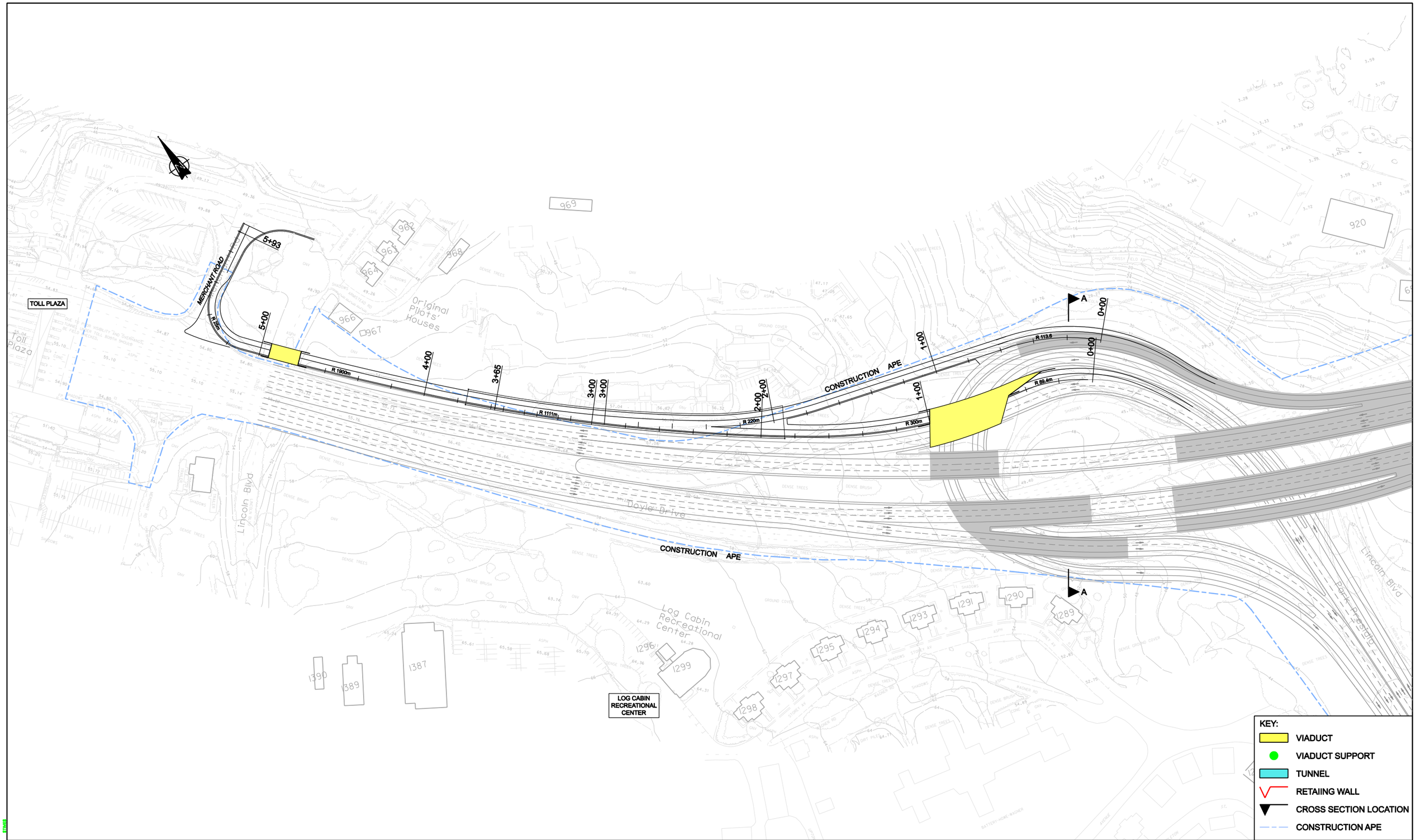
19/64 Ove Arup Partnership Ltd




| Issue | Date | By | Chkd | Appd |
|---|---|---|---|---|
| | | | | |

Job Title
ALTERNATIVE 5
PRESIDIO PARKWAY

Drawing Title
LAYOUT PLAN
MERCHANT ROAD OFF-RAMP

Scale: 1:1000
File Name: SFSK-M01.DGN
Drawing Status: DRAFT

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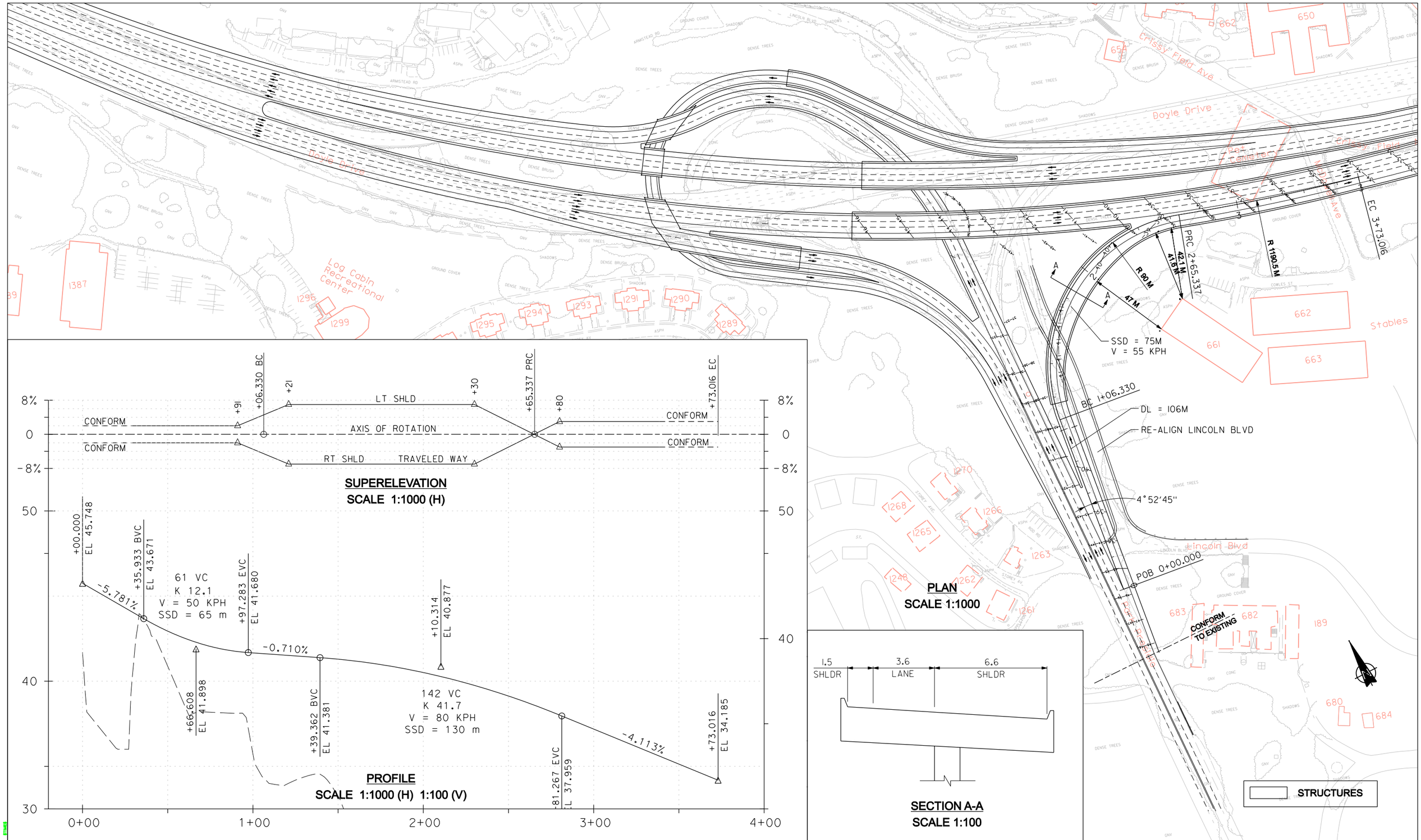
19/84 Ove Arup Partnership Ltd




| Issue | Date | By | Chkd | Appd |
|---|---|---|---|---|

Job Title
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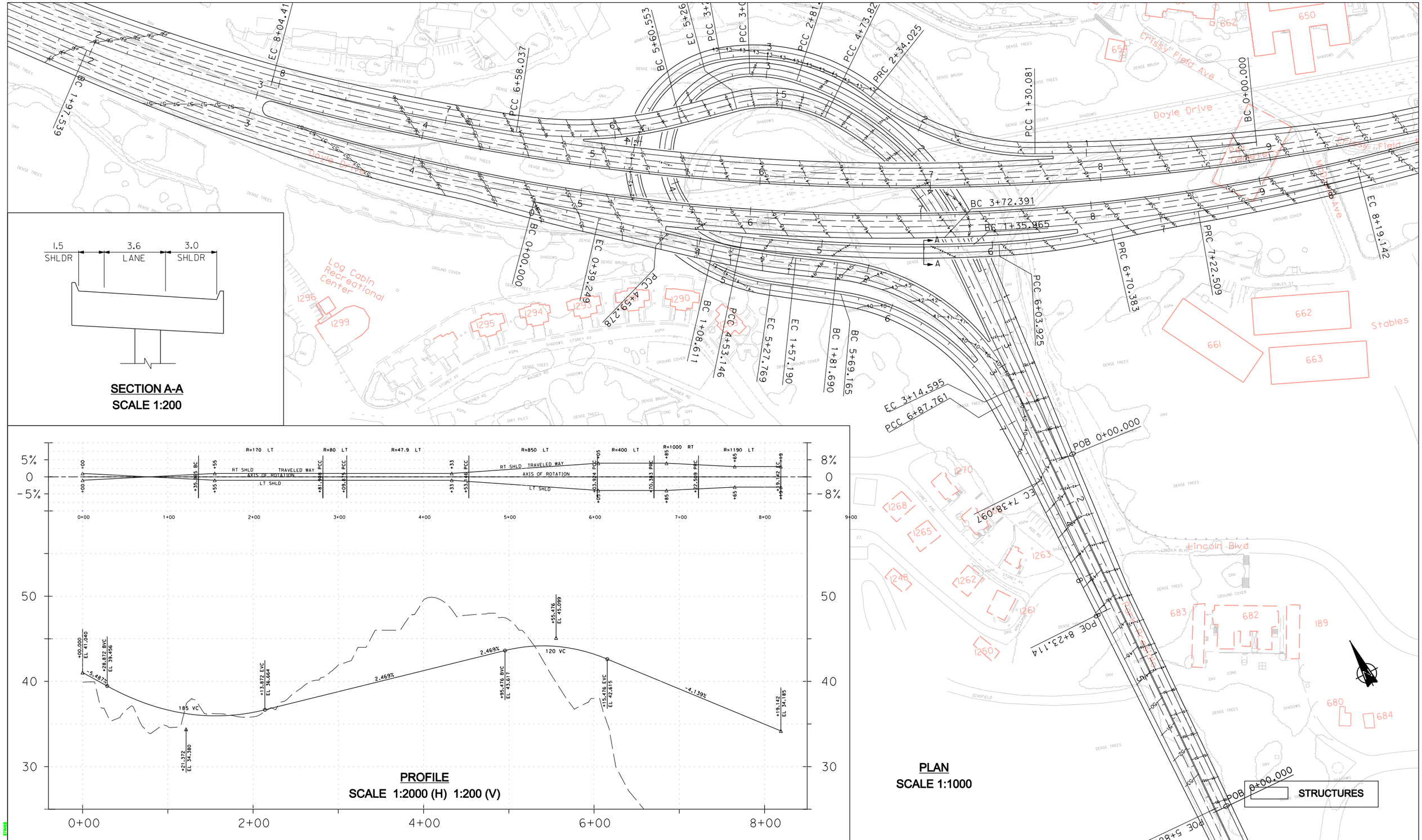
PRESIDIO PARKWAY

Drawing Title
OPTION 2: HOOK RAMP (WITH GEOMETRIC REFINEMENTS)

Scale: AS SHOWN
File Name
Drawing Status: PERLIMINARY

| Job No | Drawing No | Issue |
|---|---|---|
| 130168-00 | SFSK-054 | |

19/64 Ove Arup Partnership Ltd




Job Title
ALTERNATIVE 5
PRESIDIO PARKWAY

Drawing Title
OPTION 1: LOOP RAMP

Scale: AS SHOWN
File Name
Drawing Status
PRELIMINARY
Job No 130168-00
Drawing No SFSK-054A
Issue

| Issue | Date | By | Chkd | Appd |
|---|---|---|---|---|

19/64 Ove Arup Partnership Ltd

# APPENDIX B

# FIELD EQUIPMENT USED

## FIELD EQUIPMENT USED

The following is a listing of the equipment used during the performance of the field noise measurements associated with the Doyle Drive Project.

| | |
|---|---|
| Noise Meter: | Larson-Davis Sound Level Meter Model 700, Serial Number 2041, with microphone and windscreen. This meter was factory calibrated October 22, 2003. |
| Calibrator: | Larson Davis CA250, Serial Number 1655. This calibrator was factory certified October 22, 2003. |
| Tripod: | Ambico Adjustable |
| Radar: | Stalker Solo Plus |
| Weather: | Kestrel 3000 Pocket Weather Meter, which documented wind speed, maximum wind speed, average wind speed, temperature, wind chill, relative humidity, heat stress index, and dew point. |
| Compass: | Engineer Directional Compass by Apex |
| Traffic Counts: | Denominator |

# APPENDIX C

# TRAFFIC DATA SUMMARIZED FROM TRAFFIC MODEL

# Doyle Drive

*Volumes by Scenario*

AM Peak Hour

EB: towards City

WB: towards bridge

| | | Base Case 2000 | | No Build 2030 | | Replace and Widen 2030 | | Parkway Circle 2030 | | Parkway Diamond 2030 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Roadway** | **Segment** | **NB/EB** | **SB/WB** | **NB/EB** | **SB/WB** | **NB/EB** | **SB/WB** | **NB/EB** | **SB/WB** | **NB/EB** | **SB/WB** |
| Lincoln | Kobbe to Washington | 416 | 311 | 626 | 443 | 621 | 448 | 579 | 401 | 585 | 386 |
| | Washington to Merchant | 409 | 321 | 654 | 7 | 650 | 450 | 605 | 401 | 613 | 388 |
| | Merchant to Storey | 353 | 67 | 556 | 117 | 280 | 118 | 522 | 155 | 528 | 154 |
| | Storey to Vista Acc | 338 | 68 | 554 | 78 | 567 | 81 | 511 | 105 | 518 | 105 |
| | Vista Acc to Hoffman | 45 | 18 | 60 | 83 | 62 | 69 | 49 | 72 | 50 | 72 |
| | Hoffman to Crissy Field | 42 | 13 | 58 | 79 | 59 | 64 | 45 | 66 | 46 | 666 |
| | Crissy Field to Storey | 31 | | 53 | 3 | 55 | 4 | 39 | 4 | 39 | 4 |
| | Storey to McDowell | 36 | 10 | 75 | 18 | 777 | 18 | 50 | 21 | 49 | 21 |
| | McDowell to Crissy Field | 75 | 23 | 102 | 29 | 101 | 28 | 76 | 32 | 74 | 30 |
| | Crissy Field to Cemetery | 74 | 55 | 100 | 137 | 100 | 120 | 75 | 123 | 72 | 121 |
| | Cemetery to Sheridon | 75 | 62 | 99 | 140 | 99 | 123 | 74 | 126 | 72 | 124 |
| | Sheridon to Montgomery | | 49 | | 87 | | 57 | | 60 | | 57 |
| | Montgomery to Roberts | 50 | 89 | 87 | 139 | 88 | 109 | 63 | 112 | 60 | 113 |
| | Funston to Girard | 72 | 133 | 122 | 192 | 122 | 249 | 472 | 214 | 495 | 242 |
| | Girard to Letterman | 82 | 154 | 154 | 264 | 152 | 319 | 515 | 258 | 513 | 293 |
| Letterman | Lincoln to Lombard | | 1 | 0 | 0 | 0 | 1 | 25 | 6 | 27 | 0 |
| Presidio | Lincoln to Lombard | 166 | 243 | 246 | 374 | 243 | 427 | 578 | 365 | 570 | 404 |
| Lombard | Presidio to Letterman | 394 | 510 | 490 | 531 | 467 | 543 | 458 | 182 | 461 | 218 |
| | Letterman to Lyon | 395 | 512 | 496 | 527 | 473 | 540 | 490 | 185 | 498 | 217 |
| Doyle | Toll Plaza to Park Presidio | 6149 | 2994 | 6441 | 5019 | 6414 | 5013 | 6556 | 5096 | 6550 | 5091 |
| | WB off ramp to PP | | 448 | | 383 | | 386 | | 331 | | 354 |
| | EB off ramp to PP | 1932 | | 2096 | | 2099 | | 2479 | | 2451 | |
| | at interchange w/ PP (through) | 4217 | 1393 | 4345 | 2564 | 5314 | 2593 | 4295 | 2948 | 4328 | 2994 |
| | Park Presidio to Richardson | 5203 | 2049 | 4981 | 2947 | 4996 | 2979 | 4888 | 2948 | 4951 | 2994 |
| | Marina on/off ramps | 486 | 606 | 1656 | 806 | 1676 | 770 | 1203 | 196 | 1271 | 230 |
| Mason | Crissy to Roberts | 3 | | 10 | | 10 | | 3 | 1 | 3 | 1 |
| | Roberts to Halleck | 0 | 0 | 1 | 0 | 1 | | 3 | 1 | 3 | 1 |
| | Halleck to Marshall | 13 | 14 | 17 | 8 | 12 | 11 | 9 | 7 | 8 | 7 |
| | Marshell to Crook | 15 | 16 | 25 | 10 | 12 | 73 | 9 | 7 | 8 | 7 |
| | Crook to Lyon | 8 | 23 | 13 | 9 | 10 | 73 | 12 | 7 | 11 | 6 |
| Marina | Lyon to Baker | 1468 | 623 | 1516 | 803 | 1527 | 834 | 1197 | 203 | 1261 | 234 |
| Baker | Marina to Jefferson | 1 | 285 | 3 | 292 | 6 | 262 | 0 | 40 | 0 | 85 |
| | Jefferson to Beach | 1 | 20 | 36 | 9 | 35 | 10 | 0 | 2 | 0 | 3 |
| | Beach to Bay | 1 | 3 | 8 | 118 | 10 | 126 | 0 | 6 | 0 | 8 |
| Lyon | Marina to Bay | | 20 | | 141 | | 151 | 0 | 0 | 0 | 0 |
| Montgomery | Sheridon to Lincoln | 50 | 40 | 87 | 53 | 88 | 52 | 63 | 52 | 60 | 56 |
| Storey | Lincoln to Ralston | 10 | 5 | 22 | 15 | 23 | 15 | 15 | 21 | 14 | 21 |
| | Ralston to Ruckman | 12 | 5 | 26 | 12 | 27 | 11 | 0 | 12 | 20 | 59 |
| | Ruckman to Lincoln | 24 | 8 | 27 | 53 | 27 | 52 | 13 | 12 | 20 | 60 |
| Park Presidio | NB | 2379 | | 3092 | | 3101 | | 3072 | | 3073 | |
| | SB | | 2380 | | 2480 | | 2485 | | 2592 | | 2576 |
| | off ramp to Doyle EB | 986 | | 637 | | 381 | | 593 | | 623 | |
| | off ramp to Doyle WB | | 1601 | | 2455 | | 2420 | | 2479 | | 2451 |
| McDowell | Lincoln to Crissy Field | 11 | 1 | 23 | 4 | 23 | 4 | 23 | 10 | 23 | 10 |
| Girard | Lincoln to | 24 | 13 | 85 | 47 | 86 | 46 | 95 | 438 | 111 | 79 |
| Gorgas | Helleck to Marshall | 1 | 20 | 32 | 27 | 118 | 14 | | | | |
| | Marshall to Stenburg | 3 | 22 | 189 | 20 | 179 | 14 | | | | |
| | Stenburg to Truby | 17 | 56 | 65 | 241 | 148 | 244 | 226 | 62 | 385 | 36 |
| Merchant | Lincoln to Battery Cranston | 60 | 257 | 126 | 358 | 98 | 360 | 119 | 282 | 122 | 270 |
| | EB ramps | 158 | 284 | 220 | 401 | 191 | 402 | 217 | 310 | 220 | 298 |
| | WB ramps | 220 | 334 | 558 | 956 | 214 | 618 | 241 | 562 | 242 | 569 |
| | Ramps to Vista Acc | 220 | 334 | 208 | 606 | 214 | 618 | 241 | 562 | 242 | 569 |
| Vista Acc | Merchant to Lincoln | 103 | 346 | 124 | 612 | 130 | 623 | 104 | 568 | 141 | 577 |
| Halleck | Lincoln to Gorgas | 28 | 23 | 66 | 25 | 150 | 19 | 35 | 8 | 33 | 8 |
| | Gorgas to Mason | 39 | 16 | 48 | 12 | 41 | 14 | 35 | 9 | 34 | 8 |
| Richardson | Ramps to Francisco | 3717 | 1237 | 3325 | 212 | 3320 | 2208 | 3138 | 2188 | 3130 | 2818 |
| | Francisco to Lombard | | 1193 | 3094 | 2259 | 3087 | 2161 | 2443 | 1874 | 2451 | 1862 |

# Doyle Drive

*Volumes by Scenario*
PM Peak Hour

EB: towards City
WB: towards bridge

| | | Base Case 2000 | | No Build 2030 | | Replace and Widen 2030 | | Parkway Circle 2030 | | Parkway Diamond 2030 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Roadway** | **Segment** | **NB/EB** | **SB/WB** | **NB/EB** | **SB/WB** | **NB/EB** | **SB/WB** | **NB/EB** | **SB/WB** | **NB/EB** | **SB/WB** |
| Lincoln | Kobbe to Washington | 433 | 398 | 508 | 634 | 509 | 617 | 501 | 662 | 479 | 592 |
| | Washington to Merchant | 449 | 392 | 532 | 640 | 475 | 607 | 524 | 665 | 504 | 596 |
| | Merchant to Storey | 350 | 139 | 449 | 136 | 499 | 611 | 454 | 127 | 426 | 150 |
| | Storey to Vista Acc | 337 | 108 | 423 | 123 | 425 | 144 | 430 | 118 | 400 | 144 |
| | Vista Acc to Hoffman | 21 | 262 | 72 | 177 | 57 | 50 | 112 | 156 | 53 | 51 |
| | Hoffman to Crissy Field | 16 | 261 | 69 | 172 | 53 | 44 | 110 | 152 | 49 | 45 |
| | Crissy Field to Storey | 19 | 2 | 68 | 2 | 52 | 2 | 111 | 2 | 48 | 2 |
| | Storey to McDowell | 26 | 23 | 90 | 41 | 71 | 34 | 135 | 42 | 66 | 31 |
| | McDowell to Crissy Field | 43 | 80 | 112 | 107 | 100 | 124 | 155 | 114 | 96 | 112 |
| | Crissy Field to Cemetery | 50 | 334 | 121 | 291 | 108 | 180 | 164 | 282 | 104 | 170 |
| | Cemetery to Sheridon | 55 | 336 | 127 | 296 | 114 | 185 | 170 | 286 | 110 | 174 |
| | Sheridon to Montgomery | | 285 | | 246 | | 143 | | 241 | | 132 |
| | Montgomery to Roberts | 109 | 334 | 103 | 295 | 66 | 196 | 103 | 295 | 61 | 188 |
| | Funston to Girard | 146 | 358 | 182 | 439 | 462 | 410 | 174 | 415 | 151 | 293 |
| | Girard to Letterman | 165 | 366 | 239 | 494 | 501 | 440 | 235 | 469 | 507 | 440 |
| Letterman | Lincoln to Lombard | | 14 | | 45 | 36 | 38 | | 16 | 44 | 42 |
| Presidio | Lincoln to Lombard | 329 | 509 | 410 | 604 | 624 | 573 | 404 | 611 | 622 | 568 |
| Lombard | Presidio to Letterman | 290 | 475 | 309 | 564 | 276 | 290 | 335 | 604 | 284 | 288 |
| | Letterman to Lyon | 287 | 493 | 303 | 615 | 310 | 339 | 328 | 624 | 326 | 341 |
| Doyle | Toll Plaza to Park Presidio | 3120 | 5649 | 5074 | 6219 | 5572 | 6431 | 5437 | 6263 | 5612 | 6448 |
| | WB off ramp to PP | | 1014 | | 790 | | 672 | 726 | | | 671 |
| | EB off ramp to PP | 1236 | | 2145 | | 2400 | | | 2258 | | 2400 |
| | at interchange w/ PP (through) | 1884 | 3605 | 2929 | 4016 | 3163 | 4230 | 3180 | 4068 | 3190 | 4252 |
| | Park Presidio to Richardson | 2607 | 4619 | 3590 | 4806 | 3752 | 4902 | 3838 | 4795 | 3785 | 4924 |
| | Marina on/off ramps | 873 | 1817 | 1047 | 1875 | 820 | 1233 | 1178 | 1787 | 890 | 1283 |
| Mason | Crissy to Roberts | 15 | 1 | 22 | | 8 | 1 | 22 | | 7 | 0 |
| | Roberts to Halleck | 1 | 1 | | 2 | 2 | 1 | 2 | 1 | 7 | 0 |
| | Halleck to Marshall | 45 | 10 | 142 | 17 | 32 | 14 | 32 | 10 | 26 | 14 |
| | Marshell to Crook | 75 | 12 | 147 | 18 | 32 | 14 | 39 | 39 | 26 | 14 |
| | Crook to Lyon | 75 | 4 | 153 | 8 | 43 | 10 | 48 | 34 | 38 | 8 |
| Marina | Lyon to Baker | 887 | 1760 | 1055 | 1759 | 582 | 1233 | 1134 | 1779 | 917 | 1271 |
| Baker | Marina to Jefferson | 497 | 2 | 474 | 15 | 15 | 4 | 483 | 67 | 38 | 2 |
| | Jefferson to Beach | 191 | 3 | 28 | 4 | 2 | 3 | 107 | 9 | 1 | 2 |
| | Beach to Bay | 30 | 10 | 33 | 14 | 6 | 6 | 112 | 21 | 4 | 3 |
| Lyon | Marina to Bay | | | | 1 | | | | 50 | 9 | 0 |
| Montgomery | Sheridon to Lincoln | 74 | 37 | 103 | 49 | 66 | 54 | 103 | 55 | 61 | 56 |
| Storey | Lincoln to Ralston | 8 | 21 | 22 | 39 | 22 | 35 | 25 | 40 | 22 | 32 |
| | Ralston to Ruckman | 8 | 25 | 18 | 33 | | 25 | 19 | 32 | | 23 |
| | Ruckman to Lincoln | | 41 | 55 | 42 | 55 | 37 | 53 | 39 | 57 | 37 |
| Park Presidio | NB | 2768 | | 2864 | | 2790 | | 2853 | | 2792 | |
| | SB | | 2250 | | 2935 | | 3080 | | 2984 | | 3094 |
| | off ramp to Doyle EB | 724 | | 661 | | 589 | | 658 | | 596 | |
| | off ramp to Doyle WB | | 2044 | | 2203 | | 2201 | | 2194 | | 2196 |
| McDowell | Lincoln to Crissy Field | 7 | 4 | 14 | 23 | 14 | 39 | 14 | 24 | 14 | 39 |
| Girard | Lincoln to | 18 | 30 | 87 | 89 | 246 | 452 | 93 | 100 | 91 | 115 |
| Gorgas | Helleck to Marshall | 1 | 19 | 22 | 46 | | | 80 | 23 | | |
| | Marshall to Stenburg | 3 | 46 | 118 | 31 | 119 | 201 | 110 | 35 | 222 | 154 |
| | Stenburg to Truby | 18 | 53 | 415 | 129 | | | 396 | 128 | 222 | 154 |
| Merchant | Lincoln to Battery Cranston | 118 | 273 | 108 | 529 | 101 | 494 | 91 | 559 | 105 | 473 |
| | EB ramps | 414 | 296 | 631 | 833 | 376 | 528 | 363 | 657 | 381 | 503 |
| | WB ramps | 306 | 546 | 330 | 561 | 352 | 413 | 320 | 548 | 363 | 415 |
| | Ramps to Vista Acc | 306 | 546 | 330 | 561 | 352 | 413 | 320 | 548 | 363 | 415 |
| Vista Acc | Merchant to Lincoln | 102 | 572 | 167 | 572 | 167 | 423 | 204 | 560 | 172 | 425 |
| Halleck | Lincoln to Gorgas | 42 | 43 | 154 | 73 | 30 | 37 | 105 | 50 | 21 | 34 |
| | Gorgas to Mason | 57 | 41 | 142 | 37 | 30 | 37 | 33 | 31 | 23 | 35 |
| Richardson | Ramps to Francisco | 1604 | 2474 | 2543 | 3047 | 2665 | 3418 | 2611 | 2468 | 2398 | 3401 |
| | Francisco to Lombard | 1390 | 2185 | 2523 | 2491 | 2109 | 2399 | 2014 | 2249 | 2633 | 3402 |

# Doyle Drive

*Construction Volumes by Scenario*

AM Peak Hour

EB: towards City

WB: towards bridge

| | | Base Case 2010 | | Replace and Widen 2010 A | | Parkway Circle 2010a | |
|---|---|---|---|---|---|---|---|
| **Roadway** | **Segment** | **NB/EB** | **SB/WB** | **NB/EB** | **SB/WB** | **NB/EB** | **SB/WB** |
| Lincoln | Kobbe to Washington | 483 | 213 | 506 | 382 | 477 | 357 |
| | Washington to Merchant | 493 | 216 | 518 | 387 | 487 | 359 |
| | Merchant to Storey | 448 | 76 | 101 | 269 | 420 | 255 |
| | Storey to Vista Acc | 440 | 61 | 94 | 253 | 412 | 234 |
| | Vista Acc to Hoffman | 41 | 21 | 53 | 21 | 27 | 25 |
| | Hoffman to Crissy Field | 37 | 18 | 48 | 19 | 22 | 23 |
| | Crissy Field to Storey | 32 | 1 | 43 | 1 | 17 | 2 |
| | Storey to McDowell | 41 | 7 | 52 | 8 | 23 | 11 |
| | McDowell to Crissy Field | 81 | 20 | 85 | 22 | 56 | 28 |
| | Crissy Field to Cemetery | 77 | 50 | 81 | 52 | 54 | 60 |
| | Cemetery to Sheridon | 74 | 66 | 78 | 67 | 49 | 76 |
| | Sheridon to Montgomery | | 48 | | 50 | | 58 |
| | Montgomery to Roberts | 49 | 91 | 53 | 93 | 42 | 111 |
| | Funston to Girard | 70 | 114 | 70 | 121 | 61 | 172 |
| | Girard to Letterman | 88 | 154 | 88 | 173 | 469 | 161 |
| Letterman | Lincoln to Lombard | 5 | 2 | | 3 | 9 | |
| Presidio | Lincoln to Lombard | 162 | 244 | 165 | 261 | 527 | 265 |
| Lombard | Presidio to Letterman | 466 | 556 | 472 | 564 | 424 | 223 |
| | Letterman to Lyon | 473 | 558 | 472 | 565 | 434 | 222 |
| Doyle | Toll Plaza to Park Presidio | 5954 | 3467 | 6594 | 4264 | 6070 | 3714 |
| | WB off ramp to PP | | 432 | | 1955 | | 2091 |
| | EB off ramp to PP | 1856 | | | | | |
| | at interchange w/ PP (through) | 4098 | 1812 | 4639 | 1997 | 3979 | 1978 |
| | Park Presidio to Richardson | 5029 | 2244 | 4639 | 1997 | 4797 | 1978 |
| | Marina on/off ramps | 1450 | 585 | 1362 | 505 | 1229 | 443 |
| Mason | Crissy to Roberts | 3 | | 1 | | 4 | 2 |
| | Roberts to Halleck | | | 1 | | 4 | 2 |
| | Halleck to Marshall | 5 | 23 | 4 | 10 | 7 | 17 |
| | Marshell to Crook | 5 | 29 | 4 | 10 | 7 | 17 |
| | Crook to Lyon | 5 | 29 | 3 | 10 | 8 | 17 |
| Marina | Lyon to Baker | 1429 | 589 | | 512 | 1233 | 459 |
| Baker | Marina to Jefferson | 1 | 182 | | 95 | 5 | 33 |
| | Jefferson to Beach | 1 | 0 | 1 | 1 | 5 | 3 |
| | Beach to Bay | 36 | 1 | 1 | 1 | 4 | 6 |
| Lyon | Marina to Bay | | | | 4 | | |
| Montgomery | Sheridon to Lincoln | 49 | 43 | 53 | 43 | 42 | 53 |
| Storey | Lincoln to Ralston | 9 | 6 | 9 | 7 | 8 | 10 |
| | Ralston to Ruckman | 11 | 7 | 10 | 7 | | 9 |
| | Ruckman to Lincoln | 16 | 23 | 15 | 23 | 11 | 25 |
| Park Presidio | NB | 2586 | | 22 | | 2553 | |
| | SB | | 2888 | | 1955 | | 2091 |
| | off ramp to Doyle EB | 931 | | | | 817 | |
| | off ramp to Doyle WB | | 1655 | | 2267 | | 1736 |
| McDowell | Lincoln to Crissy Field | 10 | 1 | 10 | 4 | 13 | 4 |
| Girard | Lincoln to | 44 | 23 | 59 | 24 | 62 | 30 |
| Gorgas | Helleck to Marshall | 2 | 4 | 7 | 7 | | |
| | Marshall to Stenburg | 8 | 4 | 7 | 7 | | |
| | Stenburg to Truby | 67 | 213 | 65 | 203 | | |
| Merchant | Lincoln to Battery Cranston | 59 | 153 | 430 | 131 | 82 | 118 |
| | EB ramps | 155 | 175 | 764 | 335 | 230 | 125 |
| | WB ramps | 187 | 442 | 634 | 100 | 413 | 418 |
| | Ramps to Vista Acc | 187 | 442 | 634 | 100 | 413 | 418 |
| Vista Acc | Merchant to Lincoln | 89 | 448 | _97 | 106 | 249 | 425 |
| Halleck | Lincoln to Gorgas | 12 | 20 | 23 | 16 | 16 | 466 |
| | Gorgas to Mason | 14 | 19 | 21 | 14 | | |
| Richardson | Ramps to Francisco | 2658 | 1448 | 2861 | 1477 | 3048 | 1630 |
| | Francisco to Lombard | 2367 | 1328 | 2370 | 1230 | 2453 | 1249 |

# Doyle Drive

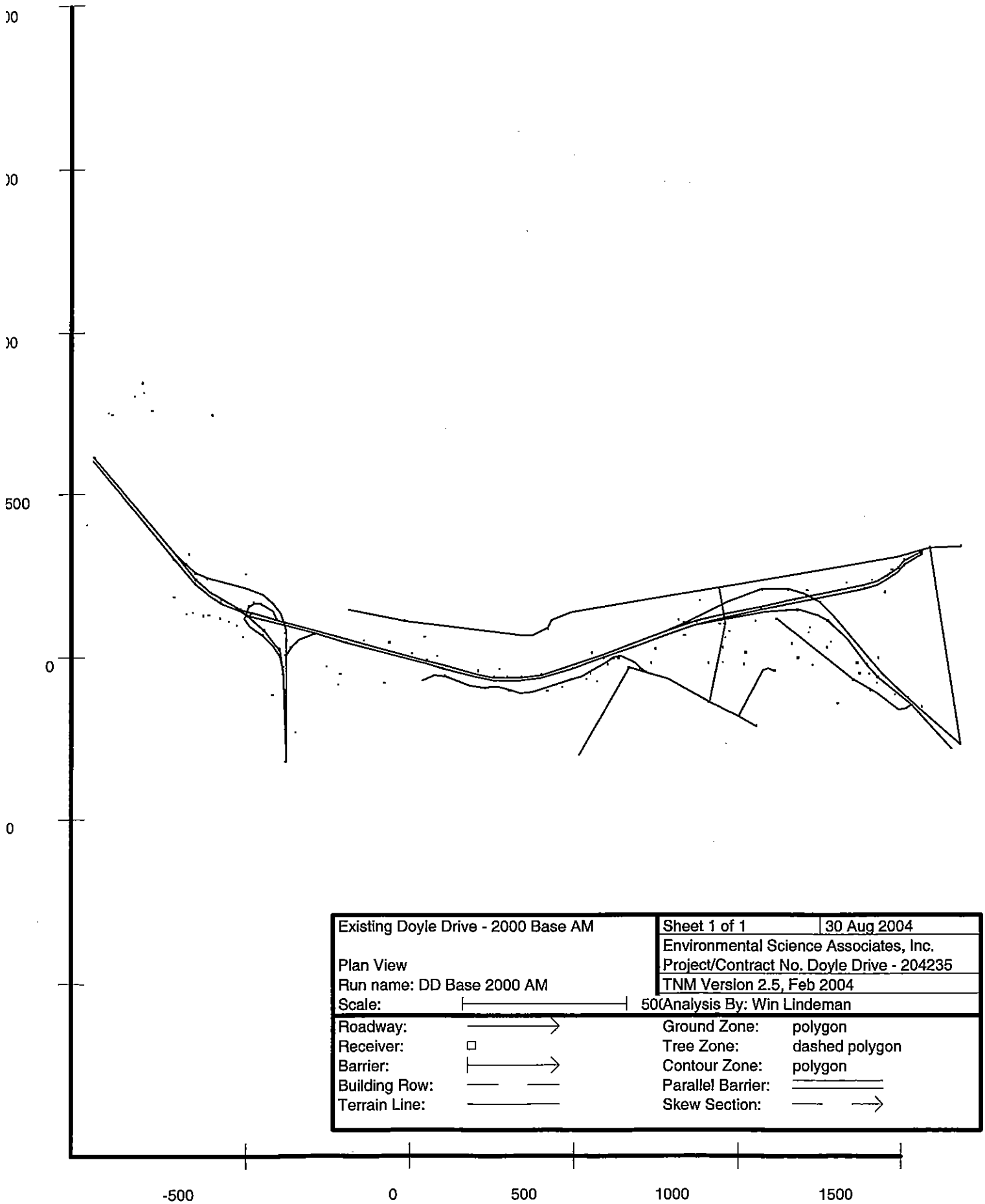
*Construction Volumes by Scenario*
PM Peak Hour

EB: towards City
WB: towards bridge

| | | Base Case 2010 | | Replace and Widen 2010 A | | Parkway Circle 2010a | |
|---|---|---|---|---|---|---|---|
| **Roadway** | **Segment** | **NB/EB** | **SB/WB** | **NB/EB** | **SB/WB** | **NB/EB** | **SB/WB** |
| Lincoln | Kobbe to Washington | 398 | 484 | 511 | 494 | 444 | 357 |
| | Washington to Merchant | 410 | 488 | 526 | 497 | 456 | 359 |
| | Merchant to Storey | 308 | 144 | 146 | 404 | 283 | 279 |
| | Storey to Vista Acc | 293 | 127 | 133 | 381 | 269 | 246 |
| | Vista Acc to Hoffman | 27 | 202 | 30 | 98 | 25 | 351 |
| | Hoffman to Crissy Field | 23 | 198 | 27 | 96 | 22 | 349 |
| | Crissy Field to Storey | 19 | 2 | 24 | 2 | 20 | 31 |
| | Storey to McDowell | 25 | 23 | 31 | 31 | 22 | 64 |
| | McDowell to Crissy Field | 48 | 87 | 54 | 133 | 53 | 202 |
| | Crissy Field to Cemetery | 57 | 279 | 62 | 219 | 60 | 504 |
| | Cemetery to Sheridon | 77 | 290 | 83 | 231 | 78 | 513 |
| | Sheridon to Montgomery | | 243 | | 185 | | 467 |
| | Montgomery to Roberts | 90 | 280 | 102 | 222 | 89 | 501 |
| | Funston to Girard | 139 | 307 | 149 | 255 | 326 | 511 |
| | Girard to Letterman | 178 | 328 | 189 | 270 | 360 | 509 |
| Letterman | Lincoln to Lombard | | 7 | | 7 | 10 | 47 |
| Presidio | Lincoln to Lombard | 344 | 469 | 355 | 415 | 485 | 620 |
| Lombard | Presidio to Letterman | 376 | 534 | 455 | 549 | 235 | 430 |
| | Letterman to Lyon | 377 | 549 | | | 241 | 479 |
| Doyle | Toll Plaza to Park Presidio | 3923 | 5705 | 4664 | 6457 | 4305 | 5848 |
| | WB off ramp to PP | | 908 | 445 | 553 | | |
| | EB off ramp to PP | 1603 | | 2038 | | 2048 | |
| | at interchange w/ PP (through) | 2320 | 3816 | 2626 | 4257 | 2256 | 3681 |
| | Park Presidio to Richardson | 3073 | 4724 | 2626 | 4257 | 2806 | 3681 |
| | Marina on/off ramps | 964 | 1846 | 824 | 1553 | 583 | 1091 |
| Mason | Crissy to Roberts | 11 | | 3 | 4 | 3 | 18 |
| | Roberts to Halleck | 1 | | 3 | 4 | 3 | 18 |
| | Halleck to Marshall | 22 | 15 | 12 | 8 | 16 | 23 |
| | Marshell to Crook | 22 | 15 | 16 | 7 | 16 | 23 |
| | Crook to Lyon | 28 | 15 | 16 | 7 | 18 | 19 |
| Marina | Lyon to Baker | 955 | 1789 | | | 596 | 1105 |
| Baker | Marina to Jefferson | 499 | | 296 | | 10 | 1 |
| | Jefferson to Beach | 148 | 3 | 3 | 3 | 4 | 1 |
| | Beach to Bay | 14 | 11 | 4 | 9 | 8 | 2 |
| Lyon | Marina to Bay | 37 | | | | | |
| Montgomery | Sheridon to Lincoln | 90 | 36 | 102 | 36 | 89 | 33 |
| Storey | Lincoln to Ralston | 7 | 21 | 7 | 29 | 6 | 37 |
| | Ralston to Ruckman | 10 | 23 | 10 | 29 | | 36 |
| | Ruckman to Lincoln | 28 | 31 | 36 | 35 | 22 | 41 |
| Park Presidio | NB | 2642 | | 2200 | | 2716 | |
| | SB | | 2511 | | 2038 | | 2048 |
| | off ramp to Doyle EB | 753 | | | | 549 | |
| | off ramp to Doyle WB | | 1889 | | 2200 | | 2166 |
| McDowell | Lincoln to Crissy Field | 7 | 2 | 6 | 10 | 9 | 18 |
| Girard | Lincoln to | 36 | 53 | 63 | 87 | 54 | 90 |
| Gorgas | Helleck to Marshall | 4 | 20 | 7 | 20 | | |
| | Marshall to Stenburg | 4 | 20 | 7 | 20 | | |
| | Stenburg to Truby | 231 | 149 | 196 | 118 | | |
| Merchant | Lincoln to Battery Cranston | 119 | 361 | 431 | 144 | 193 | 101 |
| | EB ramps | 396 | 371 | | | 594 | 106 |
| | WB ramps | 334 | 446 | 787 | 169 | 526 | 517 |
| | Ramps to Vista Acc | 334 | 446 | 787 | 169 | 526 | 517 |
| Vista Acc | Merchant to Lincoln | 135 | 476 | | 200 | 240 | 589 |
| Halleck | Lincoln to Gorgas | 20 | 39 | 22 | 37 | 51 | 258 |
| | Gorgas to Mason | 21 | 23 | 21 | 23 | | |
| Richardson | Ramps to Francisco | 1827 | 2439 | 1658 | 2409 | 2120 | 2617 |
| | Francisco to Lombard | 1690 | 2204 | | 2168 | 1647 | 1994 |

# APPENDIX D

# TNM MODEL INPUT AND RESULTS




| | | |
|---|---|---|
| Existing Doyle Drive - 2000 Base AM | Sheet 1 of 1 | 30 Aug 2004 |
| | Environmental Science Associates, Inc. | |
| Plan View | Project/Contract No. Doyle Drive - 204235 | |
| Run name: DD Base 2000 AM | TNM Version 2.5, Feb 2004 | |
| Scale: 500 | Analysis By: Win Lindeman | |

| | | | |
|---|---|---|---|
| Roadway: | | Ground Zone: | polygon |
| Receiver: | | Tree Zone: | dashed polygon |
| Barrier: | | Contour Zone: | polygon |
| Building Row: | | Parallel Barrier: | |
| Terrain Line: | | Skew Section: | |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Existing Doyle Drive - 2000 Base AM

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

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle Drive to Marina | 9.1 | N End | 1 | -966.0 | 608.0 | 53.00 | | | | Average | |
| | | 1 | 2 | -720.0 | 302.0 | 56.00 | | | | Average | |
| | | 2 | 3 | -654.0 | 228.0 | 53.00 | | | | Average | |
| | | 3 | 4 | -610.0 | 192.0 | 50.00 | | | | Average | |
| | | 5 | 6 | -576.0 | 170.0 | 46.00 | | | | Average | |
| | | 6 | 7 | -516.0 | 144.0 | 46.00 | | | | Average | Y |
| | | 7 | 8 | -488.0 | 130.0 | 45.00 | | | | Average | Y |
| | | 8 | 9 | -380.0 | 100.0 | 41.00 | | | | Average | Y |
| | | 9 | 10 | -292.0 | 76.0 | 41.00 | | | | Average | Y |
| | | 10 | 11 | -194.0 | 47.0 | 37.00 | | | | Average | Y |
| | | 12 | 13 | 49.0 | -18.0 | 29.00 | | | | Average | Y |
| | | 13 | 14 | 50.0 | -18.0 | 29.00 | | | | Average | |
| | | 14 | 15 | 98.0 | -32.0 | 28.00 | | | | Average | |
| | | 15 | 16 | 196.0 | -58.0 | 27.00 | | | | Average | |
| | | 16 | 17 | 232.0 | -66.0 | 26.50 | | | | Average | |
| | | 17 | 18 | 252.0 | -70.0 | 26.00 | | | | Average | |
| | | 19 | 20 | 333.0 | -70.0 | 24.00 | | | | Average | |
| | | 20 | 21 | 334.0 | -70.0 | 24.00 | | | | Average | Y |
| | | 21 | 22 | 396.0 | -60.0 | 21.40 | | | | Average | Y |
| | | 22 | 23 | 492.0 | -32.0 | 17.80 | | | | Average | Y |
| | | 23 | 24 | 586.0 | 0.0 | 14.00 | | | | Average | Y |
| | | 24 | 25 | 680.0 | 35.0 | 12.00 | | | | Average | Y |
| | | 25 | 26 | 776.0 | 70.0 | 12.00 | | | | Average | Y |
| | | 26 | 27 | 868.0 | 102.0 | 11.80 | | | | Average | Y |
| | | 27 | 28 | 968.0 | 126.0 | 11.20 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 28 | 29 | 1,068.0 | 150.0 | 11.20 | | | | Average | Y |
| | | 30 | 31 | 1,381.0 | 213.0 | 5.00 | | | | Average | Y |
| | | 31 | 32 | 1,382.0 | 213.0 | 5.00 | | | | Average | |
| | | 32 | 33 | 1,422.0 | 224.0 | 5.00 | | | | Average | |
| | | 33 | 34 | 1,450.0 | 240.0 | 4.00 | | | | Average | |
| | | 34 | 35 | 1,486.0 | 264.0 | 4.00 | | | | Average | |
| | | 35 | 36 | 1,504.0 | 286.0 | 4.00 | | | | Average | |
| | | 36 | 37 | 1,560.0 | 318.0 | 4.00 | | | | | |
| WB Doyle Drive from Marina to 0+00 | 9.1 | 1 | 39 | 1,560.0 | 326.0 | 4.00 | | | | Average | |
| | | 2 | 40 | 1,504.0 | 300.0 | 4.00 | | | | Average | |
| | | 3 | 41 | 1,486.0 | 276.0 | 4.00 | | | | Average | |
| | | 4 | 42 | 1,450.0 | 251.0 | 4.00 | | | | Average | |
| | | 5 | 43 | 1,422.0 | 234.0 | 5.00 | | | | Average | |
| | | 6 | 44 | 1,382.0 | 224.0 | 5.00 | | | | Average | Y |
| | | 8 | 46 | 1,166.0 | 178.0 | 10.80 | | | | Average | Y |
| | | 9 | 47 | 1,068.0 | 157.0 | 11.20 | | | | Average | Y |
| | | 10 | 48 | 968.0 | 136.0 | 11.20 | | | | Average | Y |
| | | 11 | 49 | 868.0 | 111.0 | 11.80 | | | | Average | Y |
| | | 12 | 50 | 776.0 | 80.0 | 12.00 | | | | Average | Y |
| | | 13 | 51 | 680.0 | 44.0 | 12.00 | | | | Average | Y |
| | | 14 | 52 | 586.0 | 10.0 | 14.00 | | | | Average | Y |
| | | 15 | 53 | 492.0 | -22.0 | 17.80 | | | | Average | Y |
| | | 16 | 54 | 396.0 | -52.0 | 21.40 | | | | Average | Y |
| | | 17 | 55 | 335.0 | -60.0 | 24.00 | | | | Average | Y |
| | | 18 | 56 | 334.0 | -60.0 | 24.00 | | | | Average | |
| | | 19 | 57 | 294.0 | -60.0 | 25.00 | | | | Average | |
| | | 20 | 58 | 252.0 | -60.0 | 26.00 | | | | Average | |
| | | 21 | 59 | 232.0 | -56.0 | 26.50 | | | | Average | |
| | | 22 | 60 | 196.0 | -50.0 | 27.00 | | | | Average | |
| | | 23 | 61 | 98.0 | -22.0 | 28.00 | | | | Average | |
| | | 24 | 62 | 50.0 | -8.0 | 28.40 | | | | Average | |
| | | 25 | 63 | 49.0 | -8.0 | 28.40 | | | | Average | Y |
| | | 26 | 64 | -98.0 | 30.0 | 33.00 | | | | Average | Y |
| | | 27 | 65 | -194.0 | 58.0 | 37.00 | | | | Average | Y |
| | | 28 | 66 | -292.0 | 86.0 | 41.00 | | | | Average | Y |
| | | 29 | 67 | -380.0 | 110.0 | 45.00 | | | | Average | Y |
| | | 30 | 68 | -406.0 | 118.0 | 45.60 | | | | Average | Y |
| | | 31 | 69 | -407.0 | 118.0 | 45.60 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 32 | 70 | -487.0 | 138.5 | 49.20 | | | | Average | |
| | | 33 | 71 | -488.0 | 138.5 | 49.20 | | | | Average | Y |
| | | 34 | 72 | -516.0 | 150.0 | 51.00 | | | | Average | Y |
| | | 35 | 73 | -517.0 | 150.0 | 51.00 | | | | Average | |
| | | 36 | 74 | -576.0 | 182.0 | 49.00 | | | | Average | |
| | | 37 | 75 | -610.0 | 204.0 | 50.00 | | | | Average | |
| | | 38 | 192 | -654.0 | 242.0 | 53.00 | | | | Average | |
| | | 39 | 193 | -720.0 | 322.0 | 56.00 | | | | Average | |
| | | 40 | 76 | -966.0 | 620.0 | 53.00 | | | | | |
| SB/EB Richardson from Doyle to Francis | 11.0 | 1 | 77 | 868.0 | 102.0 | 11.80 | | | | Average | Y |
| | | 2 | 78 | 1,078.0 | 140.0 | 10.00 | | | | Average | Y |
| | | 3 | 79 | 1,178.0 | 147.0 | 7.00 | | | | Average | Y |
| | | 4 | 80 | 1,233.0 | 132.0 | 5.00 | | | | Average | Y |
| | | 5 | 81 | 1,234.0 | 132.0 | 5.00 | | | | Average | |
| | | 6 | 82 | 1,270.0 | 114.0 | 2.00 | | | | Average | |
| | | 7 | 83 | 1,330.0 | 57.0 | 2.00 | | | | Average | |
| | | 8 | 84 | 1,388.0 | -20.0 | 2.00 | | | | Average | |
| | | 9 | 85 | 1,424.0 | -60.0 | 2.00 | | | | Average | |
| | | 10 | 86 | 1,528.0 | -146.0 | 4.00 | | | | Average | |
| | | 11 | 87 | 1,650.0 | -280.0 | 4.00 | | | | | |
| NB/WB Richardson from Francisco to DD | 9.0 | 1 | 88 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 89 | 1,514.0 | -122.0 | 4.00 | | | | Average | |
| | | 3 | 90 | 1,436.0 | -50.0 | 2.00 | | | | Average | |
| | | 4 | 91 | 1,285.0 | 130.0 | 2.00 | | | | Average | |
| | | 5 | 92 | 1,244.0 | 172.0 | 3.00 | | | | Average | |
| | | 6 | 93 | 1,200.0 | 196.0 | 4.00 | | | | Average | |
| | | 7 | 94 | 1,149.0 | 210.0 | 7.00 | | | | Average | |
| | | 8 | 95 | 1,150.0 | 210.0 | 7.00 | | | | Average | Y |
| | | 9 | 96 | 1,068.0 | 210.0 | 10.00 | | | | Average | Y |
| | | 10 | 97 | 968.0 | 172.0 | 11.00 | | | | Average | Y |
| | | 11 | 98 | 830.0 | 106.0 | 12.00 | | | | Average | Y |
| | | 12 | 99 | 776.0 | 80.0 | 12.00 | | | | | |
| SB PP Ramp from WB Doyle Drive | 4.6 | 1 | 100 | -406.0 | 118.0 | 45.60 | | | | Average | |
| | | 2 | 101 | -420.0 | 144.0 | 46.00 | | | | Average | |
| | | 3 | 102 | -456.0 | 170.0 | 41.00 | | | | Average | |
| | | 4 | 103 | -478.0 | 170.0 | 40.00 | | | | Average | |
| | | 5 | 104 | -494.0 | 158.0 | 39.00 | | | | Average | |
| | | 6 | 105 | -505.0 | 120.0 | 39.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 106 | -488.0 | 96.0 | 39.00 | | | | Average | |
| | | 8 | 107 | -450.0 | 70.0 | 38.00 | | | | Average | |
| | | 9 | 108 | -418.0 | 36.0 | 38.00 | | | | Average | |
| | | 10 | 109 | -398.0 | 5.0 | 38.00 | | | | Average | |
| | | 11 | 110 | -390.0 | -26.0 | 37.00 | | | | Average | |
| | | 12 | 111 | -388.0 | -50.0 | 37.00 | | | | Average | |
| | | 13 | 112 | -380.0 | -320.0 | 37.00 | | | | | |
| SB PP Ramp from EB Doyle Drive | 4.8 | 1 | 113 | -515.0 | 143.9 | 51.00 | | | | Average | Y |
| | | 2 | 114 | -495.0 | 130.0 | 50.00 | | | | Average | Y |
| | | 3 | 115 | -494.0 | 130.0 | 50.00 | | | | Average | |
| | | 4 | 116 | -476.0 | 112.0 | 49.00 | | | | Average | |
| | | 5 | 117 | -447.0 | 86.0 | 46.00 | | | | Average | |
| | | 6 | 118 | -410.0 | 38.0 | 47.00 | | | | Average | |
| | | 7 | 119 | -400.0 | 27.0 | 37.00 | | | | Average | |
| | | 8 | 120 | -390.0 | -26.0 | 37.00 | | | | Average | |
| | | 9 | 121 | -388.0 | -27.0 | 37.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 4.6 | 1 | 122 | -380.0 | -320.0 | 37.00 | | | | Average | |
| | | 2 | 123 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 3 | 124 | -380.0 | 80.0 | 37.00 | | | | Average | |
| | | 4 | 125 | -384.0 | 98.0 | 38.00 | | | | Average | |
| | | 5 | 126 | -396.0 | 138.0 | 38.00 | | | | Average | |
| | | 6 | 127 | -418.0 | 170.0 | 41.00 | | | | Average | |
| | | 7 | 128 | -450.0 | 196.0 | 44.00 | | | | Average | |
| | | 8 | 129 | -500.0 | 216.0 | 47.50 | | | | Average | |
| | | 9 | 130 | -620.0 | 246.0 | 54.00 | | | | Average | |
| | | 10 | 131 | -656.0 | 262.0 | 57.00 | | | | Average | |
| | | 11 | 132 | -686.0 | 290.0 | 58.00 | | | | Average | |
| | | 12 | 191 | -703.0 | 306.0 | 58.00 | | | | Average | |
| | | 13 | 133 | -720.0 | 322.0 | 56.00 | | | | | |
| NB PP ramp to EB Doyle Drive | 4.6 | 1 | 134 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 2 | 135 | -364.0 | 34.0 | 38.00 | | | | Average | |
| | | 3 | 136 | -338.0 | 58.0 | 39.00 | | | | Average | |
| | | 4 | 137 | -306.0 | 70.0 | 40.00 | | | | Average | |
| | | 5 | 138 | -292.0 | 76.0 | 41.00 | | | | | |
| Mason Street | 7.3 | 1 | 139 | -188.0 | 150.0 | 3.00 | | | | Average | |
| | | 2 | 140 | -16.0 | 114.0 | 3.00 | | | | Average | |
| | | 3 | 141 | 340.0 | 70.0 | 4.00 | | | | Average | |
| | | 4 | 142 | 370.0 | 70.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 5 | 143 | 416.0 | 92.0 | 4.00 | | | | Average | |
| | | 6 | 144 | 428.0 | 118.0 | 4.00 | | | | Average | |
| | | 7 | 145 | 486.0 | 142.0 | 4.00 | | | | Average | |
| | | 8 | 194 | 938.0 | 214.0 | 4.00 | | | | Average | |
| | | 9 | 146 | 1,486.0 | 310.0 | 4.00 | | | | Average | |
| | | 10 | 147 | 1,584.0 | 340.0 | 4.00 | | | | Average | |
| | | 11 | 148 | 1,680.0 | 344.0 | 4.00 | | | | | |
| Lincoln Blvd. | 7.3 | 1 | 149 | 36.0 | -70.0 | 33.00 | | | | Average | |
| | | 2 | 150 | 74.0 | -53.0 | 33.00 | | | | Average | |
| | | 3 | 151 | 106.0 | -56.0 | 32.00 | | | | Average | |
| | | 4 | 152 | 180.0 | -86.0 | 30.00 | | | | Average | |
| | | 5 | 153 | 226.0 | -92.0 | 29.00 | | | | Average | |
| | | 6 | 154 | 246.0 | -90.0 | 29.00 | | | | Average | |
| | | 7 | 155 | 268.0 | -90.0 | 29.00 | | | | Average | |
| | | 8 | 156 | 308.0 | -100.0 | 29.00 | | | | Average | |
| | | 9 | 157 | 334.0 | -108.0 | 27.00 | | | | Average | |
| | | 10 | 158 | 368.0 | -105.0 | 26.00 | | | | Average | |
| | | 11 | 159 | 490.0 | -66.0 | 19.00 | | | | Average | |
| | | 12 | 160 | 520.0 | -56.0 | 17.00 | | | | Average | |
| | | 13 | 161 | 568.0 | -30.0 | 16.00 | | | | Average | |
| | | 14 | 162 | 596.0 | -14.0 | 13.00 | | | | Average | |
| | | 15 | 163 | 620.0 | 0.0 | 14.00 | | | | Average | |
| | | 16 | 164 | 636.0 | 6.0 | 12.00 | | | | Average | |
| | | 17 | 165 | 680.0 | -14.0 | 13.00 | | | | Average | |
| | | 18 | 166 | 700.0 | -34.0 | 14.00 | | | | Average | |
| | | 19 | 167 | 718.0 | -44.0 | 14.00 | | | | Average | |
| | | 20 | 168 | 784.0 | -66.0 | 15.00 | | | | Average | |
| | | 21 | 169 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 22 | 170 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 23 | 171 | 1,054.0 | -210.0 | 14.00 | | | | | |
| Gorgas Avenue | 6.0 | 1 | 172 | 1,528.0 | -146.0 | 4.00 | | | | Average | |
| | | 2 | 173 | 1,510.0 | -158.0 | 4.00 | | | | Average | |
| | | 3 | 174 | 1,488.0 | -160.0 | 4.00 | | | | Average | |
| | | 4 | 175 | 1,420.0 | -108.0 | 2.00 | | | | Average | |
| | | 5 | 176 | 1,400.0 | -98.0 | 2.00 | | | | Average | |
| | | 6 | 177 | 1,344.0 | -66.0 | 2.00 | | | | Average | |
| | | 7 | 178 | 1,112.0 | 120.0 | 3.00 | | | | | |
| Halleck Street | 7.3 | 1 | 179 | 910.0 | -136.0 | 14.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 180 | 957.0 | 106.0 | 6.00 | | | | Average | |
| | | 3 | 181 | 938.0 | 214.0 | 4.00 | | | | | |
| Girard Road | 7.3 | 1 | 182 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 2 | 183 | 1,074.0 | -38.0 | 3.00 | | | | Average | |
| | | 3 | 184 | 1,090.0 | -33.0 | 4.00 | | | | Average | |
| | | 4 | 185 | 1,108.0 | -40.0 | 5.00 | | | | | |
| Baker Street | 11.6 | 1 | 186 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 187 | 1,584.0 | 340.0 | 4.00 | | | | | |
| Montgomery Street | 9.2 | 1 | 188 | 510.0 | -300.0 | 15.00 | | | | Average | |
| | | 2 | 189 | 664.0 | -30.0 | 12.00 | | | | Average | |
| | | 3 | 190 | 718.0 | -44.0 | 14.00 | | | | | |

Environmental Science Associates, Inc. 30 August 2004
Win Lindeman TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Existing Doyle Drive - 2000 Base AM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle Drive to Marina | N End | 1 | 5952 | 88 | 61 | 88 | 12 | 88 | 61 | 88 | 61 | 88 |
| | 1 | 2 | 5952 | 88 | 61 | 88 | 12 | 88 | 61 | 88 | 61 | 88 |
| | 2 | 3 | 5952 | 88 | 61 | 88 | 12 | 88 | 61 | 88 | 61 | 88 |
| | 3 | 4 | 5952 | 88 | 61 | 88 | 12 | 88 | 61 | 88 | 61 | 88 |
| | 5 | 6 | 4082 | 88 | 42 | 88 | 8 | 88 | 42 | 88 | 42 | 88 |
| | 6 | 7 | 4082 | 88 | 42 | 88 | 8 | 88 | 42 | 88 | 42 | 88 |
| | 7 | 8 | 4082 | 88 | 42 | 88 | 8 | 88 | 42 | 88 | 42 | 88 |
| | 8 | 9 | 4082 | 88 | 42 | 88 | 8 | 88 | 42 | 88 | 42 | 88 |
| | 9 | 10 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 10 | 11 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 12 | 13 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 13 | 14 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 14 | 15 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 15 | 16 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 16 | 17 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 17 | 18 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 19 | 20 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 20 | 21 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 21 | 22 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 22 | 23 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 23 | 24 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 24 | 25 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 25 | 26 | 5037 | 88 | 52 | 88 | 10 | 88 | 52 | 88 | 52 | 88 |
| | 26 | 27 | 470 | 88 | 5 | 88 | 1 | 88 | 5 | 88 | 5 | 88 |
| | 27 | 28 | 470 | 88 | 5 | 88 | 1 | 88 | 5 | 88 | 5 | 88 |
| | 28 | 29 | 470 | 88 | 5 | 88 | 1 | 88 | 5 | 88 | 5 | 88 |
| | 30 | 31 | 470 | 88 | 5 | 88 | 1 | 88 | 5 | 88 | 5 | 88 |
| | 31 | 32 | 470 | 56 | 5 | 56 | 1 | 56 | 5 | 56 | 5 | 56 |
| | 32 | 33 | 470 | 56 | 5 | 56 | 1 | 56 | 5 | 56 | 5 | 56 |
| | 33 | 34 | 470 | 56 | 5 | 56 | 1 | 56 | 5 | 56 | 5 | 56 |
| | 34 | 35 | 470 | 56 | 5 | 56 | 1 | 56 | 5 | 56 | 5 | 56 |
| | 35 | 36 | 470 | 56 | 5 | 56 | 1 | 56 | 5 | 56 | 5 | 56 |
| | 36 | 37 | | | | | | | | | | |
| WB Doyle Drive from Marina to 0+00 | 1 | 39 | 582 | 56 | 6 | 56 | 8 | 56 | 4 | 56 | 6 | 56 |
| | 2 | 40 | 582 | 56 | 6 | 56 | 8 | 56 | 4 | 56 | 6 | 56 |
| | 3 | 41 | 582 | 56 | 6 | 56 | 9 | 56 | 4 | 56 | 6 | 56 |
| | 4 | 42 | 582 | 56 | 6 | 56 | 8 | 56 | 4 | 56 | 6 | 56 |
| | 5 | 43 | 582 | 88 | 6 | 88 | 8 | 88 | 4 | 88 | 6 | 88 |
| | 6 | 44 | 582 | 88 | 6 | 88 | 8 | 88 | 4 | 88 | 6 | 88 |
| | 8 | 46 | 582 | 88 | 6 | 88 | 8 | 88 | 4 | 88 | 6 | 88 |
| | 9 | 47 | 582 | 88 | 6 | 88 | 8 | 88 | 4 | 88 | 6 | 88 |
| | 10 | 48 | 582 | 88 | 6 | 88 | 8 | 88 | 4 | 88 | 6 | 88 |
| | 11 | 49 | 582 | 88 | 6 | 88 | 8 | 88 | 4 | 88 | 6 | 88 |
| | 12 | 50 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 13 | 51 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 14 | 52 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 15 | 53 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 16 | 54 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 17 | 55 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 18 | 56 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 19 | 57 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 20 | 58 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 21 | 59 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 22 | 60 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 23 | 61 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 24 | 62 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 25 | 63 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 26 | 64 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 27 | 65 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 28 | 66 | 1969 | 88 | 20 | 88 | 27 | 88 | 12 | 88 | 20 | 88 |
| | 29 | 67 | 1339 | 88 | 14 | 88 | 18 | 88 | 8 | 88 | 14 | 88 |
| | 30 | 68 | 1339 | 88 | 14 | 88 | 18 | 88 | 8 | 88 | 14 | 88 |
| | 31 | 69 | 1339 | 88 | 14 | 88 | 18 | 88 | 8 | 88 | 14 | 88 |
| | 32 | 70 | 1339 | 88 | 14 | 88 | 18 | 88 | 8 | 88 | 14 | 88 |
| | 33 | 71 | 1339 | 88 | 14 | 88 | 18 | 88 | 8 | 88 | 14 | 88 |
| | 34 | 72 | 1339 | 88 | 14 | 88 | 18 | 88 | 8 | 88 | 14 | 88 |
| | 35 | 73 | 1339 | 88 | 14 | 88 | 18 | 88 | 8 | 88 | 14 | 88 |
| | 36 | 74 | 1339 | 88 | 14 | 88 | 18 | 88 | 8 | 88 | 14 | 88 |
| | 37 | 75 | 1339 | 88 | 14 | 88 | 18 | 88 | 8 | 88 | 14 | 88 |
| | 38 | 192 | 1339 | 88 | 14 | 88 | 18 | 88 | 8 | 88 | 14 | 88 |
| | 39 | 193 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 40 | 76 | | | | | | | | | | |
| SB/EB Richardson from Doyle to Francis | 1 | 77 | 3598 | 56 | 37 | 56 | 7 | 56 | 37 | 56 | 37 | 56 |
| | 2 | 78 | 3598 | 56 | 37 | 56 | 7 | 56 | 37 | 56 | 37 | 56 |
| | 3 | 79 | 3598 | 56 | 37 | 56 | 7 | 56 | 37 | 56 | 37 | 56 |
| | 4 | 80 | 3598 | 56 | 37 | 56 | 7 | 56 | 37 | 56 | 37 | 56 |
| | 5 | 81 | 3598 | 56 | 37 | 56 | 7 | 56 | 37 | 56 | 37 | 56 |
| | 6 | 82 | 3598 | 56 | 37 | 56 | 7 | 56 | 37 | 56 | 37 | 56 |
| | 7 | 83 | 3598 | 56 | 37 | 56 | 7 | 56 | 37 | 56 | 37 | 56 |
| | 8 | 84 | 3598 | 56 | 37 | 56 | 7 | 56 | 37 | 56 | 37 | 56 |
| | 9 | 85 | 3598 | 56 | 37 | 56 | 7 | 56 | 37 | 56 | 37 | 56 |
| | 10 | 86 | 3598 | 56 | 37 | 56 | 7 | 56 | 37 | 56 | 37 | 56 |
| | 11 | 87 | | | | | | | | | | |
| NB/WB Richardson from Francisco to DD | 1 | 88 | 1189 | 56 | 12 | 56 | 18 | 56 | 7 | 56 | 12 | 56 |
| | 2 | 89 | 1189 | 56 | 12 | 56 | 18 | 56 | 7 | 56 | 12 | 56 |
| | 3 | 90 | 1189 | 56 | 12 | 56 | 18 | 56 | 7 | 56 | 12 | 56 |
| | 4 | 91 | 1189 | 56 | 12 | 56 | 18 | 56 | 7 | 56 | 12 | 56 |
| | 5 | 92 | 1189 | 56 | 12 | 56 | 18 | 56 | 7 | 56 | 12 | 56 |
| | 6 | 93 | 1189 | 56 | 12 | 56 | 18 | 56 | 7 | 56 | 12 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 94 | 1189 | 56 | 12 | 56 | 18 | 56 | 7 | 56 | 12 | 56 |
| | 8 | 95 | 1189 | 56 | 12 | 56 | 18 | 56 | 7 | 56 | 12 | 56 |
| | 9 | 96 | 1189 | 56 | 12 | 56 | 18 | 56 | 7 | 56 | 12 | 56 |
| | 10 | 97 | 1189 | 56 | 12 | 56 | 18 | 56 | 7 | 56 | 12 | 56 |
| | 11 | 98 | 1189 | 56 | 12 | 56 | 18 | 56 | 7 | 56 | 12 | 56 |
| | 12 | 99 | | | | | | | | | | |
| SB PP Ramp from WB Doyle Drive | 1 | 100 | 431 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 2 | 101 | 431 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 3 | 102 | 431 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 4 | 103 | 431 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 5 | 104 | 431 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 6 | 105 | 431 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 7 | 106 | 431 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 8 | 107 | 431 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 9 | 108 | 431 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 10 | 109 | 431 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 11 | 110 | 2316 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |
| | 12 | 111 | 431 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 13 | 112 | | | | | | | | | | |
| SB PP Ramp from EB Doyle Drive | 1 | 113 | 1870 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 2 | 114 | 1870 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 3 | 115 | 1870 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 4 | 116 | 1870 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 5 | 117 | 1870 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 6 | 118 | 1870 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 7 | 119 | 1870 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 8 | 120 | 1870 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 9 | 121 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 | 122 | 2298 | 56 | 17 | 56 | 24 | 56 | 24 | 56 | 17 | 56 |
| | 2 | 123 | 1558 | 56 | 16 | 56 | 16 | 56 | 0 | 0 | 11 | 56 |
| | 3 | 124 | 1558 | 56 | 16 | 56 | 16 | 56 | 0 | 0 | 11 | 56 |
| | 4 | 125 | 1558 | 56 | 16 | 56 | 16 | 56 | 0 | 0 | 11 | 56 |
| | 5 | 126 | 1558 | 56 | 16 | 56 | 16 | 56 | 0 | 0 | 11 | 56 |
| | 6 | 127 | 1558 | 56 | 16 | 56 | 16 | 56 | 0 | 0 | 11 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 128 | 1558 | 56 | 16 | 56 | 16 | 56 | 0 | 0 | 11 | 56 |
| | 8 | 129 | 1558 | 56 | 16 | 56 | 16 | 56 | 0 | 0 | 11 | 56 |
| | 9 | 130 | 1558 | 56 | 16 | 56 | 16 | 56 | 0 | 0 | 11 | 56 |
| | 10 | 131 | 1558 | 56 | 16 | 56 | 16 | 56 | 0 | 0 | 11 | 56 |
| | 11 | 132 | 1558 | 56 | 16 | 56 | 16 | 56 | 0 | 0 | 11 | 56 |
| | 12 | 191 | 1558 | 56 | 16 | 56 | 16 | 56 | 0 | 0 | 11 | 56 |
| | 13 | 133 | | | | | | | | | | |
| NB PP ramp to EB Doyle Drive | 1 | 134 | 952 | 56 | 7 | 56 | 10 | 56 | 10 | 56 | 7 | 56 |
| | 2 | 135 | 952 | 56 | 7 | 56 | 10 | 56 | 10 | 56 | 7 | 56 |
| | 3 | 136 | 952 | 56 | 7 | 56 | 10 | 56 | 10 | 56 | 7 | 56 |
| | 4 | 137 | 952 | 56 | 7 | 56 | 10 | 56 | 10 | 56 | 7 | 56 |
| | 5 | 138 | | | | | | | | | | |
| Mason Street | 1 | 139 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 140 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 141 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 142 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 143 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 144 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 145 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 194 | 31 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 146 | 31 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 147 | 2091 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 148 | | | | | | | | | | |
| Lincoln Blvd. | 1 | 149 | 123 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 150 | 133 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 3 | 151 | 133 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 4 | 152 | 133 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 5 | 153 | 133 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 6 | 154 | 133 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 7 | 155 | 133 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 8 | 156 | 133 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 9 | 157 | 47 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 10 | 158 | 47 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 11 | 159 | 47 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 | 160 | 47 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 13 | 161 | 47 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 14 | 162 | 47 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 15 | 163 | 47 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 16 | 164 | 47 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 17 | 165 | 47 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 18 | 166 | 47 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 19 | 167 | 161 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 20 | 168 | 161 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 21 | 169 | 199 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 22 | 170 | 228 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 23 | 171 | | | | | | | | | | |
| Gorgas Avenue | 1 | 172 | 73 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 173 | 73 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 174 | 73 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 175 | 73 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 176 | 73 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 177 | 73 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 178 | | | | | | | | | | |
| Halleck Street | 1 | 179 | 51 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 180 | 51 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 181 | | | | | | | | | | |
| Girard Road | 1 | 182 | 37 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 183 | 37 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 184 | 37 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 185 | | | | | | | | | | |
| Baker Street | 1 | 186 | 277 | 32 | 3 | 32 | 0 | 0 | 0 | 0 | 3 | 32 |
| | 2 | 187 | | | | | | | | | | |
| Montgomery Street | 1 | 188 | 85 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 189 | 85 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 3 | 190 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

30 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Existing Doyle Drive - 2000 Base AM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 1,426.0 | 0.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 1,446.0 | 202.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3-Building 1187/1188 | 3 | 0 | 1,466.0 | 272.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4-Building 1182 | 5 | 0 | 1,406.0 | 240.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5-Building 1183/1186 | 6 | 0 | 1,326.0 | 230.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6-Building 1184/1185 | 7 | 0 | 1,206.0 | 208.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7-Building 603/Crissy Center | 8 | 0 | 880.0 | 176.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8-PX Building | 9 | 0 | 816.0 | 118.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9-Post Commissary/Sports Basement | 10 | 0 | 552.0 | 16.0 | 4.00 | 1.50 | 69.00 | 71 | 12.0 | 10.0 | Y |
| 10-Battery Blaney/635 | 11 | 0 | 270.0 | -34.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11-Battery Slaughter | 12 | 0 | 208.0 | -40.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12-Battery Sherwood/636 | 13 | 0 | 80.0 | 6.0 | 29.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13-Battery Baldwin | 14 | 0 | 4.0 | 15.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14-Building 644 | 15 | 0 | 42.0 | 66.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15-Building 649 | 16 | 0 | -64.0 | 48.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16-Building 650/Stilwell Hall | 17 | 0 | -140.0 | 52.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17-1253 Armistead Road | 18 | 1 | -502.0 | 258.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18-Home on Armistead Road | 19 | 1 | -674.0 | 320.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19-Building 969 | 20 | 0 | -604.0 | 748.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20-Building 968 | 21 | 0 | -788.0 | 762.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21-Building 967 | 22 | 0 | -910.0 | 750.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22-Building 966 | 23 | 0 | -920.0 | 754.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

**INPUT: RECEIVERS** **Doyle Drive - 204235**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23-Building 964 | 24 | 1 | -818.0 | 846.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24-Building 963 | 25 | 1 | -840.0 | 804.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25-Building 962 | 26 | 1 | -814.0 | 816.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26-Unknown Building | 27 | 0 | -1,132.0 | 697.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27-Log Cabin | 28 | 0 | -720.0 | 188.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28-Unknown Building | 29 | 0 | -988.0 | 408.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29-Building 1298 Storey Ave. | 30 | 2 | -682.0 | 136.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30-Building 1297 Storey Ave. | 31 | 2 | -664.0 | 140.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31-Building 1295 Storey Ave. | 32 | 2 | -632.0 | 130.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32-Building 1294 Storey Ave. | 33 | 2 | -614.0 | 132.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33-Building 1293 Storey Ave. | 34 | 2 | -580.0 | 122.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34-Building 1291 Storey Ave. | 35 | 2 | -552.0 | 112.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35-Building 1290 Storey Ave. | 36 | 2 | -528.0 | 100.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36-Building 1289 Storey Ave. | 37 | 2 | -510.0 | 66.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37-Building 1263 Storey Ave. | 38 | 2 | -420.0 | -114.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38-Building 682/Cross Cultural Center | 39 | 0 | -350.0 | -228.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | -256.0 | -26.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40-Building 662/Cavalry Stable | 41 | 0 | -214.0 | -50.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41-Building 663/Cavalry Stable | 42 | 0 | -220.0 | -80.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42-Building 667/Cavalry Stable | 43 | 0 | -80.0 | -78.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43-National Cemetery Grave Site | 44 | 0 | 300.0 | -102.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44-Building 129 | 45 | 1 | 414.0 | -100.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45-Building 122 | 46 | 0 | 460.0 | -90.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46-Building 108 | 47 | 0 | 536.0 | -64.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47-Building 107 | 48 | 0 | 546.0 | -48.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48-Building 104 | 49 | 0 | 566.0 | -72.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49-Building 105 | 50 | 0 | 598.0 | -20.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50-Building 106 | 51 | 0 | 632.0 | 0.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51-Building 211 | 52 | 0 | 744.0 | 28.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52-Building 204 | 53 | 0 | 834.0 | 68.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53-Building 210 | 54 | 0 | 734.0 | -16.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54-Building 201 | 55 | 0 | 940.0 | 106.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55-Building 220 | 56 | 0 | 908.0 | -16.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56-Building 231 | 57 | 0 | 970.0 | 80.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57-Building 228 | 58 | 0 | 958.0 | 60.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

**INPUT: RECEIVERS** **Doyle Drive - 204235**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58-Building 229 | 60 | 0 | 950.0 | 32.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59-Building 223 | 61 | 0 | 950.0 | -14.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60-Building 230 | 62 | 0 | 1,050.0 | 112.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 1,020.0 | 16.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 1,014.0 | -20.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63-Building 1063 | 66 | 0 | 1,160.0 | 44.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64-Building 1062 | 68 | 0 | 1,178.0 | 0.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65-Building 1060 | 69 | 0 | 1,224.0 | -22.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66-Building 1167 | 70 | 0 | 1,216.0 | 94.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67-Building 1163 | 71 | 0 | 1,212.0 | 76.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68-Building 1169 | 72 | 0 | 1,280.0 | 50.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69-Building 1162 | 73 | 0 | 1,266.0 | 32.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70-Building 1170 | 74 | 0 | 1,360.0 | -16.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71-Building 1161 | 75 | 0 | 1,368.0 | -48.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72-Building 1160 | 76 | 0 | 1,398.0 | -50.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73-Building 1152/YMCA | 77 | 0 | 1,420.0 | -76.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74-Building 1151/YMCA Pool | 78 | 0 | 1,476.0 | -114.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75-Building 1004 | 79 | 0 | 1,300.0 | -140.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76-Home at 3234 Lyon St. | 81 | 8 | 1,560.0 | -150.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Existing Doyle Drive - 2000 Base AM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

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

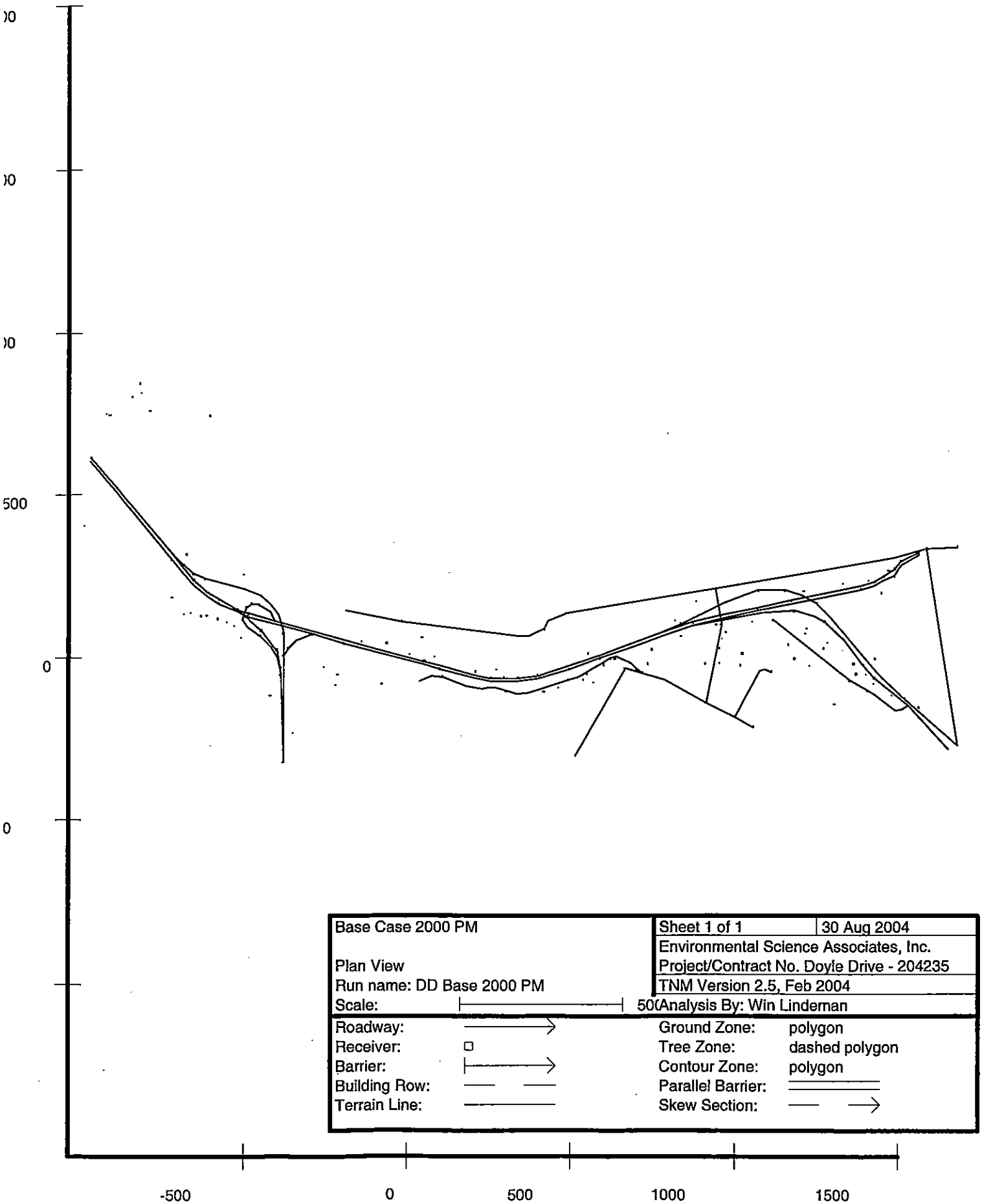
| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 67.3 | 66 | 67.3 | 12 | Snd Lvl | 67.3 | 0.0 | 10 | -10.0 |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 62.9 | 66 | 62.9 | 12 | — | 62.9 | 0.0 | 10 | -10.0 |
| 3-Building 1187/1188 | 3 | 0 | 81.0 | 64.6 | 71 | -16.4 | 12 | — | 64.6 | 0.0 | 10 | -10.0 |
| 4-Building 1182 | 5 | 0 | 81.0 | 64.6 | 71 | -16.4 | 12 | — | 64.6 | 0.0 | 10 | -10.0 |
| 5-Building 1183/1186 | 6 | 0 | 81.0 | 64.4 | 71 | -16.6 | 12 | — | 64.4 | 0.0 | 10 | -10.0 |
| 6-Building 1184/1185 | 7 | 0 | 81.0 | 67.1 | 71 | -13.9 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 7-Building 603/Crissy Center | 8 | 0 | 72.0 | 65.6 | 71 | -6.4 | 12 | — | 65.6 | 0.0 | 10 | -10.0 |
| 8-PX Building | 9 | 0 | 0.0 | 68.5 | 71 | 68.5 | 12 | — | 68.5 | 0.0 | 10 | -10.0 |
| 9-Post Commissary/Sports Basement | 10 | 0 | 69.0 | 67.1 | 71 | -1.9 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 10-Battery Blaney/635 | 11 | 0 | 68.0 | 73.2 | 66 | 5.2 | 12 | Snd Lvl | 73.2 | 0.0 | 10 | -10.0 |
| 11-Battery Slaughter | 12 | 0 | 68.0 | 78.2 | 66 | 10.2 | 12 | Snd Lvl | 78.2 | 0.0 | 10 | -10.0 |
| 12-Battery Sherwood/636 | 13 | 0 | 68.0 | 75.6 | 66 | 7.6 | 12 | Snd Lvl | 75.6 | 0.0 | 10 | -10.0 |
| 13-Battery Baldwin | 14 | 0 | 68.0 | 65.9 | 66 | -2.1 | 12 | — | 65.9 | 0.0 | 10 | -10.0 |
| 14-Building 644 | 15 | 0 | 0.0 | 63.3 | 71 | 63.3 | 12 | — | 63.3 | 0.0 | 10 | -10.0 |
| 15-Building 649 | 16 | 0 | 0.0 | 60.1 | 66 | 60.1 | 12 | — | 60.1 | 0.0 | 10 | -10.0 |
| 16-Building 650/Stilwell Hall | 17 | 0 | 70.0 | 59.5 | 66 | -10.5 | 12 | — | 59.5 | 0.0 | 10 | -10.0 |
| 17-1253 Armistead Road | 18 | 1 | 66.0 | 62.2 | 66 | -3.8 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 18-Home on Armistead Road | 19 | 1 | 66.0 | 69.5 | 66 | 3.5 | 12 | Snd Lvl | 69.5 | 0.0 | 10 | -10.0 |
| 19-Building 969 | 20 | 0 | 0.0 | 50.8 | 71 | 50.8 | 12 | — | 50.8 | 0.0 | 10 | -10.0 |
| 20-Building 968 | 21 | 0 | 0.0 | 52.5 | 71 | 52.5 | 12 | — | 52.5 | 0.0 | 10 | -10.0 |
| 21-Building 967 | 22 | 0 | 0.0 | 54.5 | 71 | 54.5 | 12 | — | 54.5 | 0.0 | 10 | -10.0 |
| 22-Building 966 | 23 | 0 | 0.0 | 54.3 | 71 | 54.3 | 12 | — | 54.3 | 0.0 | 10 | -10.0 |
| 23-Building 964 | 24 | 1 | 0.0 | 52.3 | 66 | 52.3 | 12 | — | 52.3 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24-Building 963 | 25 | 1 | 0.0 | 53.0 | 66 | 53.0 | 12 | --- | 53.0 | 0.0 | 10 | -10.0 |
| 25-Building 962 | 26 | 1 | 0.0 | 53.1 | 66 | 53.1 | 12 | --- | 53.1 | 0.0 | 10 | -10.0 |
| 26-Unknown Building | 27 | 0 | 0.0 | 55.2 | 71 | 55.2 | 12 | --- | 55.2 | 0.0 | 10 | -10.0 |
| 27-Log Cabin | 28 | 0 | 63.0 | 67.1 | 66 | 4.1 | 12 | Snd Lvl | 67.1 | 0.0 | 10 | -10.0 |
| 28-Unknown Building | 29 | 0 | 0.0 | 60.4 | 71 | 60.4 | 12 | --- | 60.4 | 0.0 | 10 | -10.0 |
| 29-Building 1298 Storey Ave. | 30 | 2 | 66.5 | 65.6 | 66 | -0.9 | 12 | --- | 65.6 | 0.0 | 10 | -10.0 |
| 30-Building 1297 Storey Ave. | 31 | 2 | 66.5 | 67.2 | 66 | 0.7 | 12 | Snd Lvl | 67.2 | 0.0 | 10 | -10.0 |
| 31-Building 1295 Storey Ave. | 32 | 2 | 66.5 | 68.8 | 66 | 2.3 | 12 | Snd Lvl | 68.8 | 0.0 | 10 | -10.0 |
| 32-Building 1294 Storey Ave. | 33 | 2 | 66.5 | 70.5 | 66 | 4.0 | 12 | Snd Lvl | 70.5 | 0.0 | 10 | -10.0 |
| 33-Building 1293 Storey Ave. | 34 | 2 | 66.5 | 71.7 | 66 | 5.2 | 12 | Snd Lvl | 71.7 | 0.0 | 10 | -10.0 |
| 34-Building 1291 Storey Ave. | 35 | 2 | 66.5 | 71.9 | 66 | 5.4 | 12 | Snd Lvl | 71.9 | 0.0 | 10 | -10.0 |
| 35-Building 1290 Storey Ave. | 36 | 2 | 66.5 | 71.6 | 66 | 5.1 | 12 | Snd Lvl | 71.6 | 0.0 | 10 | -10.0 |
| 36-Building 1289 Storey Ave. | 37 | 2 | 66.5 | 69.1 | 66 | 2.6 | 12 | Snd Lvl | 69.1 | 0.0 | 10 | -10.0 |
| 37-Building 1263 Storey Ave. | 38 | 2 | 0.0 | 66.1 | 66 | 66.1 | 12 | Snd Lvl | 66.1 | 0.0 | 10 | -10.0 |
| 38-Building 682/Cross Cultural Center | 39 | 0 | 65.5 | 63.4 | 66 | -2.1 | 12 | --- | 63.4 | 0.0 | 10 | -10.0 |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | 64.0 | 65.8 | 71 | 1.8 | 12 | --- | 65.8 | 0.0 | 10 | -10.0 |
| 40-Building 662/Cavalry Stable | 41 | 0 | 64.0 | 65.7 | 71 | 1.7 | 12 | --- | 65.7 | 0.0 | 10 | -10.0 |
| 41-Building 663/Cavalry Stable | 42 | 0 | 64.0 | 64.6 | 71 | 0.6 | 12 | --- | 64.6 | 0.0 | 10 | -10.0 |
| 42-Building 667/Cavalry Stable | 43 | 0 | 64.0 | 66.1 | 71 | 2.1 | 12 | --- | 66.1 | 0.0 | 10 | -10.0 |
| 43-National Cemetery Grave Site | 44 | 0 | 69.0 | 74.0 | 66 | 5.0 | 12 | Snd Lvl | 74.0 | 0.0 | 10 | -10.0 |
| 44-Building 129 | 45 | 1 | 0.0 | 62.3 | 66 | 62.3 | 12 | --- | 62.3 | 0.0 | 10 | -10.0 |
| 45-Building 122 | 46 | 0 | 0.0 | 72.2 | 71 | 72.2 | 12 | Snd Lvl | 72.2 | 0.0 | 10 | -10.0 |
| 46-Building 108 | 47 | 0 | 0.0 | 72.3 | 71 | 72.3 | 12 | Snd Lvl | 72.3 | 0.0 | 10 | -10.0 |
| 47-Building 107 | 48 | 0 | 0.0 | 74.2 | 71 | 74.2 | 12 | Snd Lvl | 74.2 | 0.0 | 10 | -10.0 |
| 48-Building 104 | 49 | 0 | 74.0 | 69.9 | 71 | -4.1 | 12 | --- | 69.9 | 0.0 | 10 | -10.0 |
| 49-Building 105 | 50 | 0 | 74.0 | 76.0 | 71 | 2.0 | 12 | Snd Lvl | 76.0 | 0.0 | 10 | -10.0 |
| 50-Building 106 | 51 | 0 | 76.0 | 77.4 | 71 | 1.4 | 12 | Snd Lvl | 77.4 | 0.0 | 10 | -10.0 |
| 51-Building 211 | 52 | 0 | 0.0 | 75.2 | 71 | 75.2 | 12 | Snd Lvl | 75.2 | 0.0 | 10 | -10.0 |
| 52-Building 204 | 53 | 0 | 0.0 | 67.8 | 71 | 67.8 | 12 | --- | 67.8 | 0.0 | 10 | -10.0 |
| 53-Building 210 | 54 | 0 | 0.0 | 70.9 | 71 | 70.9 | 12 | --- | 70.9 | 0.0 | 10 | -10.0 |
| 54-Building 201 | 55 | 0 | 0.0 | 64.7 | 71 | 64.7 | 12 | --- | 64.7 | 0.0 | 10 | -10.0 |
| 55-Building 220 | 56 | 0 | 0.0 | 63.9 | 71 | 63.9 | 12 | --- | 63.9 | 0.0 | 10 | -10.0 |
| 56-Building 231 | 57 | 0 | 0.0 | 65.2 | 71 | 65.2 | 12 | --- | 65.2 | 0.0 | 10 | -10.0 |
| 57-Building 228 | 58 | 0 | 0.0 | 64.3 | 71 | 64.3 | 12 | --- | 64.3 | 0.0 | 10 | -10.0 |
| 58-Building 229 | 60 | 0 | 0.0 | 63.1 | 71 | 63.1 | 12 | --- | 63.1 | 0.0 | 10 | -10.0 |
| 59-Building 223 | 61 | 0 | 0.0 | 59.0 | 71 | 59.0 | 12 | --- | 59.0 | 0.0 | 10 | -10.0 |
| 60-Building 230 | 62 | 0 | 0.0 | 65.6 | 71 | 65.6 | 12 | --- | 65.6 | 0.0 | 10 | -10.0 |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 57.0 | 61.8 | 66 | 4.8 | 12 | --- | 61.8 | 0.0 | 10 | -10.0 |
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 57.0 | 59.9 | 66 | 2.9 | 12 | --- | 59.9 | 0.0 | 10 | -10.0 |
| 63-Building 1063 | 66 | 0 | 68.5 | 60.4 | 71 | -8.1 | 12 | --- | 60.4 | 0.0 | 10 | -10.0 |

**RESULTS: SOUND LEVELS** **Doyle Drive - 204235**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64-Building 1062 | 68 | 0 | 68.5 | 58.2 | 71 | -10.3 | 12 | --- | 58.2 | 0.0 | 10 | -10.0 |
| 65-Building 1060 | 69 | 0 | 68.5 | 57.3 | 71 | -11.2 | 12 | --- | 57.3 | 0.0 | 10 | -10.0 |
| 66-Building 1167 | 70 | 0 | 68.0 | 64.9 | 71 | -3.1 | 12 | --- | 64.9 | 0.0 | 10 | -10.0 |
| 67-Building 1163 | 71 | 0 | 0.0 | 63.2 | 71 | 63.2 | 12 | --- | 63.2 | 0.0 | 10 | -10.0 |
| 68-Building 1169 | 72 | 0 | 68.0 | 65.9 | 71 | -2.1 | 12 | --- | 65.9 | 0.0 | 10 | -10.0 |
| 69-Building 1162 | 73 | 0 | 0.0 | 62.4 | 71 | 62.4 | 12 | --- | 62.4 | 0.0 | 10 | -10.0 |
| 70-Building 1170 | 74 | 0 | 68.0 | 69.2 | 71 | 1.2 | 12 | --- | 69.2 | 0.0 | 10 | -10.0 |
| 71-Building 1161 | 75 | 0 | 0.0 | 66.3 | 71 | 66.3 | 12 | --- | 66.3 | 0.0 | 10 | -10.0 |
| 72-Building 1160 | 76 | 0 | 0.0 | 71.3 | 71 | 71.3 | 12 | Snd Lvl | 71.3 | 0.0 | 10 | -10.0 |
| 73-Building 1152/YMCA | 77 | 0 | 0.0 | 70.4 | 66 | 70.4 | 12 | Snd Lvl | 70.4 | 0.0 | 10 | -10.0 |
| 74-Building 1151/YMCA Pool | 78 | 0 | 0.0 | 73.2 | 66 | 73.2 | 12 | Snd Lvl | 73.2 | 0.0 | 10 | -10.0 |
| 75-Building 1004 | 79 | 0 | 0.0 | 54.6 | 71 | 54.6 | 12 | --- | 54.6 | 0.0 | 10 | -10.0 |
| 76-Home at 3234 Lyon St. | 81 | 8 | 76.5 | 71.1 | 66 | -5.4 | 12 | Snd Lvl | 71.1 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 232 | 0.0 | 0.0 | 0.0 |
| All Impacted | 25 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |




| | | | |
|---|---|---|---|
| Base Case 2000 PM | | Sheet 1 of 1 | 30 Aug 2004 |
| | | Environmental Science Associates, Inc. | |
| Plan View | | Project/Contract No. Doyle Drive - 204235 | |
| Run name: DD Base 2000 PM | | TNM Version 2.5, Feb 2004 | |
| Scale: | 500 | Analysis By: Win Linderman | |

| | | | |
|---|---|---|---|
| Roadway: | | Ground Zone: | polygon |
| Receiver: | | Tree Zone: | dashed polygon |
| Barrier: | | Contour Zone: | polygon |
| Building Row: | | Parallel Barrier: | |
| Terrain Line: | | Skew Section: | |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Base Case 2000 PM

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

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle Drive to Marina | 11.0 | N End | 1 | -966.0 | 608.0 | 53.00 | | | | Average | |
| | | 2 | 2 | -720.0 | 302.0 | 56.00 | | | | Average | |
| | | 3 | 3 | -654.0 | 228.0 | 53.00 | | | | Average | |
| | | 4 | 4 | -610.0 | 192.0 | 50.00 | | | | Average | |
| | | 5 | 6 | -576.0 | 170.0 | 46.00 | | | | Average | |
| | | 6 | 7 | -516.0 | 144.0 | 46.00 | | | | Average | Y |
| | | 7 | 8 | -488.0 | 130.0 | 45.00 | | | | Average | Y |
| | | 8 | 9 | -380.0 | 100.0 | 41.00 | | | | Average | Y |
| | | 9 | 10 | -292.0 | 76.0 | 41.00 | | | | Average | Y |
| | | 10 | 11 | -194.0 | 47.0 | 37.00 | | | | Average | Y |
| | | 11 | 13 | 49.0 | -18.0 | 29.00 | | | | Average | Y |
| | | 12 | 14 | 50.0 | -18.0 | 29.00 | | | | Average | |
| | | 13 | 15 | 98.0 | -32.0 | 28.00 | | | | Average | |
| | | 14 | 16 | 196.0 | -58.0 | 27.00 | | | | Average | |
| | | 15 | 17 | 232.0 | -66.0 | 26.50 | | | | Average | |
| | | 16 | 18 | 252.0 | -70.0 | 26.00 | | | | Average | |
| | | 17 | 20 | 333.0 | -70.0 | 24.00 | | | | Average | |
| | | 18 | 21 | 334.0 | -70.0 | 24.00 | | | | Average | Y |
| | | 19 | 22 | 396.0 | -60.0 | 21.40 | | | | Average | Y |
| | | 20 | 23 | 492.0 | -32.0 | 17.80 | | | | Average | Y |
| | | 21 | 24 | 586.0 | 0.0 | 14.00 | | | | Average | Y |
| | | 22 | 25 | 680.0 | 35.0 | 12.00 | | | | Average | Y |
| | | 23 | 26 | 776.0 | 70.0 | 12.00 | | | | Average | Y |
| | | 24 | 27 | 868.0 | 102.0 | 11.80 | | | | Average | Y |
| | | 25 | 28 | 968.0 | 126.0 | 11.20 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 26 | 29 | 1,068.0 | 150.0 | 11.20 | | | | Average | Y |
| | | 27 | 31 | 1,381.0 | 213.0 | 5.00 | | | | Average | |
| | | 28 | 32 | 1,382.0 | 213.0 | 5.00 | | | | Average | |
| | | 29 | 33 | 1,422.0 | 224.0 | 5.00 | | | | Average | |
| | | 30 | 34 | 1,450.0 | 240.0 | 4.00 | | | | Average | |
| | | | 35 | 1,486.0 | 254.0 | 4.00 | | | | Average | |
| | | | 36 | 1,504.0 | 286.0 | 4.00 | | | | Average | |
| | | | 37 | 1,560.0 | 318.0 | 4.00 | | | | | |
| WB Doyle Drive from Marina to 0+00 | 11.0 | 1 | 39 | 1,560.0 | 326.0 | 4.00 | | | | Average | |
| | | 2 | 40 | 1,504.0 | 300.0 | 4.00 | | | | Average | |
| | | 3 | 41 | 1,486.0 | 276.0 | 4.00 | | | | Average | |
| | | 4 | 42 | 1,450.0 | 251.0 | 4.00 | | | | Average | |
| | | 5 | 43 | 1,422.0 | 234.0 | 5.00 | | | | Average | |
| | | 6 | 44 | 1,382.0 | 224.0 | 5.00 | | | | Average | Y |
| | | 7 | 46 | 1,166.0 | 178.0 | 10.80 | | | | Average | Y |
| | | 8 | 47 | 1,068.0 | 157.0 | 11.20 | | | | Average | Y |
| | | 9 | 48 | 968.0 | 136.0 | 11.20 | | | | Average | Y |
| | | 10 | 49 | 868.0 | 111.0 | 11.80 | | | | Average | Y |
| | | 11 | 50 | 776.0 | 80.0 | 12.00 | | | | Average | Y |
| | | 12 | 51 | 680.0 | 44.0 | 12.00 | | | | Average | Y |
| | | 13 | 52 | 586.0 | 10.0 | 14.00 | | | | Average | Y |
| | | 14 | 53 | 492.0 | -22.0 | 17.80 | | | | Average | Y |
| | | 15 | 54 | 396.0 | -52.0 | 21.40 | | | | Average | Y |
| | | 16 | 55 | 335.0 | -60.0 | 24.00 | | | | Average | Y |
| | | 17 | 56 | 334.0 | -60.0 | 24.00 | | | | Average | Y |
| | | 18 | 57 | 294.0 | -60.0 | 25.00 | | | | Average | |
| | | 19 | 58 | 252.0 | -60.0 | 26.00 | | | | Average | |
| | | 20 | 59 | 232.0 | -56.0 | 26.50 | | | | Average | |
| | | 21 | 60 | 196.0 | -50.0 | 27.00 | | | | Average | |
| | | 22 | 61 | 98.0 | -22.0 | 28.00 | | | | Average | |
| | | 23 | 62 | 50.0 | -8.0 | 28.40 | | | | Average | |
| | | 24 | 63 | 49.0 | -8.0 | 28.40 | | | | Average | Y |
| | | 25 | 64 | -98.0 | 30.0 | 33.00 | | | | Average | Y |
| | | 26 | 65 | -194.0 | 58.0 | 37.00 | | | | Average | Y |
| | | 27 | 66 | -292.0 | 86.0 | 41.00 | | | | Average | Y |
| | | 28 | 67 | -380.0 | 110.0 | 45.00 | | | | Average | Y |
| | | 29 | 68 | -406.0 | 118.0 | 45.60 | | | | Average | Y |
| | | 30 | 69 | -407.0 | 118.0 | 45.60 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 31 | 70 | -487.0 | 138.5 | 49.20 | | | | Average | |
| | | 32 | 71 | -488.0 | 138.5 | 49.20 | | | | Average | Y |
| | | 33 | 72 | -516.0 | 150.0 | 51.00 | | | | Average | Y |
| | | | 73 | -517.0 | 150.0 | 51.00 | | | | Average | |
| | | | 74 | -576.0 | 182.0 | 49.00 | | | | Average | |
| | | | 75 | -610.0 | 204.0 | 50.00 | | | | Average | |
| | | | 192 | -654.0 | 242.0 | 53.00 | | | | Average | |
| | | | 193 | -720.0 | 322.0 | 56.00 | | | | Average | |
| | | | 76 | -966.0 | 620.0 | 53.00 | | | | | |
| SB/EB Richardson from Doyle to Francis | 11.0 | 1 | 77 | 868.0 | 102.0 | 11.80 | | | | Average | Y |
| | | 2 | 78 | 1,078.0 | 140.0 | 10.00 | | | | Average | Y |
| | | 3 | 79 | 1,178.0 | 147.0 | 7.00 | | | | Average | Y |
| | | 4 | 80 | 1,233.0 | 132.0 | 5.00 | | | | Average | Y |
| | | 5 | 81 | 1,234.0 | 132.0 | 5.00 | | | | Average | |
| | | 6 | 82 | 1,270.0 | 114.0 | 2.00 | | | | Average | |
| | | 7 | 83 | 1,330.0 | 57.0 | 2.00 | | | | Average | |
| | | 8 | 84 | 1,388.0 | -20.0 | 2.00 | | | | Average | |
| | | 9 | 85 | 1,424.0 | -60.0 | 2.00 | | | | Average | |
| | | 10 | 86 | 1,528.0 | -146.0 | 4.00 | | | | Average | |
| | | 11 | 87 | 1,650.0 | -280.0 | 4.00 | | | | | |
| NB/WB Richardson from Francisco to DD | 9.0 | 1 | 88 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 89 | 1,514.0 | -122.0 | 4.00 | | | | Average | |
| | | 3 | 90 | 1,436.0 | -50.0 | 2.00 | | | | Average | |
| | | 4 | 91 | 1,285.0 | 130.0 | 2.00 | | | | Average | |
| | | 5 | 92 | 1,244.0 | 172.0 | 3.00 | | | | Average | |
| | | 6 | 93 | 1,200.0 | 196.0 | 4.00 | | | | Average | |
| | | 7 | 94 | 1,149.0 | 210.0 | 7.00 | | | | Average | |
| | | 8 | 95 | 1,150.0 | 210.0 | 7.00 | | | | Average | Y |
| | | 9 | 96 | 1,068.0 | 210.0 | 10.00 | | | | Average | Y |
| | | 10 | 97 | 968.0 | 172.0 | 11.00 | | | | Average | Y |
| | | 11 | 98 | 830.0 | 106.0 | 12.00 | | | | Average | Y |
| | | 12 | 99 | 776.0 | 80.0 | 12.00 | | | | | |
| SB PP Ramp from WB Doyle Drive | 4.6 | 1 | 100 | -406.0 | 118.0 | 45.60 | | | | Average | |
| | | 2 | 101 | -420.0 | 144.0 | 46.00 | | | | Average | |
| | | 3 | 102 | -456.0 | 170.0 | 41.00 | | | | Average | |
| | | 4 | 103 | -478.0 | 170.0 | 40.00 | | | | Average | |
| | | 5 | 104 | -494.0 | 158.0 | 39.00 | | | | Average | |
| | | 6 | 105 | -505.0 | 120.0 | 39.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 106 | -488.0 | 96.0 | 39.00 | | | | Average | |
| | | 8 | 107 | -450.0 | 70.0 | 38.00 | | | | Average | |
| | | 9 | 108 | -418.0 | 36.0 | 38.00 | | | | Average | |
| | | 10 | 109 | -398.0 | 5.0 | 38.00 | | | | Average | |
| | | 11 | 110 | -390.0 | -26.0 | 37.00 | | | | Average | |
| | | 12 | 111 | -388.0 | -50.0 | 37.00 | | | | Average | |
| | | 13 | 112 | -380.0 | -320.0 | 37.00 | | | | | |
| SB PP Ramp from EB Doyle Drive | 4.8 | 1 | 113 | -515.0 | 143.9 | 51.00 | | | | Average | Y |
| | | 2 | 114 | -495.0 | 130.0 | 50.00 | | | | Average | Y |
| | | 3 | 115 | -494.0 | 130.0 | 50.00 | | | | Average | |
| | | 4 | 116 | -476.0 | 112.0 | 49.00 | | | | Average | |
| | | 5 | 117 | -447.0 | 86.0 | 46.00 | | | | Average | |
| | | 6 | 118 | -410.0 | 38.0 | 47.00 | | | | Average | |
| | | 7 | 119 | -400.0 | 27.0 | 37.00 | | | | Average | |
| | | 8 | 120 | -390.0 | -26.0 | 37.00 | | | | Average | |
| | | 9 | 121 | -388.0 | -27.0 | 37.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 4.6 | 1 | 122 | -380.0 | -320.0 | 37.00 | | | | Average | |
| | | 2 | 123 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 3 | 124 | -380.0 | 80.0 | 37.00 | | | | Average | |
| | | 4 | 125 | -384.0 | 98.0 | 38.00 | | | | Average | |
| | | 5 | 126 | -396.0 | 138.0 | 38.00 | | | | Average | |
| | | 6 | 127 | -418.0 | 170.0 | 41.00 | | | | Average | |
| | | 7 | 128 | -450.0 | 196.0 | 44.00 | | | | Average | |
| | | 8 | 129 | -500.0 | 216.0 | 47.50 | | | | Average | |
| | | 9 | 130 | -620.0 | 246.0 | 54.00 | | | | Average | |
| | | 10 | 131 | -656.0 | 262.0 | 57.00 | | | | Average | |
| | | 11 | 132 | -686.0 | 290.0 | 58.00 | | | | Average | |
| | | 12 | 191 | -703.0 | 306.0 | 58.00 | | | | Average | |
| | | 13 | 133 | -720.0 | 322.0 | 56.00 | | | | | |
| NB PP ramp to EB Doyle Drive | 4.6 | 1 | 134 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 2 | 135 | -364.0 | 34.0 | 38.00 | | | | Average | |
| | | 3 | 136 | -338.0 | 58.0 | 39.00 | | | | Average | |
| | | 4 | 137 | -306.0 | 70.0 | 40.00 | | | | Average | |
| | | 5 | 138 | -292.0 | 76.0 | 41.00 | | | | | |
| Mason Street | 7.3 | 1 | 139 | -188.0 | 150.0 | 3.00 | | | | Average | |
| | | 2 | 140 | -16.0 | 114.0 | 3.00 | | | | Average | |
| | | 3 | 141 | 340.0 | 70.0 | 4.00 | | | | Average | |
| | | 4 | 142 | 370.0 | 70.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 5 | 143 | 416.0 | 92.0 | 4.00 | | | | Average | |
| | | 6 | 144 | 428.0 | 118.0 | 4.00 | | | | Average | |
| | | 7 | 145 | 486.0 | 142.0 | 4.00 | | | | Average | |
| | | 8 | 194 | 938.0 | 214.0 | 4.00 | | | | Average | |
| | | 9 | 146 | 1,486.0 | 310.0 | 4.00 | | | | Average | |
| | | 10 | 147 | 1,584.0 | 340.0 | 4.00 | | | | Average | |
| | | 11 | 148 | 1,680.0 | 344.0 | 4.00 | | | | | |
| Lincoln Blvd. | 7.3 | 1 | 149 | 36.0 | -70.0 | 33.00 | | | | Average | |
| | | 2 | 150 | 74.0 | -53.0 | 33.00 | | | | Average | |
| | | 3 | 151 | 106.0 | -56.0 | 32.00 | | | | Average | |
| | | 4 | 152 | 180.0 | -86.0 | 30.00 | | | | Average | |
| | | 5 | 153 | 226.0 | -92.0 | 29.00 | | | | Average | |
| | | 6 | 154 | 246.0 | -90.0 | 29.00 | | | | Average | |
| | | 7 | 155 | 268.0 | -90.0 | 29.00 | | | | Average | |
| | | 8 | 156 | 308.0 | -100.0 | 29.00 | | | | Average | |
| | | 9 | 157 | 334.0 | -108.0 | 27.00 | | | | Average | |
| | | 10 | 158 | 368.0 | -105.0 | 26.00 | | | | Average | |
| | | 11 | 159 | 490.0 | -66.0 | 19.00 | | | | Average | |
| | | 12 | 160 | 520.0 | -56.0 | 17.00 | | | | Average | |
| | | 13 | 161 | 568.0 | -30.0 | 16.00 | | | | Average | |
| | | 14 | 162 | 596.0 | -14.0 | 13.00 | | | | Average | |
| | | 15 | 163 | 620.0 | 0.0 | 14.00 | | | | Average | |
| | | 16 | 164 | 636.0 | 6.0 | 12.00 | | | | Average | |
| | | 17 | 165 | 680.0 | -14.0 | 13.00 | | | | Average | |
| | | 18 | 166 | 700.0 | -34.0 | 14.00 | | | | Average | |
| | | 19 | 167 | 718.0 | -44.0 | 14.00 | | | | Average | |
| | | 20 | 168 | 784.0 | -66.0 | 15.00 | | | | Average | |
| | | 21 | 169 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 22 | 170 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 23 | 171 | 1,054.0 | -210.0 | 14.00 | | | | | |
| Gorgas Avenue | 6.0 | 1 | 172 | 1,528.0 | -146.0 | 4.00 | | | | Average | |
| | | 2 | 173 | 1,510.0 | -158.0 | 4.00 | | | | Average | |
| | | 3 | 174 | 1,488.0 | -160.0 | 4.00 | | | | Average | |
| | | 4 | 175 | 1,420.0 | -108.0 | 2.00 | | | | Average | |
| | | 5 | 176 | 1,400.0 | -98.0 | 2.00 | | | | Average | |
| | | 6 | 177 | 1,344.0 | -66.0 | 2.00 | | | | Average | |
| | | 7 | 178 | 1,112.0 | 120.0 | 3.00 | | | | | |
| Halleck Street | 7.3 | 1 | 179 | 910.0 | -136.0 | 14.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 180 | 957.0 | 106.0 | 6.00 | | | | Average | |
| | | 3 | 181 | 938.0 | 214.0 | 4.00 | | | | | |
| Girard Road | 7.3 | 1 | 182 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 2 | 183 | 1,074.0 | -38.0 | 3.00 | | | | Average | |
| | | 3 | 184 | 1,090.0 | -33.0 | 4.00 | | | | Average | |
| | | 4 | 185 | 1,108.0 | -40.0 | 5.00 | | | | | |
| Baker Street | 11.6 | 1 | 186 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 187 | 1,584.0 | 340.0 | 4.00 | | | | | |
| Montgomery Street | 9.2 | 1 | 188 | 510.0 | -300.0 | 15.00 | | | | Average | |
| | | 2 | 189 | 664.0 | -30.0 | 12.00 | | | | Average | |
| | | 3 | 190 | 718.0 | -44.0 | 14.00 | | | | | |

Environmental Science Associates, Inc. 30 August 2004
Win Lindeman TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Base Case 2000 PM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle Drive to Marina | N End | 1 | 2908 | 88 | 16 | 88 | 23 | 88 | 42 | 88 | 31 | 88 |
| | 2 | 2 | 2908 | 88 | 16 | 88 | 23 | 88 | 42 | 88 | 31 | 88 |
| | 3 | 3 | 2908 | 88 | 16 | 88 | 23 | 88 | 42 | 88 | 31 | 88 |
| | 4 | 4 | 2908 | 88 | 16 | 88 | 23 | 88 | 42 | 88 | 31 | 88 |
| | 5 | 6 | 1820 | 88 | 9 | 88 | 14 | 88 | 25 | 88 | 16 | 88 |
| | 6 | 7 | 1820 | 88 | 9 | 88 | 14 | 88 | 25 | 88 | 16 | 88 |
| | 7 | 8 | 1820 | 88 | 9 | 88 | 14 | 88 | 25 | 88 | 16 | 88 |
| | 8 | 9 | 1820 | 88 | 9 | 88 | 14 | 88 | 25 | 88 | 16 | 88 |
| | 9 | 10 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 10 | 11 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 11 | 13 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 12 | 14 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 13 | 15 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 14 | 16 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 15 | 17 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 16 | 18 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 17 | 20 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 18 | 21 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 19 | 22 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 20 | 23 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 21 | 24 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 22 | 25 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 23 | 26 | 2517 | 88 | 13 | 88 | 20 | 88 | 35 | 88 | 22 | 88 |
| | 24 | 27 | 843 | 88 | 4 | 88 | 7 | 88 | 12 | 88 | 7 | 88 |
| | 25 | 28 | 843 | 88 | 4 | 88 | 7 | 88 | 12 | 88 | 7 | 88 |
| | 26 | 29 | 843 | 88 | 4 | 88 | 7 | 88 | 12 | 88 | 7 | 88 |
| | 27 | 31 | 843 | 88 | 4 | 88 | 7 | 88 | 12 | 88 | 7 | 88 |
| | 28 | 32 | 843 | 56 | 4 | 56 | 7 | 56 | 12 | 56 | 7 | 56 |
| | 29 | 33 | 843 | 56 | 4 | 56 | 7 | 56 | 12 | 56 | 7 | 56 |
| | 30 | 34 | 843 | 56 | 4 | 56 | 7 | 56 | 12 | 56 | 7 | 56 |
| | | 35 | 843 | 56 | 4 | 56 | 7 | 56 | 12 | 56 | 7 | 56 |
| | | 36 | 843 | 56 | 4 | 56 | 7 | 56 | 12 | 56 | 7 | 56 |
| | | 37 | | | | | | | | | | |
| WB Doyle Drive from Marina to 0+00 | 1 | 39 | 1746 | 56 | 0 | 0 | 4 | 56 | 49 | 56 | 18 | 56 |
| | 2 | 40 | 1746 | 56 | 0 | 0 | 4 | 56 | 49 | 56 | 18 | 56 |
| | 3 | 41 | 1746 | 56 | 0 | 0 | 4 | 56 | 49 | 56 | 18 | 56 |
| | 4 | 42 | 1746 | 56 | 0 | 0 | 4 | 56 | 49 | 56 | 18 | 56 |
| | 5 | 43 | 1746 | 88 | 0 | 0 | 4 | 88 | 49 | 88 | 18 | 88 |
| | 6 | 44 | 1746 | 88 | 0 | 0 | 4 | 88 | 49 | 88 | 18 | 88 |
| | 7 | 46 | 1746 | 88 | 0 | 0 | 4 | 88 | 49 | 88 | 18 | 88 |
| | 8 | 47 | 1746 | 88 | 0 | 0 | 4 | 88 | 49 | 88 | 18 | 88 |
| | 9 | 48 | 1746 | 88 | 0 | 0 | 4 | 88 | 49 | 88 | 18 | 88 |
| | 10 | 49 | 1746 | 88 | 0 | 0 | 4 | 88 | 49 | 88 | 18 | 88 |
| | 11 | 50 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 12 | 51 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 13 | 52 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 14 | 53 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 15 | 54 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 16 | 55 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 17 | 56 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 18 | 57 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 19 | 58 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 20 | 59 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 21 | 60 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 22 | 61 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 23 | 62 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 24 | 63 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 25 | 64 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 26 | 65 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 27 | 66 | 4439 | 88 | 0 | 0 | 9 | 88 | 125 | 88 | 46 | 88 |
| | 28 | 67 | 3464 | 88 | 0 | 0 | 7 | 88 | 97 | 88 | 36 | 88 |
| | 29 | 68 | 3464 | 88 | 0 | 0 | 7 | 88 | 97 | 88 | 36 | 88 |
| | 30 | 69 | 3464 | 88 | 0 | 0 | 7 | 88 | 97 | 88 | 36 | 88 |
| | 31 | 70 | 3464 | 88 | 0 | 0 | 7 | 88 | 97 | 88 | 36 | 88 |
| | 32 | 71 | 3464 | 88 | 0 | 0 | 7 | 88 | 97 | 88 | 36 | 88 |
| | 33 | 72 | 3464 | 88 | 0 | 0 | 7 | 88 | 97 | 88 | 36 | 88 |
| | | 73 | 3464 | 88 | 0 | 0 | 7 | 88 | 97 | 88 | 36 | 88 |
| | | 74 | 3464 | 88 | 0 | 0 | 7 | 88 | 97 | 88 | 36 | 88 |
| | | 75 | 3464 | 88 | 0 | 0 | 7 | 88 | 97 | 88 | 36 | 88 |
| | | 192 | 3464 | 88 | 0 | 0 | 7 | 88 | 97 | 88 | 36 | 88 |
| | | 193 | 5429 | 88 | 0 | 0 | 11 | 88 | 153 | 88 | 56 | 88 |
| | | 76 | | | | | | | | | | |
| SB/EB Richardson from Doyle to Francis | 1 | 77 | 1549 | 56 | 8 | 56 | 12 | 56 | 22 | 56 | 13 | 56 |
| | 2 | 78 | 1549 | 56 | 8 | 56 | 12 | 56 | 22 | 56 | 13 | 56 |
| | 3 | 79 | 1549 | 56 | 8 | 56 | 12 | 56 | 22 | 56 | 13 | 56 |
| | 4 | 80 | 1549 | 56 | 8 | 56 | 12 | 56 | 22 | 56 | 13 | 56 |
| | 5 | 81 | 1549 | 56 | 8 | 56 | 12 | 56 | 22 | 56 | 13 | 56 |
| | 6 | 82 | 1549 | 56 | 8 | 56 | 12 | 56 | 22 | 56 | 13 | 56 |
| | 7 | 83 | 1549 | 56 | 8 | 56 | 12 | 56 | 22 | 56 | 13 | 56 |
| | 8 | 84 | 1549 | 56 | 8 | 56 | 12 | 56 | 22 | 56 | 13 | 56 |
| | 9 | 85 | 1549 | 56 | 8 | 56 | 12 | 56 | 22 | 56 | 13 | 56 |
| | 10 | 86 | 1549 | 56 | 8 | 56 | 12 | 56 | 22 | 56 | 13 | 56 |
| | 11 | 87 | | | | | | | | | | |
| NB/WB Richardson from Francisco to DD | 1 | 88 | 2378 | 56 | 0 | 0 | 4 | 56 | 59 | 56 | 22 | 56 |
| | 2 | 89 | 2378 | 56 | 0 | 0 | 4 | 56 | 59 | 56 | 22 | 56 |
| | 3 | 90 | 2378 | 56 | 0 | 0 | 4 | 56 | 59 | 56 | 22 | 56 |
| | 4 | 91 | 2378 | 56 | 0 | 0 | 4 | 56 | 59 | 56 | 22 | 56 |
| | 5 | 92 | 2378 | 56 | 0 | 0 | 4 | 56 | 59 | 56 | 22 | 56 |
| | 6 | 93 | 2378 | 56 | 0 | 0 | 4 | 56 | 59 | 56 | 22 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 94 | 2378 | 56 | 0 | 0 | 4 | 56 | 59 | 56 | 22 | 56 |
| | 8 | 95 | 2378 | 56 | 0 | 0 | 4 | 56 | 59 | 56 | 22 | 56 |
| | 9 | 96 | 2378 | 56 | 0 | 0 | 4 | 56 | 59 | 56 | 22 | 56 |
| | 10 | 97 | 2378 | 56 | 0 | 0 | 4 | 56 | 59 | 56 | 22 | 56 |
| | 11 | 98 | 2378 | 56 | 0 | 0 | 4 | 56 | 59 | 56 | 22 | 56 |
| | 12 | 99 | | | | | | | | | | |
| SB PP Ramp from WB Doyle Drive | 1 | 100 | 974 | 56 | 0 | 0 | 2 | 56 | 27 | 56 | 10 | 56 |
| | 2 | 101 | 974 | 56 | 0 | 0 | 2 | 56 | 27 | 56 | 10 | 56 |
| | 3 | 102 | 974 | 56 | 0 | 0 | 2 | 56 | 27 | 56 | 10 | 56 |
| | 4 | 103 | 974 | 56 | 0 | 0 | 2 | 56 | 27 | 56 | 10 | 56 |
| | 5 | 104 | 974 | 56 | 0 | 0 | 2 | 56 | 27 | 56 | 10 | 56 |
| | 6 | 105 | 974 | 56 | 0 | 0 | 2 | 56 | 27 | 56 | 10 | 56 |
| | 7 | 106 | 974 | 56 | 0 | 0 | 2 | 56 | 27 | 56 | 10 | 56 |
| | 8 | 107 | 974 | 56 | 0 | 0 | 2 | 56 | 27 | 56 | 10 | 56 |
| | 9 | 108 | 974 | 56 | 0 | 0 | 2 | 56 | 27 | 56 | 10 | 56 |
| | 10 | 109 | 974 | 56 | 0 | 0 | 2 | 56 | 27 | 56 | 10 | 56 |
| | 11 | 110 | 974 | 56 | 0 | 0 | 2 | 56 | 27 | 56 | 10 | 56 |
| | 12 | 111 | 974 | 56 | 0 | 0 | 2 | 56 | 27 | 56 | 10 | 56 |
| | 13 | 112 | | | | | | | | | | |
| SB PP Ramp from EB Doyle Drive | 1 | 113 | 1194 | 56 | 6 | 56 | 9 | 56 | 17 | 56 | 10 | 56 |
| | 2 | 114 | 1194 | 56 | 6 | 56 | 9 | 56 | 17 | 56 | 10 | 56 |
| | 3 | 115 | 1194 | 56 | 6 | 56 | 9 | 56 | 17 | 56 | 10 | 56 |
| | 4 | 116 | 1194 | 56 | 6 | 56 | 9 | 56 | 17 | 56 | 10 | 56 |
| | 5 | 117 | 1194 | 56 | 6 | 56 | 9 | 56 | 17 | 56 | 10 | 56 |
| | 6 | 118 | 1194 | 56 | 6 | 56 | 9 | 56 | 17 | 56 | 10 | 56 |
| | 7 | 119 | 1194 | 56 | 6 | 56 | 9 | 56 | 17 | 56 | 10 | 56 |
| | 8 | 120 | 1194 | 56 | 6 | 56 | 9 | 56 | 17 | 56 | 10 | 56 |
| | 9 | 121 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 | 122 | 1993 | 56 | 0 | 0 | 8 | 56 | 20 | 56 | 22 | 56 |
| | 2 | 123 | 1993 | 56 | 0 | 0 | 8 | 56 | 20 | 56 | 22 | 56 |
| | 3 | 124 | 1993 | 56 | 0 | 0 | 8 | 56 | 20 | 56 | 22 | 56 |
| | 4 | 125 | 1993 | 56 | 0 | 0 | 8 | 56 | 20 | 56 | 22 | 56 |
| | 5 | 126 | 1993 | 56 | 0 | 0 | 8 | 56 | 20 | 56 | 22 | 56 |
| | 6 | 127 | 1993 | 56 | 0 | 0 | 8 | 56 | 20 | 56 | 22 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 128 | 1993 | 56 | 0 | 0 | 8 | 56 | 20 | 56 | 22 | 56 |
| | 8 | 129 | 1993 | 56 | 0 | 0 | 8 | 56 | 20 | 56 | 22 | 56 |
| | 9 | 130 | 1993 | 56 | 0 | 0 | 8 | 56 | 20 | 56 | 22 | 56 |
| | 10 | 131 | 1993 | 56 | 0 | 0 | 8 | 56 | 20 | 56 | 22 | 56 |
| | 11 | 132 | 1993 | 56 | 0 | 0 | 8 | 56 | 20 | 56 | 22 | 56 |
| | 12 | 191 | 1993 | 56 | 0 | 0 | 8 | 56 | 20 | 56 | 22 | 56 |
| | 13 | 133 | | | | | | | | | | |
| NB PP ramp to EB Doyle Drive | 1 | 134 | 704 | 56 | 4 | 56 | 5 | 56 | 4 | 56 | 7 | 56 |
| | 2 | 135 | 704 | 56 | 4 | 56 | 5 | 56 | 4 | 56 | 7 | 56 |
| | 3 | 136 | 704 | 56 | 4 | 56 | 5 | 56 | 4 | 56 | 7 | 56 |
| | 4 | 137 | 704 | 56 | 4 | 56 | 5 | 56 | 4 | 56 | 7 | 56 |
| | 5 | 138 | | | | | | | | | | |
| Mason Street | 1 | 139 | 12 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 2 | 140 | 12 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 3 | 141 | 12 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 4 | 142 | 12 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 5 | 143 | 12 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 6 | 144 | 12 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 7 | 145 | 12 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 8 | 194 | 50 | 32 | 1 | 32 | 1 | 32 | 2 | 32 | 1 | 32 |
| | 9 | 146 | 80 | 32 | 2 | 32 | 1 | 32 | 2 | 32 | 3 | 32 |
| | 10 | 147 | 81 | 32 | 2 | 32 | 1 | 32 | 2 | 32 | 3 | 32 |
| | 11 | 148 | | | | | | | | | | |
| Lincoln Blvd. | 1 | 149 | 117 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 150 | 372 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 3 | 151 | 372 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 4 | 152 | 372 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 5 | 153 | 372 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 6 | 154 | 372 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 7 | 155 | 372 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 8 | 156 | 372 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 9 | 157 | 379 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 10 | 158 | 276 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 11 | 159 | 276 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 | 160 | 276 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 13 | 161 | 276 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 14 | 162 | 276 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 15 | 163 | 276 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 16 | 164 | 276 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 17 | 165 | 276 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 18 | 166 | 276 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 19 | 167 | 455 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 20 | 168 | 455 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 21 | 169 | 491 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 5 | 32 |
| | 22 | 170 | 516 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 5 | 32 |
| | 23 | 171 | | | | | | | | | | |
| Gorgas Avenue | 1 | 172 | 71 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 173 | 71 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 174 | 71 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 175 | 71 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 176 | 49 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 177 | 20 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 178 | | | | | | | | | | |
| Halleck Street | 1 | 179 | 85 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 180 | 98 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 181 | | | | | | | | | | |
| Girard Road | 1 | 182 | 48 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 183 | 48 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 184 | 48 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 185 | | | | | | | | | | |
| Baker Street | 1 | 186 | 489 | 32 | 5 | 32 | 0 | 0 | 0 | 0 | 5 | 32 |
| | 2 | 187 | | | | | | | | | | |
| Montgomery Street | 1 | 188 | 103 | 32 | 2 | 32 | 2 | 32 | 2 | 32 | 2 | 32 |
| | 2 | 189 | 103 | 32 | 2 | 32 | 2 | 32 | 2 | 32 | 2 | 32 |
| | 3 | 190 | | | | | | | | | | |

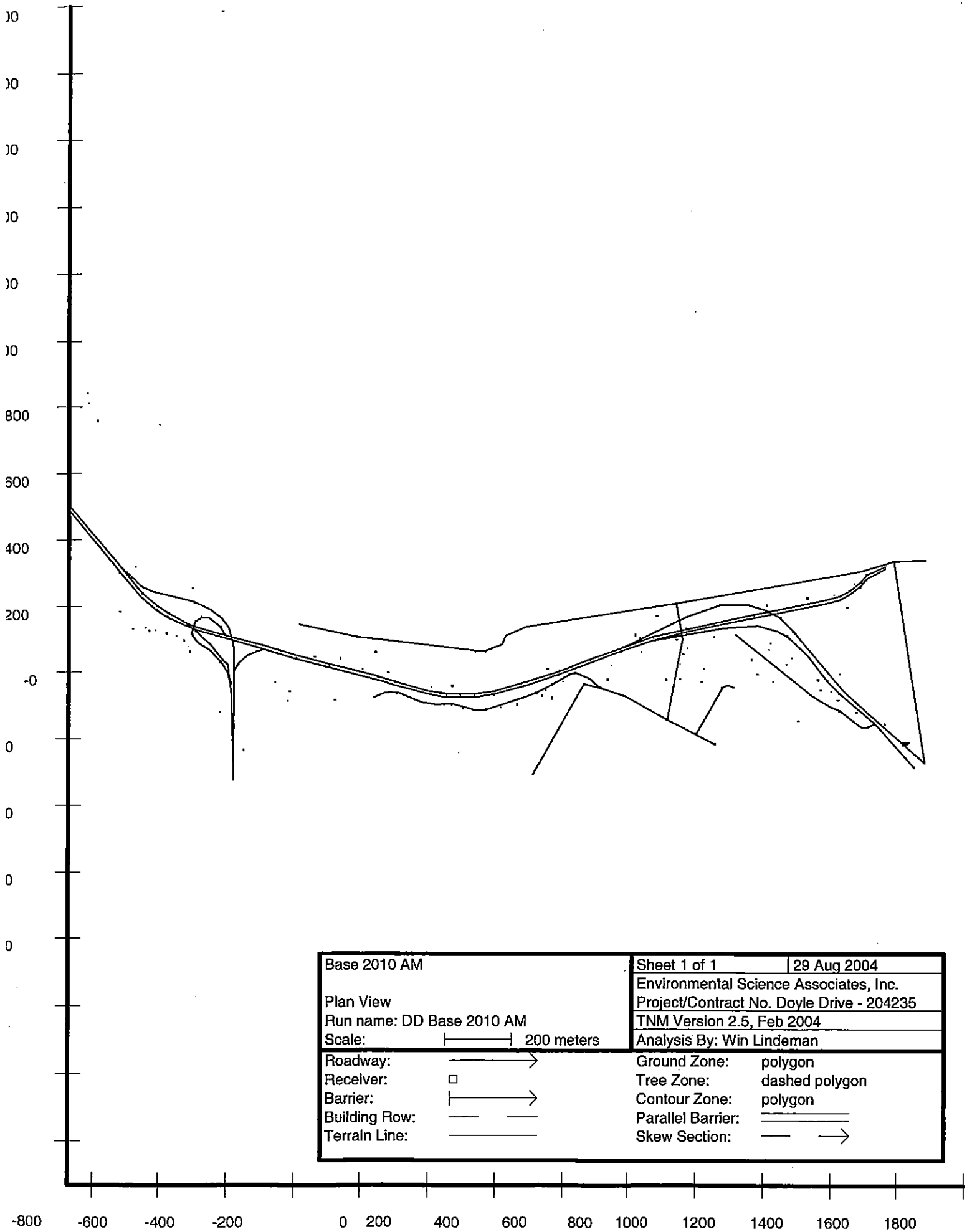
Environmental Science Associates, Inc
Win Lindeman

30 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Base Case 2000 PM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 1,426.0 | 0.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 1,446.0 | 202.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3-Building 1187/1188 | 3 | 0 | 1,466.0 | 272.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4-Building 1182 | 5 | 0 | 1,406.0 | 240.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5-Building 1183/1186 | 6 | 0 | 1,326.0 | 230.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6-Building 1184/1185 | 7 | 0 | 1,206.0 | 208.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7-Building 603/Crissy Center | 8 | 0 | 880.0 | 176.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8-PX Building | 9 | 0 | 816.0 | 118.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9-Post Commissary/Sports Basement | 10 | 0 | 552.0 | 16.0 | 4.00 | 1.50 | 69.00 | 71 | 12.0 | 10.0 | Y |
| 10-Battery Blaney/635 | 11 | 0 | 270.0 | -34.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11-Battery Slaughter | 12 | 0 | 208.0 | -40.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12-Battery Sherwood/636 | 13 | 0 | 80.0 | 6.0 | 29.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13-Battery Baldwin | 14 | 0 | 4.0 | 15.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14-Building 644 | 15 | 0 | 42.0 | 66.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15-Building 649 | 16 | 0 | -64.0 | 48.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16-Building 650/Stilwell Hall | 17 | 0 | -140.0 | 52.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17-1253 Armistead Road | 18 | 1 | -502.0 | 258.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18-Home on Armistead Road | 19 | 1 | -674.0 | 320.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19-Building 969 | 20 | 0 | -604.0 | 748.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20-Building 968 | 21 | 0 | -788.0 | 762.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21-Building 967 | 22 | 0 | -910.0 | 750.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22-Building 966 | 23 | 0 | -920.0 | 754.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23-Building 964 | 24 | 1 | -818.0 | 846.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24-Building 963 | 25 | 1 | -840.0 | 804.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25-Building 962 | 26 | 1 | -814.0 | 816.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26-Unknown Building | 27 | 0 | -1,132.0 | 697.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27-Log Cabin | 28 | 0 | -720.0 | 188.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28-Unknown Building | 29 | 0 | -988.0 | 408.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29-Building 1298 Storey Ave. | 30 | 2 | -682.0 | 136.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30-Building 1297 Storey Ave. | 31 | 2 | -664.0 | 140.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31-Building 1295 Storey Ave. | 32 | 2 | -632.0 | 130.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32-Building 1294 Storey Ave. | 33 | 2 | -614.0 | 132.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33-Building 1293 Storey Ave. | 34 | 2 | -580.0 | 122.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34-Building 1291 Storey Ave. | 35 | 2 | -552.0 | 112.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35-Building 1290 Storey Ave. | 36 | 2 | -528.0 | 100.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36-Building 1289 Storey Ave. | 37 | 2 | -510.0 | 66.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37-Building 1263 Storey Ave. | 38 | 2 | -420.0 | -114.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38-Building 682/Cross Cultural Center | 39 | 0 | -350.0 | -228.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | -256.0 | -26.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40-Building 662/Cavalry Stable | 41 | 0 | -214.0 | -50.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41-Building 663/Cavalry Stable | 42 | 0 | -220.0 | -80.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42-Building 667/Cavalry Stable | 43 | 0 | -80.0 | -78.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43-National Cemetery Grave Site | 44 | 0 | 300.0 | -102.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44-Building 129 | 45 | 1 | 414.0 | -100.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45-Building 122 | 46 | 0 | 460.0 | -90.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46-Building 108 | 47 | 0 | 536.0 | -64.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47-Building 107 | 48 | 0 | 546.0 | -48.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48-Building 104 | 49 | 0 | 566.0 | -72.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49-Building 105 | 50 | 0 | 598.0 | -20.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50-Building 106 | 51 | 0 | 632.0 | 0.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51-Building 211 | 52 | 0 | 744.0 | 28.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52-Building 204 | 53 | 0 | 834.0 | 68.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53-Building 210 | 54 | 0 | 734.0 | -16.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54-Building 201 | 55 | 0 | 940.0 | 106.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55-Building 220 | 56 | 0 | 908.0 | -16.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56-Building 231 | 57 | 0 | 970.0 | 80.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57-Building 228 | 58 | 0 | 958.0 | 60.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |


Base 2010 AM
Plan View
Run name: DD Base 2010 AM
Scale: 200 meters
Sheet 1 of 1
29 Aug 2004
Environmental Science Associates, Inc.
Project/Contract No. Doyle Drive - 204235
TNM Version 2.5, Feb 2004
Analysis By: Win Lindeman
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
-800
-600
-400
-200
0
200
400
600
800
1000
1200
1400
1600
1800

Environmental Science Associates, Inc.
Win Lindeman

29 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Base 2010 AM

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

| Roadway | | Points | | | | | Flow Control | | | Segment | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle Drive to Marina | 9.1 | 1 | 1 | -966.0 | 608.0 | 53.00 | | | | Average | |
| | | 2 | 2 | -720.0 | 302.0 | 56.00 | | | | Average | |
| | | 3 | 3 | -654.0 | 228.0 | 53.00 | | | | Average | |
| | | 4 | 4 | -610.0 | 192.0 | 50.00 | | | | Average | |
| | | 5 | 5 | -576.0 | 170.0 | 46.00 | | | | Average | |
| | | 6 | 6 | -516.0 | 144.0 | 49.00 | | | | Average | Y |
| | | 7 | 7 | -488.0 | 130.0 | 45.00 | | | | Average | Y |
| | | 8 | 8 | -380.0 | 100.0 | 41.00 | | | | Average | Y |
| | | 9 | 9 | -292.0 | 76.0 | 41.00 | | | | Average | Y |
| | | 10 | 10 | -194.0 | 47.0 | 37.00 | | | | Average | Y |
| | | 11 | 11 | 49.0 | -18.0 | 29.00 | | | | Average | Y |
| | | 12 | 12 | 50.0 | -18.0 | 29.00 | | | | Average | |
| | | 13 | 13 | 98.0 | -32.0 | 28.00 | | | | Average | |
| | | 14 | 14 | 196.0 | -58.0 | 27.00 | | | | Average | |
| | | 15 | 15 | 232.0 | -66.0 | 26.50 | | | | Average | |
| | | 16 | 16 | 252.0 | -70.0 | 26.00 | | | | Average | |
| | | 17 | 17 | 333.0 | -70.0 | 24.00 | | | | Average | |
| | | 18 | 18 | 334.0 | -70.0 | 24.00 | | | | Average | Y |
| | | 19 | 19 | 396.0 | -60.0 | 21.40 | | | | Average | Y |
| | | 20 | 20 | 492.0 | -32.0 | 17.80 | | | | Average | Y |
| | | 21 | 21 | 586.0 | 0.0 | 14.00 | | | | Average | Y |
| | | 22 | 22 | 680.0 | 35.0 | 12.00 | | | | Average | Y |
| | | 23 | 23 | 776.0 | 70.0 | 12.00 | | | | Average | Y |
| | | 24 | 24 | 868.0 | 102.0 | 11.80 | | | | Average | Y |
| | | 25 | 25 | 968.0 | 126.0 | 11.20 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 26 | 26 | 1,068.0 | 150.0 | 11.20 | | | | Average | Y |
| | | 27 | 27 | 1,381.0 | 213.0 | 5.00 | | | | Average | Y |
| | | 28 | 28 | 1,382.0 | 213.0 | 5.00 | | | | Average | |
| | | 29 | 29 | 1,422.0 | 224.0 | 5.00 | | | | Average | |
| | | 30 | 30 | 1,450.0 | 240.0 | 4.00 | | | | Average | |
| | | 31 | 31 | 1,486.0 | 264.0 | 4.00 | | | | Average | |
| | | 32 | 32 | 1,504.0 | 286.0 | 4.00 | | | | Average | |
| | | 33 | 33 | 1,560.0 | 318.0 | 4.00 | | | | | |
| WB Doyle Drive from Marina to Toll Gate | 9.1 | 1 | 37 | 1,560.0 | 326.0 | 4.00 | | | | Average | |
| | | 2 | 38 | 1,504.0 | 300.0 | 4.00 | | | | Average | |
| | | 3 | 39 | 1,486.0 | 276.0 | 4.00 | | | | Average | |
| | | 4 | 40 | 1,450.0 | 251.0 | 4.00 | | | | Average | |
| | | 5 | 41 | 1,422.0 | 234.0 | 5.00 | | | | Average | |
| | | 6 | 42 | 1,382.0 | 224.0 | 5.00 | | | | Average | Y |
| | | 7 | 43 | 1,166.0 | 178.0 | 10.80 | | | | Average | Y |
| | | 8 | 44 | 1,068.0 | 157.0 | 11.20 | | | | Average | Y |
| | | 9 | 45 | 968.0 | 136.0 | 11.20 | | | | Average | Y |
| | | 10 | 46 | 868.0 | 111.0 | 11.80 | | | | Average | Y |
| | | 11 | 47 | 776.0 | 80.0 | 12.00 | | | | Average | Y |
| | | 12 | 48 | 680.0 | 44.0 | 12.00 | | | | Average | Y |
| | | 13 | 49 | 586.0 | 10.0 | 14.00 | | | | Average | Y |
| | | 14 | 50 | 492.0 | -22.0 | 17.80 | | | | Average | Y |
| | | 15 | 51 | 396.0 | -52.0 | 21.40 | | | | Average | Y |
| | | 15 | 52 | 335.0 | -60.0 | 24.00 | | | | Average | Y |
| | | 17 | 53 | 334.0 | -60.0 | 24.00 | | | | Average | |
| | | 18 | 54 | 294.0 | -60.0 | 25.00 | | | | Average | |
| | | 19 | 55 | 252.0 | -60.0 | 26.00 | | | | Average | |
| | | 20 | 56 | 232.0 | -56.0 | 26.50 | | | | Average | |
| | | 21 | 57 | 196.0 | -50.0 | 27.00 | | | | Average | |
| | | 22 | 58 | 98.0 | -22.0 | 28.00 | | | | Average | |
| | | 23 | 59 | 49.0 | -8.0 | 28.40 | | | | Average | |
| | | 24 | 60 | 50.0 | -8.0 | 28.40 | | | | Average | Y |
| | | 25 | 61 | -98.0 | 30.0 | 33.00 | | | | Average | Y |
| | | 26 | 62 | -194.0 | 58.0 | 37.00 | | | | Average | Y |
| | | 27 | 63 | -292.0 | 86.0 | 41.00 | | | | Average | Y |
| | | 28 | 64 | -380.0 | 110.0 | 45.00 | | | | Average | Y |
| | | 29 | 65 | -406.0 | 118.0 | 45.00 | | | | Average | Y |
| | | 30 | 66 | -407.0 | 118.0 | 45.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 31 | 67 | -487.0 | 138.5 | 49.20 | | | | Average | |
| | | 32 | 68 | -488.0 | 138.5 | 49.20 | | | | Average | Y |
| | | 33 | 69 | -516.0 | 150.0 | 51.00 | | | | Average | Y |
| | | 34 | 70 | -517.0 | 150.0 | 51.00 | | | | Average | |
| | | 35 | 71 | -576.0 | 182.0 | 49.00 | | | | Average | |
| | | 36 | 72 | -610.0 | 204.0 | 50.00 | | | | Average | |
| | | 37 | 73 | -654.0 | 242.0 | 53.00 | | | | Average | |
| | | 38 | 74 | -720.0 | 322.0 | 56.00 | | | | Average | |
| | | 39 | 75 | -966.0 | 620.0 | 53.00 | | | | | |
| SB Richardson fro Doyle to Francisco | 11.0 | 1 | 76 | 868.0 | 102.0 | 11.80 | | | | Average | Y |
| | | 2 | 77 | 1,078.0 | 140.0 | 10.00 | | | | Average | Y |
| | | 3 | 78 | 1,178.0 | 147.0 | 7.00 | | | | Average | Y |
| | | 4 | 79 | 1,233.0 | 132.0 | 5.00 | | | | Average | Y |
| | | 5 | 80 | 1,234.0 | 132.0 | 5.00 | | | | Average | |
| | | 6 | 81 | 1,270.0 | 114.0 | 2.00 | | | | Average | |
| | | 7 | 82 | 1,330.0 | 57.0 | 2.00 | | | | Average | |
| | | 8 | 83 | 1,388.0 | -20.0 | 2.00 | | | | Average | |
| | | 9 | 84 | 1,424.0 | -60.0 | 2.00 | | | | Average | |
| | | 10 | 85 | 1,528.0 | -146.0 | 4.00 | | | | Average | |
| | | 11 | 86 | 1,650.0 | -280.0 | 4.00 | | | | | |
| NB Richardson from Francisco to Doyle | 11.0 | 1 | 87 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 88 | 1,514.0 | -122.0 | 4.00 | | | | Average | |
| | | 3 | 89 | 1,436.0 | -50.0 | 2.00 | | | | Average | |
| | | 4 | 90 | 1,285.0 | 130.0 | 2.00 | | | | Average | |
| | | 5 | 91 | 1,244.0 | 172.0 | 3.00 | | | | Average | |
| | | 6 | 92 | 1,200.0 | 196.0 | 4.00 | | | | Average | |
| | | 7 | 93 | 1,149.0 | 210.0 | 7.00 | | | | Average | |
| | | 8 | 94 | 1,150.0 | 210.0 | 7.00 | | | | Average | Y |
| | | 9 | 95 | 1,068.0 | 210.0 | 10.00 | | | | Average | Y |
| | | 10 | 96 | 968.0 | 172.0 | 11.00 | | | | Average | Y |
| | | 11 | 97 | 830.0 | 106.0 | 12.00 | | | | Average | Y |
| | | 12 | 98 | 776.0 | 80.0 | 12.00 | | | | | |
| SB PP Ramp from WB Doyle Drive | 4.6 | 1 | 99 | -406.0 | 118.0 | 45.60 | | | | Average | |
| | | 2 | 100 | -420.0 | 144.0 | 46.00 | | | | Average | |
| | | 3 | 101 | -456.0 | 170.0 | 41.00 | | | | Average | |
| | | 4 | 102 | -478.0 | 170.0 | 40.00 | | | | Average | |
| | | 5 | 103 | -494.0 | 158.0 | 39.00 | | | | Average | |
| | | 6 | 104 | -505.0 | 120.0 | 39.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 105 | -488.0 | 96.0 | 39.00 | | | | Average | |
| | | 8 | 106 | -450.0 | 70.0 | 38.00 | | | | Average | |
| | | 9 | 107 | -418.0 | 36.0 | 38.00 | | | | Average | |
| | | 10 | 108 | -398.0 | 5.0 | 38.00 | | | | Average | |
| | | 11 | 109 | -390.0 | -26.0 | 37.00 | | | | Average | |
| | | 12 | 110 | -388.0 | -50.0 | 37.00 | | | | Average | |
| | | 13 | 111 | -380.0 | -320.0 | 37.00 | | | | | |
| SB PP from EB Doyle Drive | 4.6 | 1 | 112 | -515.0 | 143.9 | 51.00 | | | | Average | Y |
| | | 2 | 113 | -495.0 | 130.0 | 50.00 | | | | Average | Y |
| | | 3 | 114 | -494.0 | 130.0 | 50.00 | | | | Average | |
| | | 4 | 115 | -476.0 | 112.0 | 49.00 | | | | Average | |
| | | 5 | 116 | -447.0 | 86.0 | 46.00 | | | | Average | |
| | | 6 | 117 | -410.0 | 38.0 | 47.00 | | | | Average | |
| | | 7 | 118 | -400.0 | 30.0 | 37.00 | | | | Average | |
| | | 8 | 119 | -390.0 | -26.0 | 37.00 | | | | Average | |
| | | 9 | 120 | -388.0 | -27.0 | 37.00 | | | | | |
| NB PP to WB Doyle Drive | 4.6 | 1 | 121 | -380.0 | -320.0 | 37.00 | | | | Average | |
| | | 2 | 122 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 3 | 123 | -380.0 | 80.0 | 37.00 | | | | Average | |
| | | 4 | 124 | -384.0 | 98.0 | 38.00 | | | | Average | |
| | | 5 | 125 | -396.0 | 138.0 | 38.00 | | | | Average | |
| | | 6 | 126 | -418.0 | 170.0 | 41.00 | | | | Average | |
| | | 7 | 127 | -450.0 | 196.0 | 44.00 | | | | Average | |
| | | 8 | 128 | -500.0 | 216.0 | 47.50 | | | | Average | |
| | | 9 | 129 | -620.0 | 246.0 | 54.00 | | | | Average | |
| | | 10 | 130 | -656.0 | 262.0 | 57.00 | | | | Average | |
| | | 11 | 131 | -686.0 | 290.0 | 58.00 | | | | Average | |
| | | 12 | 132 | -703.0 | 306.0 | 58.00 | | | | Average | |
| | | 13 | 133 | -720.0 | 322.0 | 56.00 | | | | | |
| NB PP Ramp to EB Doyle Drive | 4.6 | 1 | 134 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 2 | 135 | -364.0 | 34.0 | 38.00 | | | | Average | |
| | | 3 | 136 | -338.0 | 58.0 | 39.00 | | | | Average | |
| | | 4 | 137 | -306.0 | 70.0 | 40.00 | | | | Average | |
| | | 5 | 138 | -292.0 | 76.0 | 41.00 | | | | | |
| Mason Street | 7.3 | 1 | 139 | -188.0 | 150.0 | 3.00 | | | | Average | |
| | | 2 | 140 | -16.0 | 114.0 | 3.00 | | | | Average | |
| | | 3 | 141 | 340.0 | 70.0 | 4.00 | | | | Average | |
| | | 4 | 142 | 370.0 | 70.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 5 | 143 | 416.0 | 92.0 | 4.00 | | | | Average | |
| | | 6 | 144 | 428.0 | 118.0 | 4.00 | | | | Average | |
| | | 7 | 145 | 486.0 | 142.0 | 4.00 | | | | Average | |
| | | 8 | 146 | 938.0 | 214.0 | 4.00 | | | | Average | |
| | | 9 | 147 | 1,486.0 | 310.0 | 4.00 | | | | Average | |
| | | 10 | 148 | 1,584.0 | 340.0 | 4.00 | | | | Average | |
| | | 11 | 149 | 1,680.0 | 344.0 | 4.00 | | | | | |
| Lincoln Blvd. from McDowell to Letterma | 7.3 | 1 | 150 | 36.0 | -70.0 | 33.00 | | | | Average | |
| | | 2 | 151 | 74.0 | -53.0 | 33.00 | | | | Average | |
| | | 3 | 152 | 106.0 | -56.0 | 32.00 | | | | Average | |
| | | 4 | 153 | 180.0 | -86.0 | 30.00 | | | | Average | |
| | | 5 | 154 | 226.0 | -92.0 | 29.00 | | | | Average | |
| | | 6 | 155 | 246.0 | -90.0 | 29.00 | | | | Average | |
| | | 7 | 156 | 268.0 | -90.0 | 29.00 | | | | Average | |
| | | 8 | 157 | 308.0 | -100.0 | 29.00 | | | | Average | |
| | | 9 | 158 | 334.0 | -108.0 | 27.00 | | | | Average | |
| | | 10 | 159 | 368.0 | -105.0 | 26.00 | | | | Average | |
| | | 11 | 160 | 490.0 | -66.0 | 19.00 | | | | Average | |
| | | 12 | 161 | 520.0 | -56.0 | 17.00 | | | | Average | |
| | | 13 | 162 | 568.0 | -30.0 | 16.00 | | | | Average | |
| | | 14 | 163 | 596.0 | -14.0 | 13.00 | | | | Average | |
| | | 15 | 164 | 620.0 | 0.0 | 14.00 | | | | Average | |
| | | 16 | 165 | 636.0 | 6.0 | 12.00 | | | | Average | |
| | | 17 | 166 | 680.0 | -14.0 | 13.00 | | | | Average | |
| | | 18 | 167 | 700.0 | -34.0 | 14.00 | | | | Average | |
| | | 19 | 168 | 718.0 | -44.0 | 14.00 | | | | Average | |
| | | 20 | 169 | 784.0 | -66.0 | 15.00 | | | | Average | |
| | | 21 | 170 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 22 | 190 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 22 | 171 | 1,054.0 | -210.0 | 14.00 | | | | | |
| Gorgas Avenue | 7.3 | 1 | 172 | 1,528.0 | -146.0 | 4.00 | | | | Average | |
| | | 2 | 173 | 1,510.0 | -158.0 | 4.00 | | | | Average | |
| | | 3 | 174 | 1,488.0 | -160.0 | 4.00 | | | | Average | |
| | | 4 | 175 | 1,420.0 | -108.0 | 2.00 | | | | Average | |
| | | 5 | 176 | 1,400.0 | -98.0 | 2.00 | | | | Average | |
| | | 6 | 191 | 1,344.0 | -66.0 | 2.00 | | | | Average | |
| | | 7 | 177 | 1,112.0 | 120.0 | 3.00 | | | | | |
| Halleck Street | 7.3 | 1 | 178 | 910.0 | -136.0 | 14.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 179 | 957.0 | 106.0 | 6.00 | | | | Average | |
| | | 3 | 180 | 938.0 | 214.0 | 4.00 | | | | | |
| Girard Road | 7.3 | 1 | 181 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 2 | 182 | 1,074.0 | -38.0 | 3.00 | | | | Average | |
| | | 3 | 183 | 1,090.0 | -33.0 | 4.00 | | | | Average | |
| | | 4 | 184 | 1,108.0 | -40.0 | 5.00 | | | | | |
| Baker Street | 7.3 | 1 | 185 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 186 | 1,584.0 | 340.0 | 4.00 | | | | | |
| Montgomery Street | 7.3 | 1 | 187 | 510.0 | -300.0 | 15.00 | | | | Average | |
| | | 2 | 188 | 664.0 | -30.0 | 12.00 | | | | Average | |
| | | 3 | 189 | 718.0 | -44.0 | 14.00 | | | | | |

Environmental Science Associates, Inc.
Win Lindeman

29 August 2004
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Base 2010 AM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle Drive to Marina | 1 | 1 | 5763 | 88 | 60 | 88 | 12 | 88 | 60 | 88 | 60 | 88 |
| | 2 | 2 | 5763 | 88 | 60 | 88 | 12 | 88 | 60 | 88 | 60 | 88 |
| | 3 | 3 | 5763 | 88 | 60 | 88 | 12 | 88 | 60 | 88 | 60 | 88 |
| | 4 | 4 | 5763 | 88 | 60 | 88 | 12 | 88 | 60 | 88 | 60 | 88 |
| | 5 | 5 | 5763 | 88 | 60 | 88 | 12 | 88 | 60 | 88 | 60 | 88 |
| | 6 | 6 | 3967 | 88 | 41 | 88 | 8 | 88 | 41 | 88 | 41 | 88 |
| | 7 | 7 | 3967 | 88 | 41 | 88 | 8 | 88 | 41 | 88 | 41 | 88 |
| | 8 | 8 | 3967 | 88 | 41 | 88 | 8 | 88 | 41 | 88 | 41 | 88 |
| | 9 | 9 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 10 | 10 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 11 | 11 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 12 | 12 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 13 | 13 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 14 | 14 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 15 | 15 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 16 | 16 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 17 | 17 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 18 | 18 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 19 | 19 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 20 | 20 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 21 | 21 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 22 | 22 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 23 | 23 | 4868 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 24 | 24 | 1450 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 25 | 25 | 1450 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 26 | 26 | 1450 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 27 | 27 | 1450 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 28 | 28 | 1450 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 29 | 29 | 1450 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 30 | 30 | 1450 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 31 | 31 | 1450 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 32 | 32 | 1450 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 33 | 33 | | | | | | | | | | |
| WB Doyle Drive from Marina to Toll Gate | 1 | 37 | 585 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 38 | 585 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 39 | 585 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 40 | 585 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 41 | 585 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 42 | 585 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 43 | 585 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 44 | 585 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 45 | 585 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 46 | 585 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 47 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 12 | 48 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 13 | 49 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 14 | 50 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 15 | 51 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 15 | 52 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 17 | 53 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 18 | 54 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 19 | 55 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 20 | 56 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 21 | 57 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 22 | 58 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 23 | 59 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 24 | 60 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 25 | 61 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 26 | 62 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 27 | 63 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 28 | 64 | 2156 | 88 | 22 | 88 | 29 | 88 | 13 | 88 | 22 | 88 |
| | 29 | 65 | 1741 | 88 | 18 | 88 | 24 | 88 | 11 | 88 | 18 | 88 |
| | 30 | 66 | 1741 | 88 | 18 | 88 | 24 | 88 | 11 | 88 | 18 | 88 |
| | 31 | 67 | 1741 | 88 | 18 | 88 | 24 | 88 | 11 | 88 | 18 | 88 |
| | 32 | 68 | 1741 | 88 | 18 | 88 | 24 | 88 | 11 | 88 | 18 | 88 |
| | 33 | 69 | 1741 | 88 | 18 | 88 | 24 | 88 | 11 | 88 | 18 | 88 |
| | 34 | 70 | 1741 | 88 | 18 | 88 | 24 | 88 | 11 | 88 | 18 | 88 |
| | 35 | 71 | 1741 | 88 | 18 | 88 | 24 | 88 | 11 | 88 | 18 | 88 |
| | 36 | 72 | 1741 | 88 | 18 | 88 | 24 | 88 | 11 | 88 | 18 | 88 |
| | 37 | 73 | 1741 | 88 | 18 | 88 | 24 | 88 | 11 | 88 | 18 | 88 |
| | 38 | 74 | 3332 | 88 | 35 | 88 | 45 | 88 | 21 | 88 | 35 | 88 |
| | 39 | 75 | | | | | | | | | | |
| SB Richardson fro Doyle to Francisco | 1 | 76 | 2658 | 56 | 27 | 56 | 5 | 56 | 27 | 56 | 27 | 56 |
| | 2 | 77 | 2658 | 56 | 27 | 56 | 5 | 56 | 27 | 56 | 27 | 56 |
| | 3 | 78 | 2658 | 56 | 27 | 56 | 5 | 56 | 27 | 56 | 27 | 56 |
| | 4 | 79 | 2658 | 56 | 27 | 56 | 5 | 56 | 27 | 56 | 27 | 56 |
| | 5 | 80 | 2658 | 56 | 27 | 56 | 5 | 56 | 27 | 56 | 27 | 56 |
| | 6 | 81 | 2658 | 56 | 27 | 56 | 5 | 56 | 27 | 56 | 27 | 56 |
| | 7 | 82 | 2658 | 56 | 27 | 56 | 5 | 56 | 27 | 56 | 27 | 56 |
| | 8 | 83 | 2658 | 56 | 27 | 56 | 5 | 56 | 27 | 56 | 27 | 56 |
| | 9 | 84 | 2658 | 56 | 27 | 56 | 5 | 56 | 27 | 56 | 27 | 56 |
| | 10 | 85 | 2658 | 56 | 27 | 56 | 5 | 56 | 27 | 56 | 27 | 56 |
| | 11 | 86 | | | | | | | | | | |
| NB Richardson from Francisco to Doyle | 1 | 87 | 1392 | 56 | 14 | 56 | 19 | 56 | 9 | 56 | 14 | 56 |
| | 2 | 88 | 1392 | 56 | 14 | 56 | 19 | 56 | 9 | 56 | 14 | 56 |
| | 3 | 89 | 1392 | 56 | 14 | 56 | 19 | 56 | 9 | 56 | 14 | 56 |
| | 4 | 90 | 1392 | 56 | 14 | 56 | 19 | 56 | 9 | 56 | 14 | 56 |
| | 5 | 91 | 1392 | 56 | 14 | 56 | 19 | 56 | 9 | 56 | 14 | 56 |
| | 6 | 92 | 1392 | 56 | 14 | 56 | 19 | 56 | 9 | 56 | 14 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 93 | 1392 | 56 | 14 | 56 | 19 | 56 | 9 | 56 | 14 | 56 |
| | 8 | 94 | 1392 | 56 | 14 | 56 | 19 | 56 | 9 | 56 | 14 | 56 |
| | 9 | 95 | 1392 | 56 | 14 | 56 | 19 | 56 | 9 | 56 | 14 | 56 |
| | 10 | 96 | 1392 | 56 | 14 | 56 | 19 | 56 | 9 | 56 | 14 | 56 |
| | 11 | 97 | 1392 | 56 | 14 | 56 | 19 | 56 | 9 | 56 | 14 | 56 |
| | 12 | 98 | | | | | | | | | | |
| SB PP Ramp from WB Doyle Drive | 1 | 99 | 415 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 2 | 100 | 415 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 3 | 101 | 415 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 4 | 102 | 415 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 5 | 103 | 415 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 6 | 104 | 415 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 7 | 105 | 415 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 8 | 106 | 415 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 9 | 107 | 415 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 10 | 108 | 415 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 11 | 109 | 415 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 12 | 110 | 415 | 56 | 4 | 56 | 6 | 56 | 3 | 56 | 4 | 56 |
| | 13 | 111 | | | | | | | | | | |
| SB PP from EB Doyle Drive | 1 | 112 | 1797 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 2 | 113 | 1797 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 3 | 114 | 1797 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 4 | 115 | 1797 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 5 | 116 | 1797 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 6 | 117 | 1797 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 7 | 118 | 1797 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 8 | 119 | 1797 | 56 | 19 | 56 | 4 | 56 | 19 | 56 | 19 | 56 |
| | 9 | 120 | | | | | | | | | | |
| NB PP to WB Doyle Drive | 1 | 121 | 1620 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 2 | 122 | 1620 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 3 | 123 | 1620 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 4 | 124 | 1620 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 5 | 125 | 1620 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 6 | 126 | 1620 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 127 | 1620 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 8 | 128 | 1620 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 9 | 129 | 1620 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 10 | 130 | 1620 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 11 | 131 | 1620 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 12 | 132 | 1620 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 13 | 133 | | | | | | | | | | |
| NB PP Ramp to EB Doyle Drive | 1 | 134 | 899 | 56 | 7 | 56 | 9 | 56 | 9 | 56 | 7 | 56 |
| | 2 | 135 | 899 | 56 | 7 | 56 | 9 | 56 | 9 | 56 | 7 | 56 |
| | 3 | 136 | 899 | 56 | 7 | 56 | 9 | 56 | 9 | 56 | 7 | 56 |
| | 4 | 137 | 899 | 56 | 7 | 56 | 9 | 56 | 9 | 56 | 7 | 56 |
| | 5 | 138 | | | | | | | | | | |
| Mason Street | 1 | 139 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 140 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 141 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 142 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 143 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 144 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 145 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 146 | 28 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 147 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 148 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 149 | | | | | | | | | | |
| Lincoln Blvd. from McDowell to Letterma | 1 | 150 | 99 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 2 | 151 | 124 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 3 | 152 | 124 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 4 | 153 | 124 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 5 | 154 | 124 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 6 | 155 | 124 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 7 | 156 | 124 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 8 | 157 | 138 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 9 | 158 | 46 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 10 | 159 | 46 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 11 | 160 | 46 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 | 161 | 46 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 13 | 162 | 46 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 14 | 163 | 46 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 15 | 164 | 46 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 16 | 165 | 46 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 17 | 166 | 46 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 18 | 167 | 46 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 19 | 168 | 138 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 20 | 169 | 149 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 21 | 170 | 180 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 22 | 190 | 237 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 22 | 171 | | | | | | | | | | |
| Gorgas Avenue | 1 | 172 | 280 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 173 | 280 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 174 | 280 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 175 | 12 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 176 | 6 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 191 | 67 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 177 | | | | | | | | | | |
| Halleck Street | 1 | 178 | 32 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 179 | 33 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 180 | | | | | | | | | | |
| Girard Road | 1 | 181 | 67 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 182 | 67 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 183 | 67 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 184 | | | | | | | | | | |
| Baker Street | 1 | 185 | 183 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 186 | | | | | | | | | | |
| Montgomery Street | 1 | 187 | 92 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 188 | 92 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 189 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

29 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Base 2010 AM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1 Palace of Fine Arts near Ricardson | 1 | 0 | 1,426.0 | 0.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2 Palace of Fine Arts near Girard | 3 | 0 | 1,446.0 | 202.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3 Building 1187/1188 | 4 | 0 | 1,466.0 | 272.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4 Building 1182 | 5 | 0 | 1,406.0 | 240.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5 Building 1183/1186 | 6 | 0 | 1,326.0 | 230.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6 Building 1184/1185 | 7 | 0 | 1,206.0 | 208.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7 Building 603/Crissy Center | 8 | 0 | 880.0 | 176.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8 PX Building | 9 | 0 | 816.0 | 118.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9 Post Commissary/Sports Basement | 10 | 0 | 552.0 | 16.0 | 4.00 | 1.50 | 69.00 | 71 | 12.0 | 10.0 | Y |
| 10 Battery Blaney | 11 | 0 | 270.0 | -34.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11 Battery Slaughter | 12 | 0 | 208.0 | -40.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12 Battery Sherwood | 13 | 0 | 80.0 | 6.0 | 29.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13 Battery Baldwin | 14 | 0 | 4.0 | 15.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14 Building 644 | 15 | 0 | 42.0 | 66.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15 Building 649 | 16 | 0 | -64.0 | 48.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16 Building 650/Stilwell Hall | 17 | 0 | -140.0 | 52.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17 Armistead Rd. 1253 | 18 | 2 | -502.0 | 258.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18 Armistead Rd. residence | 19 | 2 | -674.0 | 320.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19 Building 969 | 20 | 0 | -604.0 | 748.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20 Building 968 | 21 | 0 | -788.0 | 762.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21 Building 967 | 22 | 0 | -910.0 | 750.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22 Building 966 | 23 | 0 | -920.0 | 754.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 Building 964 | 24 | 1 | -818.0 | 846.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24 Building 963 | 25 | 1 | -840.0 | 804.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25 Building 962 | 26 | 1 | -814.0 | 816.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26 Unknown Building | 27 | 0 | -1,132.0 | 697.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27 Log Cabin | 28 | 0 | -720.0 | 188.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28 Unknown Building | 29 | 0 | -988.0 | 408.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29 Storey Ave. 1298 | 30 | 2 | -682.0 | 136.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30 Storey Ave. 1297 | 31 | 2 | -644.0 | 140.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31 Storey Ave. 1295 | 32 | 2 | -632.0 | 130.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32 Storey Ave. 1294 | 33 | 2 | -614.0 | 132.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33 Storey Ave. 1293 | 34 | 2 | -580.0 | 122.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34 Storey Ave 1291 | 35 | 2 | -552.0 | 112.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35 Storey Ave. 1290 | 36 | 2 | -528.0 | 100.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36 Storey Ave. 1289 | 37 | 2 | -510.0 | 66.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37 Storey Ave. 1263 | 38 | 2 | -420.0 | -114.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38 Building 682/Cross Cultural Center | 39 | 0 | -350.0 | -228.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39 Building 661/Cavalry Stables Pen | 40 | 0 | -256.0 | -26.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40 Building 662/Cavalry Stables | 41 | 0 | -214.0 | -50.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41 Building 663/Cavalry Stables | 42 | 0 | -220.0 | -80.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42 Building 667/Cavalry Stable | 43 | 0 | -80.0 | -78.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43 National Cemetery Grave Site | 44 | 0 | 300.0 | -102.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44 Building 129 | 46 | 1 | 414.0 | -100.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45 Building 122 | 47 | 0 | 460.0 | -90.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46 Building 108 | 48 | 0 | 536.0 | -64.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47 Building 107 | 49 | 0 | 546.0 | -48.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48 Building 104 | 50 | 0 | 566.0 | -72.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49 Building 105 | 51 | 0 | 598.0 | -20.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50 Building 106 | 52 | 0 | 632.0 | 0.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51 Building 211 | 53 | 0 | 744.0 | 28.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52 Building 204 | 54 | 0 | 834.0 | 68.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53 Building 210 | 55 | 0 | 734.0 | -16.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54 Building 201 | 56 | 0 | 940.0 | 106.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55 Building 220 | 57 | 0 | 908.0 | -16.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56 Building 231 | 58 | 0 | 970.0 | 80.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57 Building 228 | 59 | 0 | 958.0 | 60.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 Building 229 | 60 | 0 | 950.0 | 32.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59 Building 223 | 61 | 0 | 950.0 | -14.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60 Building 230 | 62 | 0 | 1,050.0 | 112.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61 Building 1029/Swords to Plowshares | 63 | 100 | 1,020.0 | 16.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62 Building 1030/Swords to Plowshares | 64 | 100 | 1,014.0 | -20.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63 Building 1063 | 65 | 0 | 1,160.0 | 44.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64 Building 1062 | 66 | 0 | 1,178.0 | 0.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65 Building 1060 | 67 | 0 | 1,224.0 | -22.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66 Building 1167 | 68 | 0 | 1,216.0 | 94.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 67 Building 1163 | 69 | 0 | 1,212.0 | 76.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68 Building 1169 | 70 | 0 | 1,280.0 | 50.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69 Building 1162 | 71 | 0 | 1,266.0 | 32.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70 Building 1170 | 72 | 0 | 1,360.0 | -16.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 71 Building 1161 | 73 | 0 | 1,368.0 | -48.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72 Building 1160 | 74 | 0 | 1,398.0 | -50.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73 Building 1152/YMCA | 75 | 0 | 1,420.0 | -76.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74 Building 1151/YMCA Pool | 76 | 0 | 1,476.0 | -114.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75 Building 1004 | 77 | 0 | 1,300.0 | -140.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76 Residence at 3234 Lyon St. | 79 | 8 | 1,560.0 | -150.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

29 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Base 2010 AM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

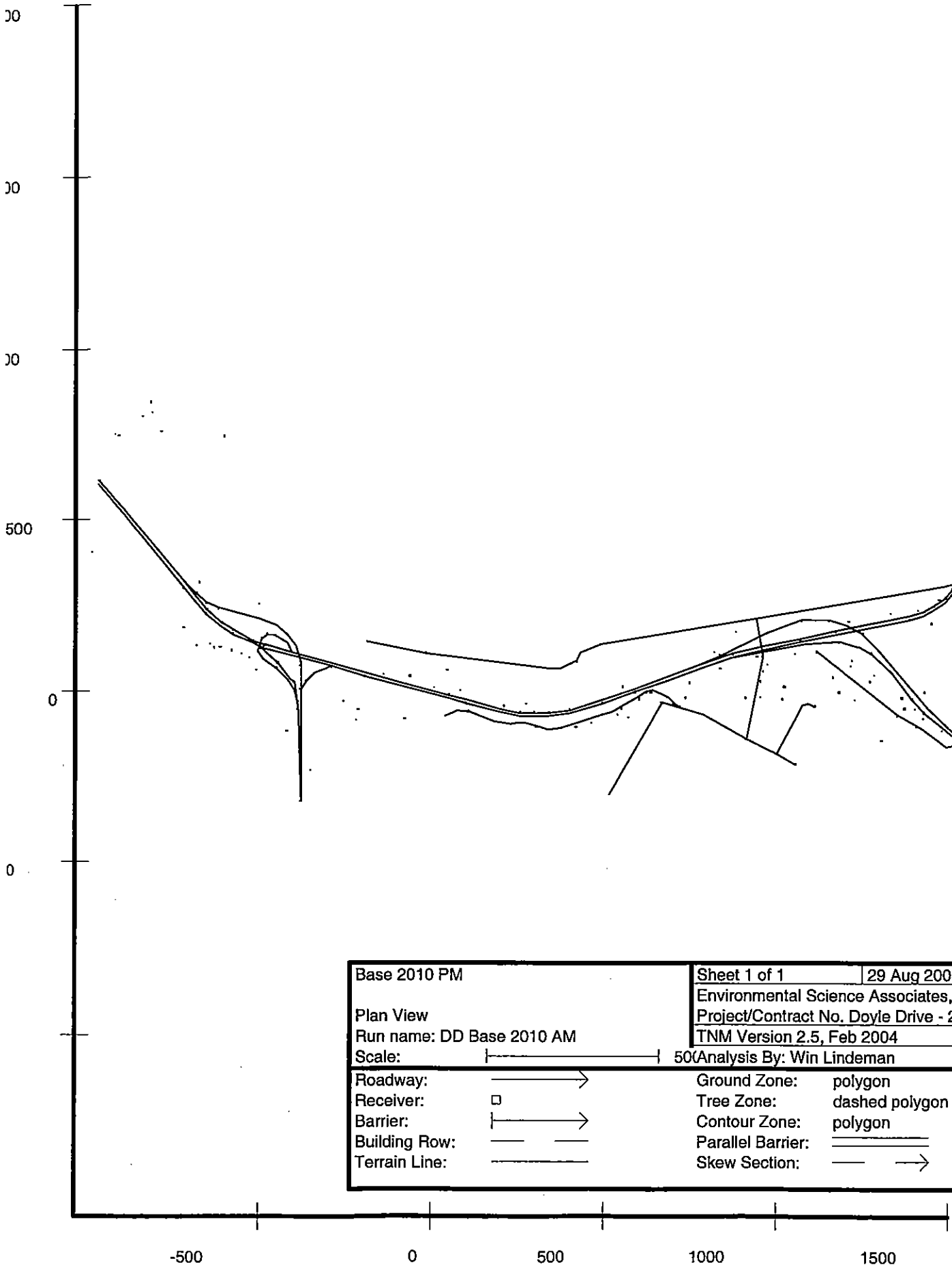
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 Palace of Fine Arts near Ricardson | 1 | 0 | 0.0 | 66.8 | 66 | 66.8 | 12 | Snd Lvl | 66.8 | 0.0 | 10 | -10.0 |
| 2 Palace of Fine Arts near Girard | 3 | 0 | 0.0 | 62.5 | 66 | 62.5 | 12 | — | 62.5 | 0.0 | 10 | -10.0 |
| 3 Building 1187/1188 | 4 | 0 | 81.0 | 64.5 | 71 | -16.5 | 12 | — | 64.5 | 0.0 | 10 | -10.0 |
| 4 Building 1182 | 5 | 0 | 81.0 | 60.6 | 71 | -20.4 | 12 | — | 60.6 | 0.0 | 10 | -10.0 |
| 5 Building 1183/1186 | 6 | 0 | 81.0 | 60.9 | 71 | -20.1 | 12 | — | 60.9 | 0.0 | 10 | -10.0 |
| 6 Building 1184/1185 | 7 | 0 | 81.0 | 66.3 | 71 | -14.7 | 12 | — | 66.3 | 0.0 | 10 | -10.0 |
| 7 Building 603/Crissy Center | 8 | 0 | 72.0 | 65.7 | 71 | -6.3 | 12 | — | 65.7 | 0.0 | 10 | -10.0 |
| 8 PX Building | 9 | 0 | 0.0 | 68.3 | 71 | 68.3 | 12 | — | 68.3 | 0.0 | 10 | -10.0 |
| 9 Post Commissary/Sports Basement | 10 | 0 | 69.0 | 67.1 | 71 | -1.9 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 10 Battery Blaney | 11 | 0 | 68.0 | 73.3 | 66 | 5.3 | 12 | Snd Lvl | 73.3 | 0.0 | 10 | -10.0 |
| 11 Battery Slaughter | 12 | 0 | 68.0 | 78.3 | 66 | 10.3 | 12 | Snd Lvl | 78.3 | 0.0 | 10 | -10.0 |
| 12 Battery Sherwood | 13 | 0 | 68.0 | 75.6 | 66 | 7.6 | 12 | Snd Lvl | 75.6 | 0.0 | 10 | -10.0 |
| 13 Battery Baldwin | 14 | 0 | 68.0 | 65.9 | 66 | -2.1 | 12 | — | 65.9 | 0.0 | 10 | -10.0 |
| 14 Building 644 | 15 | 0 | 0.0 | 63.3 | 71 | 63.3 | 12 | — | 63.3 | 0.0 | 10 | -10.0 |
| 15 Building 649 | 16 | 0 | 0.0 | 60.2 | 66 | 60.2 | 12 | — | 60.2 | 0.0 | 10 | -10.0 |
| 16 Building 650/Stilwell Hall | 17 | 0 | 70.0 | 59.5 | 66 | -10.5 | 12 | — | 59.5 | 0.0 | 10 | -10.0 |
| 17 Armistead Rd. 1253 | 18 | 2 | 66.0 | 62.6 | 66 | -3.4 | 12 | — | 62.6 | 0.0 | 10 | -10.0 |
| 18 Armistead Rd. residence | 19 | 2 | 66.0 | 69.7 | 66 | 3.7 | 12 | Snd Lvl | 69.7 | 0.0 | 10 | -10.0 |
| 19 Building 969 | 20 | 0 | 0.0 | 51.1 | 71 | 51.1 | 12 | — | 51.1 | 0.0 | 10 | -10.0 |
| 20 Building 968 | 21 | 0 | 0.0 | 52.9 | 71 | 52.9 | 12 | — | 52.9 | 0.0 | 10 | -10.0 |
| 21 Building 967 | 22 | 0 | 0.0 | 54.9 | 71 | 54.9 | 12 | — | 54.9 | 0.0 | 10 | -10.0 |
| 22 Building 966 | 23 | 0 | 0.0 | 54.7 | 66 | 54.7 | 12 | — | 54.7 | 0.0 | 10 | -10.0 |
| 23 Building 964 | 24 | 1 | 0.0 | 52.6 | 66 | 52.6 | 12 | — | 52.6 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 Building 963 | 25 | 1 | 0.0 | 53.3 | 66 | 53.3 | 12 | --- | 53.3 | 0.0 | 10 | -10.0 |
| 25 Building 962 | 26 | 1 | 0.0 | 53.3 | 66 | 53.3 | 12 | --- | 53.3 | 0.0 | 10 | -10.0 |
| 26 Unknown Building | 27 | 0 | 0.0 | 55.4 | 71 | 55.4 | 12 | --- | 55.4 | 0.0 | 10 | -10.0 |
| 27 Log Cabin | 28 | 0 | 63.0 | 67.4 | 66 | 4.4 | 12 | Snd Lvl | 67.4 | 0.0 | 10 | -10.0 |
| 28 Unknown Building | 29 | 0 | 0.0 | 60.8 | 71 | 60.8 | 12 | --- | 60.8 | 0.0 | 10 | -10.0 |
| 29 Storey Ave. 1298 | 30 | 2 | 66.5 | 66.0 | 66 | -0.5 | 12 | Snd Lvl | 66.0 | 0.0 | 10 | -10.0 |
| 30 Storey Ave. 1297 | 31 | 2 | 66.5 | 69.4 | 66 | 2.9 | 12 | Snd Lvl | 69.4 | 0.0 | 10 | -10.0 |
| 31 Storey Ave. 1295 | 32 | 2 | 66.5 | 69.2 | 66 | 2.7 | 12 | Snd Lvl | 69.2 | 0.0 | 10 | -10.0 |
| 32 Storey Ave. 1294 | 33 | 2 | 66.5 | 71.0 | 66 | 4.5 | 12 | Snd Lvl | 71.0 | 0.0 | 10 | -10.0 |
| 33 Storey Ave. 1293 | 34 | 2 | 66.5 | 72.4 | 66 | 5.9 | 12 | Snd Lvl | 72.4 | 0.0 | 10 | -10.0 |
| 34 Storey Ave 1291 | 35 | 2 | 66.5 | 72.6 | 66 | 6.1 | 12 | Snd Lvl | 72.6 | 0.0 | 10 | -10.0 |
| 35 Storey Ave. 1290 | 36 | 2 | 66.5 | 72.1 | 66 | 5.6 | 12 | Snd Lvl | 72.1 | 0.0 | 10 | -10.0 |
| 36 Storey Ave. 1289 | 37 | 2 | 66.5 | 69.4 | 66 | 2.9 | 12 | Snd Lvl | 69.4 | 0.0 | 10 | -10.0 |
| 37 Storey Ave. 1263 | 38 | 2 | 0.0 | 65.6 | 66 | 65.6 | 12 | --- | 65.6 | 0.0 | 10 | -10.0 |
| 38 Building 682/Cross Cultural Center | 39 | 0 | 65.5 | 62.2 | 66 | -3.3 | 12 | --- | 62.2 | 0.0 | 10 | -10.0 |
| 39 Building 661/Cavalry Stables Pen | 40 | 0 | 64.0 | 65.8 | 71 | 1.8 | 12 | --- | 65.8 | 0.0 | 10 | -10.0 |
| 40 Building 662/Cavalry Stables | 41 | 0 | 64.0 | 65.7 | 71 | 1.7 | 12 | --- | 65.7 | 0.0 | 10 | -10.0 |
| 41 Building 663/Cavalry Stables | 42 | 0 | 64.0 | 64.6 | 71 | 0.6 | 12 | --- | 64.6 | 0.0 | 10 | -10.0 |
| 42 Building 667/Cavalry Stable | 43 | 0 | 64.0 | 66.1 | 71 | 2.1 | 12 | --- | 66.1 | 0.0 | 10 | -10.0 |
| 43 National Cemetery Grave Site | 44 | 0 | 69.0 | 73.9 | 66 | 4.9 | 12 | Snd Lvl | 73.9 | 0.0 | 10 | -10.0 |
| 44 Building 129 | 46 | 1 | 0.0 | 62.3 | 66 | 62.3 | 12 | --- | 62.3 | 0.0 | 10 | -10.0 |
| 45 Building 122 | 47 | 0 | 0.0 | 72.2 | 71 | 72.2 | 12 | Snd Lvl | 72.2 | 0.0 | 10 | -10.0 |
| 46 Building 108 | 48 | 0 | 0.0 | 72.3 | 71 | 72.3 | 12 | Snd Lvl | 72.3 | 0.0 | 10 | -10.0 |
| 47 Building 107 | 49 | 0 | 0.0 | 74.1 | 71 | 74.1 | 12 | Snd Lvl | 74.1 | 0.0 | 10 | -10.0 |
| 48 Building 104 | 50 | 0 | 74.0 | 69.9 | 71 | -4.1 | 12 | --- | 69.9 | 0.0 | 10 | -10.0 |
| 49 Building 105 | 51 | 0 | 74.0 | 75.9 | 71 | 1.9 | 12 | Snd Lvl | 75.9 | 0.0 | 10 | -10.0 |
| 50 Building 106 | 52 | 0 | 76.0 | 77.4 | 71 | 1.4 | 12 | Snd Lvl | 77.4 | 0.0 | 10 | -10.0 |
| 51 Building 211 | 53 | 0 | 0.0 | 75.1 | 71 | 75.1 | 12 | Snd Lvl | 75.1 | 0.0 | 10 | -10.0 |
| 52 Building 204 | 54 | 0 | 0.0 | 67.7 | 71 | 67.7 | 12 | --- | 67.7 | 0.0 | 10 | -10.0 |
| 53 Building 210 | 55 | 0 | 0.0 | 70.8 | 71 | 70.8 | 12 | --- | 70.8 | 0.0 | 10 | -10.0 |
| 54 Building 201 | 56 | 0 | 0.0 | 64.6 | 71 | 64.6 | 12 | --- | 64.6 | 0.0 | 10 | -10.0 |
| 55 Building 220 | 57 | 0 | 0.0 | 63.9 | 71 | 63.9 | 12 | --- | 63.9 | 0.0 | 10 | -10.0 |
| 56 Building 231 | 58 | 0 | 0.0 | 65.4 | 71 | 65.4 | 12 | --- | 65.4 | 0.0 | 10 | -10.0 |
| 57 Building 228 | 59 | 0 | 0.0 | 64.4 | 71 | 64.4 | 12 | --- | 64.4 | 0.0 | 10 | -10.0 |
| 58 Building 229 | 60 | 0 | 0.0 | 63.2 | 71 | 63.2 | 12 | --- | 63.2 | 0.0 | 10 | -10.0 |
| 59 Building 223 | 61 | 0 | 0.0 | 59.0 | 71 | 59.0 | 12 | --- | 59.0 | 0.0 | 10 | -10.0 |
| 60 Building 230 | 62 | 0 | 0.0 | 65.5 | 71 | 65.5 | 12 | --- | 65.5 | 0.0 | 10 | -10.0 |
| 61 Building 1029/Swords to Plowshares | 63 | 100 | 57.0 | 61.9 | 66 | 4.9 | 12 | --- | 61.9 | 0.0 | 10 | -10.0 |
| 62 Building 1030/Swords to Plowshares | 64 | 100 | 57.0 | 60.0 | 66 | 3.0 | 12 | --- | 60.0 | 0.0 | 10 | -10.0 |
| 63 Building 1063 | 65 | 0 | 68.5 | 59.8 | 71 | -8.7 | 12 | --- | 59.8 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 Building 1062 | 66 | 0 | 68.5 | 57.8 | 71 | -10.7 | 12 | — | 57.8 | 0.0 | 10 | -10.0 |
| 65 Building 1060 | 67 | 0 | 68.5 | 56.9 | 71 | -11.6 | 12 | — | 56.9 | 0.0 | 10 | -10.0 |
| 66 Building 1167 | 68 | 0 | 68.5 | 63.7 | 71 | -4.8 | 12 | — | 63.7 | 0.0 | 10 | -10.0 |
| 67 Building 1163 | 69 | 0 | 0.0 | 62.0 | 71 | 62.0 | 12 | — | 62.0 | 0.0 | 10 | -10.0 |
| 68 Building 1169 | 70 | 0 | 68.0 | 65.0 | 71 | -3.0 | 12 | — | 65.0 | 0.0 | 10 | -10.0 |
| 69 Building 1162 | 71 | 0 | 0.0 | 61.5 | 71 | 61.5 | 12 | — | 61.5 | 0.0 | 10 | -10.0 |
| 70 Building 1170 | 72 | 0 | 0.0 | 68.3 | 71 | 68.3 | 12 | — | 68.3 | 0.0 | 10 | -10.0 |
| 71 Building 1161 | 73 | 0 | 0.0 | 65.5 | 71 | 65.5 | 12 | — | 65.5 | 0.0 | 10 | -10.0 |
| 72 Building 1160 | 74 | 0 | 0.0 | 70.2 | 71 | 70.2 | 12 | — | 70.2 | 0.0 | 10 | -10.0 |
| 73 Building 1152/YMCA | 75 | 0 | 0.0 | 69.4 | 66 | 69.4 | 12 | Snd Lvl | 69.4 | 0.0 | 10 | -10.0 |
| 74 Building 1151/YMCA Pool | 76 | 0 | 0.0 | 72.2 | 66 | 72.2 | 12 | Snd Lvl | 72.2 | 0.0 | 10 | -10.0 |
| 75 Building 1004 | 77 | 0 | 0.0 | 54.2 | 71 | 54.2 | 12 | — | 54.2 | 0.0 | 10 | -10.0 |
| 76 Residence at 3234 Lyon St. | 79 | 8 | 76.5 | 70.9 | 66 | -5.6 | 12 | Snd Lvl | 70.9 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 234 | 0.0 | 0.0 | 0.0 |
| All Impacted | 26 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |




| | | |
|---|---|---|
| Base 2010 PM | Sheet 1 of 1 | 29 Aug 2004 |
| | Environmental Science Associates, Inc. | |
| Plan View | Project/Contract No. Doyle Drive - 204235 | |
| Run name: DD Base 2010 AM | TNM Version 2.5, Feb 2004 | |
| Scale: 50 | Analysis By: Win Lindeman | |

| | | | |
|---|---|---|---|
| Roadway: | | Ground Zone: | polygon |
| Receiver: | | Tree Zone: | dashed polygon |
| Barrier: | | Contour Zone: | polygon |
| Building Row: | | Parallel Barrier: | |
| Terrain Line: | | Skew Section: | |

Environmental Science Associates, Inc.
Win Lindeman

29 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Base 2010 PM

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

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle Drive to Marina | 9.1 | 1 | 1 | -966.0 | 608.0 | 53.00 | | | | Average | |
| | | 2 | 2 | -720.0 | 302.0 | 56.00 | | | | Average | |
| | | 3 | 3 | -654.0 | 228.0 | 53.00 | | | | Average | |
| | | 4 | 4 | -610.0 | 192.0 | 50.00 | | | | Average | |
| | | 5 | 5 | -576.0 | 170.0 | 46.00 | | | | Average | |
| | | 6 | 6 | -516.0 | 144.0 | 49.00 | | | | Average | Y |
| | | 7 | 7 | -488.0 | 130.0 | 45.00 | | | | Average | Y |
| | | 8 | 8 | -380.0 | 100.0 | 41.00 | | | | Average | Y |
| | | 9 | 9 | -292.0 | 76.0 | 41.00 | | | | Average | Y |
| | | 10 | 10 | -194.0 | 47.0 | 37.00 | | | | Average | Y |
| | | 11 | 11 | 49.0 | -18.0 | 29.00 | | | | Average | Y |
| | | 12 | 12 | 50.0 | -18.0 | 29.00 | | | | Average | |
| | | 13 | 13 | 98.0 | -32.0 | 28.00 | | | | Average | |
| | | 14 | 14 | 196.0 | -58.0 | 27.00 | | | | Average | |
| | | 15 | 15 | 232.0 | -66.0 | 26.50 | | | | Average | |
| | | 16 | 16 | 252.0 | -70.0 | 26.00 | | | | Average | |
| | | 17 | 17 | 333.0 | -70.0 | 24.00 | | | | Average | |
| | | 18 | 18 | 334.0 | -70.0 | 24.00 | | | | Average | Y |
| | | 19 | 19 | 396.0 | -60.0 | 21.40 | | | | Average | Y |
| | | 20 | 20 | 492.0 | -32.0 | 17.80 | | | | Average | Y |
| | | 21 | 21 | 586.0 | 0.0 | 14.00 | | | | Average | Y |
| | | 22 | 22 | 680.0 | 35.0 | 12.00 | | | | Average | Y |
| | | 23 | 23 | 776.0 | 70.0 | 12.00 | | | | Average | Y |
| | | 24 | 24 | 868.0 | 102.0 | 11.80 | | | | Average | Y |
| | | 25 | 25 | 968.0 | 126.0 | 11.20 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 26 | 26 | 1,068.0 | 150.0 | 11.20 | | | | Average | Y |
| | | 27 | 27 | 1,381.0 | 213.0 | 5.00 | | | | Average | Y |
| | | 28 | 28 | 1,382.0 | 213.0 | 5.00 | | | | Average | |
| | | 29 | 29 | 1,422.0 | 224.0 | 5.00 | | | | Average | |
| | | 30 | 30 | 1,450.0 | 240.0 | 4.00 | | | | Average | |
| | | 31 | 31 | 1,486.0 | 264.0 | 4.00 | | | | Average | |
| | | 32 | 32 | 1,504.0 | 286.0 | 4.00 | | | | Average | |
| | | 33 | 33 | 1,560.0 | 318.0 | 4.00 | | | | | |
| WB Doyle Drive from Marina to Toll Gate | 9.1 | 1 | 37 | 1,560.0 | 326.0 | 4.00 | | | | Average | |
| | | 2 | 38 | 1,504.0 | 300.0 | 4.00 | | | | Average | |
| | | 3 | 39 | 1,486.0 | 276.0 | 4.00 | | | | Average | |
| | | 4 | 40 | 1,450.0 | 251.0 | 4.00 | | | | Average | |
| | | 5 | 41 | 1,422.0 | 234.0 | 5.00 | | | | Average | |
| | | 6 | 42 | 1,382.0 | 224.0 | 5.00 | | | | Average | Y |
| | | 7 | 43 | 1,166.0 | 178.0 | 10.80 | | | | Average | Y |
| | | 8 | 44 | 1,068.0 | 157.0 | 11.20 | | | | Average | Y |
| | | 9 | 45 | 968.0 | 136.0 | 11.20 | | | | Average | Y |
| | | 10 | 46 | 868.0 | 111.0 | 11.80 | | | | Average | Y |
| | | 11 | 47 | 776.0 | 80.0 | 12.00 | | | | Average | Y |
| | | 12 | 48 | 680.0 | 44.0 | 12.00 | | | | Average | Y |
| | | 13 | 49 | 586.0 | 10.0 | 14.00 | | | | Average | Y |
| | | 14 | 50 | 492.0 | -22.0 | 17.80 | | | | Average | Y |
| | | 15 | 51 | 396.0 | -52.0 | 21.40 | | | | Average | Y |
| | | 15 | 52 | 335.0 | -60.0 | 24.00 | | | | Average | Y |
| | | 17 | 53 | 334.0 | -60.0 | 24.00 | | | | Average | |
| | | 18 | 54 | 294.0 | -60.0 | 25.00 | | | | Average | |
| | | 19 | 55 | 252.0 | -60.0 | 26.00 | | | | Average | |
| | | 20 | 56 | 232.0 | -56.0 | 26.50 | | | | Average | |
| | | 21 | 57 | 196.0 | -50.0 | 27.00 | | | | Average | |
| | | 22 | 58 | 98.0 | -22.0 | 28.00 | | | | Average | |
| | | 23 | 59 | 49.0 | -8.0 | 28.40 | | | | Average | |
| | | 24 | 60 | 50.0 | -8.0 | 28.40 | | | | Average | Y |
| | | 25 | 61 | -98.0 | 30.0 | 33.00 | | | | Average | Y |
| | | 26 | 62 | -194.0 | 58.0 | 37.00 | | | | Average | Y |
| | | 27 | 63 | -292.0 | 86.0 | 41.00 | | | | Average | Y |
| | | 28 | 64 | -380.0 | 110.0 | 45.00 | | | | Average | Y |
| | | 29 | 65 | -406.0 | 118.0 | 45.00 | | | | Average | Y |
| | | 30 | 66 | -407.0 | 118.0 | 45.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 31 | 67 | -487.0 | 138.5 | 49.20 | | | | Average | |
| | | 32 | 68 | -488.0 | 138.5 | 49.20 | | | | Average | Y |
| | | 33 | 69 | -516.0 | 150.0 | 51.00 | | | | Average | Y |
| | | 34 | 70 | -517.0 | 150.0 | 51.00 | | | | Average | |
| | | 35 | 71 | -576.0 | 182.0 | 49.00 | | | | Average | |
| | | 36 | 72 | -610.0 | 204.0 | 50.00 | | | | Average | |
| | | 37 | 73 | -654.0 | 242.0 | 53.00 | | | | Average | |
| | | 38 | 74 | -720.0 | 322.0 | 56.00 | | | | Average | |
| | | 39 | 75 | -966.0 | 620.0 | 53.00 | | | | | |
| SB Richardson from Doyle to Francisco | 11.0 | 1 | 76 | 868.0 | 102.0 | 11.80 | | | | Average | Y |
| | | 2 | 77 | 1,078.0 | 140.0 | 10.00 | | | | Average | Y |
| | | 3 | 78 | 1,178.0 | 147.0 | 7.00 | | | | Average | Y |
| | | 4 | 79 | 1,233.0 | 132.0 | 5.00 | | | | Average | Y |
| | | 5 | 80 | 1,234.0 | 132.0 | 5.00 | | | | Average | |
| | | 6 | 81 | 1,270.0 | 114.0 | 2.00 | | | | Average | |
| | | 7 | 82 | 1,330.0 | 57.0 | 2.00 | | | | Average | |
| | | 8 | 83 | 1,388.0 | -20.0 | 2.00 | | | | Average | |
| | | 9 | 84 | 1,424.0 | -60.0 | 2.00 | | | | Average | |
| | | 10 | 85 | 1,528.0 | -146.0 | 4.00 | | | | Average | |
| | | 11 | 86 | 1,650.0 | -280.0 | 4.00 | | | | | |
| NB Richardson from Francisco to Doyle | 11.0 | 1 | 87 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 88 | 1,514.0 | -122.0 | 4.00 | | | | Average | |
| | | 3 | 89 | 1,436.0 | -50.0 | 2.00 | | | | Average | |
| | | 4 | 90 | 1,285.0 | 130.0 | 2.00 | | | | Average | |
| | | 5 | 91 | 1,244.0 | 172.0 | 3.00 | | | | Average | |
| | | 6 | 92 | 1,200.0 | 196.0 | 4.00 | | | | Average | |
| | | 7 | 93 | 1,149.0 | 210.0 | 7.00 | | | | Average | |
| | | 8 | 94 | 1,150.0 | 210.0 | 7.00 | | | | Average | Y |
| | | 9 | 95 | 1,068.0 | 210.0 | 10.00 | | | | Average | Y |
| | | 10 | 96 | 968.0 | 172.0 | 11.00 | | | | Average | Y |
| | | 11 | 97 | 830.0 | 106.0 | 12.00 | | | | Average | Y |
| | | 12 | 98 | 776.0 | 80.0 | 12.00 | | | | | |
| SB PP Ramp from WB Doyle Drive | 4.6 | 1 | 99 | -406.0 | 118.0 | 45.60 | | | | Average | |
| | | 2 | 100 | -420.0 | 144.0 | 46.00 | | | | Average | |
| | | 3 | 101 | -456.0 | 170.0 | 41.00 | | | | Average | |
| | | 4 | 102 | -478.0 | 170.0 | 40.00 | | | | Average | |
| | | 5 | 103 | -494.0 | 158.0 | 39.00 | | | | Average | |
| | | 6 | 104 | -505.0 | 120.0 | 39.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 105 | -488.0 | 96.0 | 39.00 | | | | Average | |
| | | 8 | 106 | -450.0 | 70.0 | 38.00 | | | | Average | |
| | | 9 | 107 | -418.0 | 36.0 | 38.00 | | | | Average | |
| | | 10 | 108 | -398.0 | 5.0 | 38.00 | | | | Average | |
| | | 11 | 109 | -390.0 | -26.0 | 37.00 | | | | Average | |
| | | 12 | 110 | -388.0 | -50.0 | 37.00 | | | | Average | |
| | | 13 | 111 | -380.0 | -320.0 | 37.00 | | | | | |
| SB PP from EB Doyle Drive | 4.6 | 1 | 112 | -515.0 | 143.9 | 51.00 | | | | Average | Y |
| | | 2 | 113 | -495.0 | 130.0 | 50.00 | | | | Average | Y |
| | | 3 | 114 | -494.0 | 130.0 | 50.00 | | | | Average | |
| | | 4 | 115 | -476.0 | 112.0 | 49.00 | | | | Average | |
| | | 5 | 116 | -447.0 | 86.0 | 46.00 | | | | Average | |
| | | 6 | 117 | -410.0 | 38.0 | 47.00 | | | | Average | |
| | | 7 | 118 | -400.0 | 30.0 | 37.00 | | | | Average | |
| | | 8 | 119 | -390.0 | -26.0 | 37.00 | | | | Average | |
| | | 9 | 120 | -388.0 | -27.0 | 37.00 | | | | | |
| NB PP to WB Doyle Drive | 4.6 | 1 | 121 | -380.0 | -320.0 | 37.00 | | | | Average | |
| | | 2 | 122 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 3 | 123 | -380.0 | 80.0 | 37.00 | | | | Average | |
| | | 4 | 124 | -384.0 | 98.0 | 38.00 | | | | Average | |
| | | 5 | 125 | -396.0 | 138.0 | 38.00 | | | | Average | |
| | | 6 | 126 | -418.0 | 170.0 | 41.00 | | | | Average | |
| | | 7 | 127 | -450.0 | 196.0 | 44.00 | | | | Average | |
| | | 8 | 128 | -500.0 | 216.0 | 47.50 | | | | Average | |
| | | 9 | 129 | -620.0 | 246.0 | 54.00 | | | | Average | |
| | | 10 | 130 | -656.0 | 262.0 | 57.00 | | | | Average | |
| | | 11 | 131 | -686.0 | 290.0 | 58.00 | | | | Average | |
| | | 12 | 132 | -703.0 | 306.0 | 58.00 | | | | Average | |
| | | 13 | 133 | -720.0 | 322.0 | 56.00 | | | | | |
| NB PP Ramp to EB Doyle Drive | 4.6 | 1 | 134 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 2 | 135 | -364.0 | 34.0 | 38.00 | | | | Average | |
| | | 3 | 136 | -338.0 | 58.0 | 39.00 | | | | Average | |
| | | 4 | 137 | -306.0 | 70.0 | 40.00 | | | | Average | |
| | | 5 | 138 | -292.0 | 76.0 | 41.00 | | | | | |
| Mason Street | 7.3 | 1 | 139 | -188.0 | 150.0 | 3.00 | | | | Average | |
| | | 2 | 140 | -16.0 | 114.0 | 3.00 | | | | Average | |
| | | 3 | 141 | 340.0 | 70.0 | 4.00 | | | | Average | |
| | | 4 | 142 | 370.0 | 70.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 5 | 143 | 416.0 | 92.0 | 4.00 | | | | Average | |
| | | 6 | 144 | 428.0 | 118.0 | 4.00 | | | | Average | |
| | | 7 | 145 | 486.0 | 142.0 | 4.00 | | | | Average | |
| | | 8 | 146 | 938.0 | 214.0 | 4.00 | | | | Average | |
| | | 9 | 147 | 1,486.0 | 310.0 | 4.00 | | | | Average | |
| | | 10 | 148 | 1,584.0 | 340.0 | 4.00 | | | | Average | |
| | | 11 | 149 | 1,680.0 | 344.0 | 4.00 | | | | | |
| Lincoln Blvd. from McDowell to Letterma | 7.3 | 1 | 150 | 36.0 | -70.0 | 33.00 | | | | Average | |
| | | 2 | 151 | 74.0 | -53.0 | 33.00 | | | | Average | |
| | | 3 | 152 | 106.0 | -56.0 | 32.00 | | | | Average | |
| | | 4 | 153 | 180.0 | -86.0 | 30.00 | | | | Average | |
| | | 5 | 154 | 226.0 | -92.0 | 29.00 | | | | Average | |
| | | 6 | 155 | 246.0 | -90.0 | 29.00 | | | | Average | |
| | | 7 | 156 | 268.0 | -90.0 | 29.00 | | | | Average | |
| | | 8 | 157 | 308.0 | -100.0 | 29.00 | | | | Average | |
| | | 9 | 158 | 334.0 | -108.0 | 27.00 | | | | Average | |
| | | 10 | 159 | 368.0 | -105.0 | 26.00 | | | | Average | |
| | | 11 | 160 | 490.0 | -66.0 | 19.00 | | | | Average | |
| | | 12 | 161 | 520.0 | -56.0 | 17.00 | | | | Average | |
| | | 13 | 162 | 568.0 | -30.0 | 16.00 | | | | Average | |
| | | 14 | 163 | 596.0 | -14.0 | 13.00 | | | | Average | |
| | | 15 | 164 | 620.0 | 0.0 | 14.00 | | | | Average | |
| | | 16 | 165 | 636.0 | 6.0 | 12.00 | | | | Average | |
| | | 17 | 166 | 680.0 | -14.0 | 13.00 | | | | Average | |
| | | 18 | 167 | 700.0 | -34.0 | 14.00 | | | | Average | |
| | | 19 | 168 | 718.0 | -44.0 | 14.00 | | | | Average | |
| | | 20 | 169 | 784.0 | -66.0 | 15.00 | | | | Average | |
| | | 21 | 170 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 22 | 190 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 22 | 171 | 1,054.0 | -210.0 | 14.00 | | | | | |
| Gorgas Avenue | 7.3 | 1 | 172 | 1,528.0 | -146.0 | 4.00 | | | | Average | |
| | | 2 | 173 | 1,510.0 | -158.0 | 4.00 | | | | Average | |
| | | 3 | 174 | 1,488.0 | -160.0 | 4.00 | | | | Average | |
| | | 4 | 175 | 1,420.0 | -108.0 | 2.00 | | | | Average | |
| | | 5 | 176 | 1,400.0 | -98.0 | 2.00 | | | | Average | |
| | | 6 | 191 | 1,344.0 | -66.0 | 2.00 | | | | Average | |
| | | 7 | 177 | 1,112.0 | 120.0 | 3.00 | | | | | |
| Halleck Street | 7.3 | 1 | 178 | 910.0 | -136.0 | 14.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 179 | 957.0 | 106.0 | 6.00 | | | | Average | |
| | | 3 | 180 | 938.0 | 214.0 | 4.00 | | | | | |
| Girard Road | 7.3 | 1 | 181 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 2 | 182 | 1,074.0 | -38.0 | 3.00 | | | | Average | |
| | | 3 | 183 | 1,090.0 | -33.0 | 4.00 | | | | Average | |
| | | 4 | 184 | 1,108.0 | -40.0 | 5.00 | | | | | |
| Baker Street | 7.3 | 1 | 185 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 186 | 1,584.0 | 340.0 | 4.00 | | | | | |
| Montgomery Street | 7.3 | 1 | 187 | 510.0 | -300.0 | 15.00 | | | | Average | |
| | | 2 | 188 | 664.0 | -30.0 | 12.00 | | | | Average | |
| | | 3 | 189 | 718.0 | -44.0 | 14.00 | | | | | |

Environmental Science Associates, Inc. 29 August 2004
Win Lindeman TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Base 2010 PM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle Drive to Marina | 1 | 1 | 3801 | 88 | 12 | 88 | 51 | 88 | 43 | 88 | 12 | 88 |
| | 2 | 2 | 3801 | 88 | 12 | 88 | 51 | 88 | 43 | 88 | 12 | 88 |
| | 3 | 3 | 3801 | 88 | 12 | 88 | 51 | 88 | 43 | 88 | 12 | 88 |
| | 4 | 4 | 3801 | 88 | 12 | 88 | 51 | 88 | 43 | 88 | 12 | 88 |
| | 5 | 5 | 3801 | 88 | 12 | 88 | 51 | 88 | 43 | 88 | 12 | 88 |
| | 6 | 6 | 2248 | 88 | 7 | 88 | 30 | 88 | 26 | 88 | 7 | 88 |
| | 7 | 7 | 2248 | 88 | 7 | 88 | 30 | 88 | 26 | 88 | 7 | 88 |
| | 8 | 8 | 2248 | 88 | 7 | 88 | 30 | 88 | 26 | 88 | 7 | 88 |
| | 9 | 9 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 10 | 10 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 11 | 11 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 12 | 12 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 13 | 13 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 14 | 14 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 15 | 15 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 16 | 16 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 17 | 17 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 18 | 18 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 19 | 19 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 20 | 20 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 21 | 21 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 22 | 22 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 23 | 23 | 2978 | 88 | 9 | 88 | 40 | 88 | 34 | 88 | 9 | 88 |
| | 24 | 24 | 964 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 25 | 25 | 964 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 26 | 26 | 964 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 27 | 27 | 964 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 28 | 28 | 964 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 29 | 29 | 964 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 30 | 30 | 964 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 31 | 31 | 964 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 32 | 32 | 964 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 33 | 33 | | | | | | | | | | |
| WB Doyle Drive from Marina to Toll Gate | 1 | 37 | 1846 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 38 | 1846 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 39 | 1846 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 40 | 1846 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 41 | 1846 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 42 | 1846 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 43 | 1846 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 44 | 1846 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 45 | 1846 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 46 | 1846 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 47 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 12 | 48 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 13 | 49 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 14 | 50 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 15 | 51 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 15 | 52 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 17 | 53 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 18 | 54 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 19 | 55 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 20 | 56 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 21 | 57 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 22 | 58 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 23 | 59 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 24 | 60 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 25 | 61 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 26 | 62 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 27 | 63 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 28 | 64 | 4540 | 88 | 0 | 0 | 9 | 88 | 128 | 88 | 47 | 88 |
| | 29 | 65 | 3667 | 88 | 0 | 0 | 8 | 88 | 103 | 88 | 38 | 88 |
| | 30 | 66 | 3667 | 88 | 0 | 0 | 8 | 88 | 103 | 88 | 38 | 88 |
| | 31 | 67 | 3667 | 88 | 0 | 0 | 8 | 88 | 103 | 88 | 38 | 88 |
| | 32 | 68 | 3667 | 88 | 0 | 0 | 8 | 88 | 103 | 88 | 38 | 88 |
| | 33 | 69 | 3667 | 88 | 0 | 0 | 8 | 88 | 103 | 88 | 38 | 88 |
| | 34 | 70 | 3667 | 88 | 0 | 0 | 8 | 88 | 103 | 88 | 38 | 88 |
| | 35 | 71 | 3667 | 88 | 0 | 0 | 8 | 88 | 103 | 88 | 38 | 88 |
| | 36 | 72 | 3667 | 88 | 0 | 0 | 8 | 88 | 103 | 88 | 38 | 88 |
| | 37 | 73 | 3667 | 88 | 0 | 0 | 8 | 88 | 103 | 88 | 38 | 88 |
| | 38 | 74 | 5483 | 88 | 0 | 0 | 11 | 88 | 154 | 88 | 57 | 88 |
| | 39 | 75 | | | | | | | | | | |
| SB Richardson from Doyle to Francisco | 1 | 76 | 1770 | 56 | 5 | 56 | 24 | 56 | 20 | 56 | 5 | 56 |
| | 2 | 77 | 1770 | 56 | 5 | 56 | 24 | 56 | 20 | 56 | 5 | 56 |
| | 3 | 78 | 1770 | 56 | 5 | 56 | 24 | 56 | 20 | 56 | 5 | 56 |
| | 4 | 79 | 1770 | 56 | 5 | 56 | 24 | 56 | 20 | 56 | 5 | 56 |
| | 5 | 80 | 1770 | 56 | 5 | 56 | 24 | 56 | 20 | 56 | 5 | 56 |
| | 6 | 81 | 1770 | 56 | 5 | 56 | 24 | 56 | 20 | 56 | 5 | 56 |
| | 7 | 82 | 1770 | 56 | 5 | 56 | 24 | 56 | 20 | 56 | 5 | 56 |
| | 8 | 83 | 1770 | 56 | 5 | 56 | 24 | 56 | 20 | 56 | 5 | 56 |
| | 9 | 84 | 1770 | 56 | 5 | 56 | 24 | 56 | 20 | 56 | 5 | 56 |
| | 10 | 85 | 1770 | 56 | 5 | 56 | 24 | 56 | 20 | 56 | 5 | 56 |
| | 11 | 86 | | | | | | | | | | |
| NB Richardson from Francisco to Doyle | 1 | 87 | 2344 | 56 | 0 | 0 | 5 | 56 | 66 | 56 | 24 | 56 |
| | 2 | 88 | 2344 | 56 | 0 | 0 | 5 | 56 | 66 | 56 | 24 | 56 |
| | 3 | 89 | 2344 | 56 | 0 | 0 | 5 | 56 | 66 | 56 | 24 | 56 |
| | 4 | 90 | 2344 | 56 | 0 | 0 | 5 | 56 | 66 | 56 | 24 | 56 |
| | 5 | 91 | 2344 | 56 | 0 | 0 | 5 | 56 | 66 | 56 | 24 | 56 |
| | 6 | 92 | 2344 | 56 | 0 | 0 | 5 | 56 | 66 | 56 | 24 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 93 | 2344 | 56 | 0 | 0 | 5 | 56 | 66 | 56 | 24 | 56 |
| | 8 | 94 | 2344 | 56 | 0 | 0 | 5 | 56 | 66 | 56 | 24 | 56 |
| | 9 | 95 | 2344 | 56 | 0 | 0 | 5 | 56 | 66 | 56 | 24 | 56 |
| | 10 | 96 | 2344 | 56 | 0 | 0 | 5 | 56 | 66 | 56 | 24 | 56 |
| | 11 | 97 | 2344 | 56 | 0 | 0 | 5 | 56 | 66 | 56 | 24 | 56 |
| | 12 | 98 | | | | | | | | | | |
| SB PP Ramp from WB Doyle Drive | 1 | 99 | 873 | 56 | 0 | 0 | 2 | 56 | 25 | 56 | 9 | 56 |
| | 2 | 100 | 873 | 56 | 0 | 0 | 2 | 56 | 25 | 56 | 9 | 56 |
| | 3 | 101 | 873 | 56 | 0 | 0 | 2 | 56 | 25 | 56 | 9 | 56 |
| | 4 | 102 | 873 | 56 | 0 | 0 | 2 | 56 | 25 | 56 | 9 | 56 |
| | 5 | 103 | 873 | 56 | 0 | 0 | 2 | 56 | 25 | 56 | 9 | 56 |
| | 6 | 104 | 873 | 56 | 0 | 0 | 2 | 56 | 25 | 56 | 9 | 56 |
| | 7 | 105 | 873 | 56 | 0 | 0 | 2 | 56 | 25 | 56 | 9 | 56 |
| | 8 | 106 | 873 | 56 | 0 | 0 | 2 | 56 | 25 | 56 | 9 | 56 |
| | 9 | 107 | 873 | 56 | 0 | 0 | 2 | 56 | 25 | 56 | 9 | 56 |
| | 10 | 108 | 873 | 56 | 0 | 0 | 2 | 56 | 25 | 56 | 9 | 56 |
| | 11 | 109 | 873 | 56 | 0 | 0 | 2 | 56 | 25 | 56 | 9 | 56 |
| | 12 | 110 | 873 | 56 | 0 | 0 | 2 | 56 | 25 | 56 | 9 | 56 |
| | 13 | 111 | | | | | | | | | | |
| SB PP from EB Doyle Drive | 1 | 112 | 1553 | 56 | 5 | 56 | 21 | 56 | 18 | 56 | 5 | 56 |
| | 2 | 113 | 1553 | 56 | 5 | 56 | 21 | 56 | 18 | 56 | 5 | 56 |
| | 3 | 114 | 1553 | 56 | 5 | 56 | 21 | 56 | 18 | 56 | 5 | 56 |
| | 4 | 115 | 1553 | 56 | 5 | 56 | 21 | 56 | 18 | 56 | 5 | 56 |
| | 5 | 116 | 1553 | 56 | 5 | 56 | 21 | 56 | 18 | 56 | 5 | 56 |
| | 6 | 117 | 1553 | 56 | 5 | 56 | 21 | 56 | 18 | 56 | 5 | 56 |
| | 7 | 118 | 1553 | 56 | 5 | 56 | 21 | 56 | 18 | 56 | 5 | 56 |
| | 8 | 119 | 1553 | 56 | 5 | 56 | 21 | 56 | 18 | 56 | 5 | 56 |
| | 9 | 120 | | | | | | | | | | |
| NB PP to WB Doyle Drive | 1 | 121 | 1842 | 56 | 0 | 0 | 8 | 56 | 19 | 56 | 21 | 56 |
| | 2 | 122 | 1842 | 56 | 0 | 0 | 8 | 56 | 19 | 56 | 21 | 56 |
| | 3 | 123 | 1842 | 56 | 0 | 0 | 8 | 56 | 19 | 56 | 21 | 56 |
| | 4 | 124 | 1842 | 56 | 0 | 0 | 8 | 56 | 19 | 56 | 21 | 56 |
| | 5 | 125 | 1842 | 56 | 0 | 0 | 8 | 56 | 19 | 56 | 21 | 56 |
| | 6 | 126 | 1842 | 56 | 0 | 0 | 8 | 56 | 19 | 56 | 21 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 127 | 1842 | 56 | 0 | 0 | 8 | 56 | 19 | 56 | 21 | 56 |
| | 8 | 128 | 1842 | 56 | 0 | 0 | 8 | 56 | 19 | 56 | 21 | 56 |
| | 9 | 129 | 1842 | 56 | 0 | 0 | 8 | 56 | 19 | 56 | 21 | 56 |
| | 10 | 130 | 1842 | 56 | 0 | 0 | 8 | 56 | 19 | 56 | 21 | 56 |
| | 11 | 131 | 1842 | 56 | 0 | 0 | 8 | 56 | 19 | 56 | 21 | 56 |
| | 12 | 132 | 1842 | 56 | 0 | 0 | 8 | 56 | 19 | 56 | 21 | 56 |
| | 13 | 133 | | | | | | | | | | |
| NB PP Ramp to EB Doyle Drive | 1 | 134 | 734 | 56 | 3 | 56 | 3 | 56 | 5 | 56 | 8 | 56 |
| | 2 | 135 | 734 | 56 | 3 | 56 | 3 | 56 | 5 | 56 | 8 | 56 |
| | 3 | 136 | 734 | 56 | 3 | 56 | 3 | 56 | 5 | 56 | 8 | 56 |
| | 4 | 137 | 734 | 56 | 3 | 56 | 3 | 56 | 5 | 56 | 8 | 56 |
| | 5 | 138 | | | | | | | | | | |
| Mason Street | 1 | 139 | 11 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 140 | 11 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 141 | 11 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 142 | 11 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 143 | 11 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 144 | 11 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 145 | 11 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 146 | 37 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 147 | 43 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 148 | 43 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 149 | | | | | | | | | | |
| Lincoln Blvd. from McDowell to Letterma | 1 | 150 | 133 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 2 | 151 | 329 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 3 | 152 | 329 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 4 | 153 | 329 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 5 | 154 | 329 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 6 | 155 | 329 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 7 | 156 | 329 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 8 | 157 | 329 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 9 | 158 | 360 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 10 | 159 | 238 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 11 | 160 | 238 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 | 161 | 238 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 13 | 162 | 238 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 14 | 163 | 238 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 15 | 164 | 238 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 16 | 165 | 238 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 17 | 166 | 238 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 18 | 167 | 238 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 19 | 168 | 362 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 0 | 0 |
| | 20 | 169 | 396 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 0 | 0 |
| | 21 | 170 | 437 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 0 | 0 |
| | 22 | 190 | 496 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 0 | 0 |
| | 22 | 171 | | | | | | | | | | |
| Gorgas Avenue | 1 | 172 | 380 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 173 | 380 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 174 | 380 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 175 | 24 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 176 | 24 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 191 | 89 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 177 | | | | | | | | | | |
| Halleck Street | 1 | 178 | 59 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 179 | 44 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 180 | | | | | | | | | | |
| Girard Road | 1 | 181 | 89 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 182 | 89 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 183 | 89 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 184 | | | | | | | | | | |
| Baker Street | 1 | 185 | 499 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 186 | | | | | | | | | | |
| Montgomery Street | 1 | 187 | 126 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 188 | 92 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 189 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

29 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Base 2010 PM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1 Palace of Fine Arts near Ricardson | 1 | 0 | 1,426.0 | 0.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2 Palace of Fine Arts near Girard | 3 | 0 | 1,446.0 | 202.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3 Building 1187/1188 | 4 | 0 | 1,466.0 | 272.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4 Building 1182 | 5 | 0 | 1,406.0 | 240.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5 Building 1183/1186 | 6 | 0 | 1,326.0 | 230.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6 Building 1184/1185 | 7 | 0 | 1,206.0 | 208.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7 Building 603/Crissy Center | 8 | 0 | 880.0 | 176.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8 PX Building | 9 | 0 | 816.0 | 118.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9 Post Commissary/Sports Basement | 10 | 0 | 552.0 | 16.0 | 4.00 | 1.50 | 69.00 | 71 | 12.0 | 10.0 | Y |
| 10 Battery Blaney | 11 | 0 | 270.0 | -34.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11 Battery Slaughter | 12 | 0 | 208.0 | -40.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12 Battery Sherwood | 13 | 0 | 80.0 | 6.0 | 29.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13 Battery Baldwin | 14 | 0 | 4.0 | 15.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14 Building 644 | 15 | 0 | 42.0 | 66.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15 Building 649 | 16 | 0 | -64.0 | 48.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16 Building 650/Stilwell Hall | 17 | 0 | -140.0 | 52.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17 Armistead Rd. 1253 | 18 | 2 | -502.0 | 258.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18 Armistead Rd. residence | 19 | 2 | -674.0 | 320.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19 Building 969 | 20 | 0 | -604.0 | 748.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20 Building 968 | 21 | 0 | -788.0 | 762.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21 Building 967 | 22 | 0 | -910.0 | 750.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22 Building 966 | 23 | 0 | -920.0 | 754.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 Building 964 | 24 | 1 | -818.0 | 846.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24 Building 963 | 25 | 1 | -840.0 | 804.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25 Building 962 | 26 | 1 | -814.0 | 816.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26 Unknown Building | 27 | 0 | -1,132.0 | 697.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27 Log Cabin | 28 | 0 | -720.0 | 188.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28 Unknown Building | 29 | 0 | -988.0 | 408.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29 Storey Ave. 1298 | 30 | 2 | -682.0 | 136.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30 Storey Ave. 1297 | 31 | 2 | -644.0 | 140.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31 Storey Ave. 1295 | 32 | 2 | -632.0 | 130.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32 Storey Ave. 1294 | 33 | 2 | -614.0 | 132.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33 Storey Ave. 1293 | 34 | 2 | -580.0 | 122.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34 Storey Ave 1291 | 35 | 2 | -552.0 | 112.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35 Storey Ave. 1290 | 36 | 2 | -528.0 | 100.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36 Storey Ave. 1289 | 37 | 2 | -510.0 | 66.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37 Storey Ave. 1263 | 38 | 2 | -420.0 | -114.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38 Building 682/Cross Cultural Center | 39 | 0 | -350.0 | -228.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39 Building 661/Cavalry Stables Pen | 40 | 0 | -256.0 | -26.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40 Building 662/Cavalry Stables | 41 | 0 | -214.0 | -50.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41 Building 663/Cavalry Stables | 42 | 0 | -220.0 | -80.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42 Building 667/Cavalry Stable | 43 | 0 | -80.0 | -78.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43 National Cemetery Grave Site | 44 | 0 | 300.0 | -102.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44 Building 129 | 46 | 1 | 414.0 | -100.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45 Building 122 | 47 | 0 | 460.0 | -90.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46 Building 108 | 48 | 0 | 536.0 | -64.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47 Building 107 | 49 | 0 | 546.0 | -48.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48 Building 104 | 50 | 0 | 566.0 | -72.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49 Building 105 | 51 | 0 | 598.0 | -20.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50 Building 106 | 52 | 0 | 632.0 | 0.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51 Building 211 | 53 | 0 | 744.0 | 28.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52 Building 204 | 54 | 0 | 834.0 | 68.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53 Building 210 | 55 | 0 | 734.0 | -16.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54 Building 201 | 56 | 0 | 940.0 | 106.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55 Building 220 | 57 | 0 | 908.0 | -16.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56 Building 231 | 58 | 0 | 970.0 | 80.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57 Building 228 | 59 | 0 | 958.0 | 60.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 Building 229 | 60 | 0 | 950.0 | 32.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59 Building 223 | 61 | 0 | 950.0 | -14.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60 Building 230 | 62 | 0 | 1,050.0 | 112.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61 Building 1029/Swords to Plowshares | 63 | 100 | 1,020.0 | 16.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62 Building 1030/Swords to Plowshares | 64 | 100 | 1,014.0 | -20.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63 Building 1063 | 65 | 0 | 1,160.0 | 44.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64 Building 1062 | 66 | 0 | 1,178.0 | 0.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65 Building 1060 | 67 | 0 | 1,224.0 | -22.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66 Building 1167 | 68 | 0 | 1,216.0 | 94.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 67 Building 1163 | 69 | 0 | 1,212.0 | 76.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68 Building 1169 | 70 | 0 | 1,280.0 | 50.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69 Building 1162 | 71 | 0 | 1,266.0 | 32.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70 Building 1170 | 72 | 0 | 1,360.0 | -16.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 71 Building 1161 | 73 | 0 | 1,368.0 | -48.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72 Building 1160 | 74 | 0 | 1,398.0 | -50.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73 Building 1152/YMCA | 75 | 0 | 1,420.0 | -76.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74 Building 1151/YMCA Pool | 76 | 0 | 1,476.0 | -114.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75 Building 1004 | 77 | 0 | 1,300.0 | -140.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76 Residence at 3234 Lyon St. | 79 | 8 | 1,560.0 | -150.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

29 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Base 2010 PM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

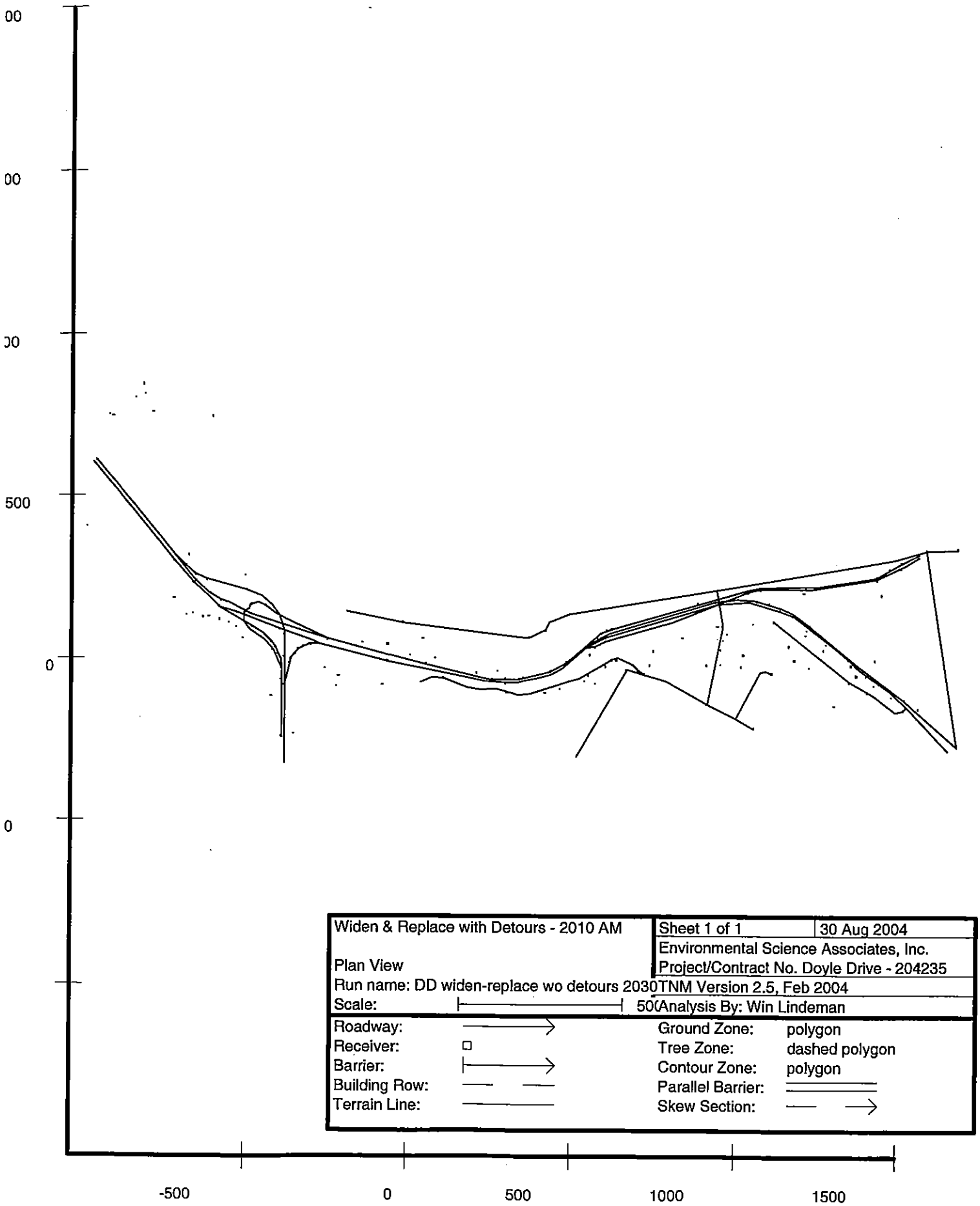
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 Palace of Fine Arts near Ricardson | 1 | 0 | 0.0 | 67.6 | 66 | 67.6 | 12 | Snd Lvl | 67.6 | 0.0 | 10 | -10.0 |
| 2 Palace of Fine Arts near Girard | 3 | 0 | 0.0 | 64.9 | 66 | 64.9 | 12 | — | 64.9 | 0.0 | 10 | -10.0 |
| 3 Building 1187/1188 | 4 | 0 | 81.0 | 67.7 | 71 | -13.3 | 12 | — | 67.7 | 0.0 | 10 | -10.0 |
| 4 Building 1182 | 5 | 0 | 81.0 | 65.3 | 71 | -15.7 | 12 | — | 65.3 | 0.0 | 10 | -10.0 |
| 5 Building 1183/1186 | 6 | 0 | 81.0 | 62.5 | 71 | -18.5 | 12 | — | 62.5 | 0.0 | 10 | -10.0 |
| 6 Building 1184/1185 | 7 | 0 | 81.0 | 67.9 | 71 | -13.1 | 12 | — | 67.9 | 0.0 | 10 | -10.0 |
| 7 Building 603/Crissy Center | 8 | 0 | 72.0 | 66.2 | 71 | -5.8 | 12 | — | 66.2 | 0.0 | 10 | -10.0 |
| 8 PX Building | 9 | 0 | 0.0 | 67.5 | 71 | 67.5 | 12 | — | 67.5 | 0.0 | 10 | -10.0 |
| 9 Post Commissary/Sports Basement | 10 | 0 | 69.0 | 66.8 | 71 | -2.2 | 12 | — | 66.8 | 0.0 | 10 | -10.0 |
| 10 Battery Blaney | 11 | 0 | 68.0 | 74.6 | 66 | 6.6 | 12 | Snd Lvl | 74.6 | 0.0 | 10 | -10.0 |
| 11 Battery Slaughter | 12 | 0 | 68.0 | 79.2 | 66 | 11.2 | 12 | Snd Lvl | 79.2 | 0.0 | 10 | -10.0 |
| 12 Battery Sherwood | 13 | 0 | 68.0 | 76.5 | 66 | 8.5 | 12 | Snd Lvl | 76.5 | 0.0 | 10 | -10.0 |
| 13 Battery Baldwin | 14 | 0 | 68.0 | 66.3 | 66 | -1.7 | 12 | Snd Lvl | 66.3 | 0.0 | 10 | -10.0 |
| 14 Building 644 | 15 | 0 | 0.0 | 63.4 | 71 | 63.4 | 12 | — | 63.4 | 0.0 | 10 | -10.0 |
| 15 Building 649 | 16 | 0 | 0.0 | 60.5 | 66 | 60.5 | 12 | — | 60.5 | 0.0 | 10 | -10.0 |
| 16 Building 650/Stilwell Hall | 17 | 0 | 70.0 | 59.9 | 66 | -10.1 | 12 | — | 59.9 | 0.0 | 10 | -10.0 |
| 17 Armistead Rd. 1253 | 18 | 2 | 66.0 | 63.4 | 66 | -2.6 | 12 | — | 63.4 | 0.0 | 10 | -10.0 |
| 18 Armistead Rd. residence | 19 | 2 | 66.0 | 70.1 | 66 | 4.1 | 12 | Snd Lvl | 70.1 | 0.0 | 10 | -10.0 |
| 19 Building 969 | 20 | 0 | 0.0 | 52.0 | 71 | 52.0 | 12 | — | 52.0 | 0.0 | 10 | -10.0 |
| 20 Building 968 | 21 | 0 | 0.0 | 53.7 | 71 | 53.7 | 12 | — | 53.7 | 0.0 | 10 | -10.0 |
| 21 Building 967 | 22 | 0 | 0.0 | 55.7 | 71 | 55.7 | 12 | — | 55.7 | 0.0 | 10 | -10.0 |
| 22 Building 966 | 23 | 0 | 0.0 | 55.5 | 66 | 55.5 | 12 | — | 55.5 | 0.0 | 10 | -10.0 |
| 23 Building 964 | 24 | 1 | 0.0 | 52.8 | 66 | 52.8 | 12 | — | 52.8 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 Building 963 | 25 | 1 | 0.0 | 53.8 | 66 | 53.8 | 12 | --- | 53.8 | 0.0 | 10 | -10.0 |
| 25 Building 962 | 26 | 1 | 0.0 | 53.6 | 66 | 53.6 | 12 | --- | 53.6 | 0.0 | 10 | -10.0 |
| 26 Unknown Building | 27 | 0 | 0.0 | 55.5 | 71 | 55.5 | 12 | --- | 55.5 | 0.0 | 10 | -10.0 |
| 27 Log Cabin | 28 | 0 | 63.0 | 67.9 | 66 | 4.9 | 12 | Snd Lvl | 67.9 | 0.0 | 10 | -10.0 |
| 28 Unknown Building | 29 | 0 | 0.0 | 61.6 | 71 | 61.6 | 12 | --- | 61.6 | 0.0 | 10 | -10.0 |
| 29 Storey Ave. 1298 | 30 | 2 | 66.5 | 66.9 | 66 | 0.4 | 12 | Snd Lvl | 66.9 | 0.0 | 10 | -10.0 |
| 30 Storey Ave. 1297 | 31 | 2 | 66.5 | 69.8 | 66 | 3.3 | 12 | Snd Lvl | 69.8 | 0.0 | 10 | -10.0 |
| 31 Storey Ave. 1295 | 32 | 2 | 66.5 | 69.6 | 66 | 3.1 | 12 | Snd Lvl | 69.6 | 0.0 | 10 | -10.0 |
| 32 Storey Ave. 1294 | 33 | 2 | 66.5 | 71.2 | 66 | 4.7 | 12 | Snd Lvl | 71.2 | 0.0 | 10 | -10.0 |
| 33 Storey Ave. 1293 | 34 | 2 | 66.5 | 72.5 | 66 | 6.0 | 12 | Snd Lvl | 72.5 | 0.0 | 10 | -10.0 |
| 34 Storey Ave 1291 | 35 | 2 | 66.5 | 72.8 | 66 | 6.3 | 12 | Snd Lvl | 72.8 | 0.0 | 10 | -10.0 |
| 35 Storey Ave. 1290 | 36 | 2 | 66.5 | 72.5 | 66 | 6.0 | 12 | Snd Lvl | 72.5 | 0.0 | 10 | -10.0 |
| 36 Storey Ave. 1289 | 37 | 2 | 66.5 | 69.8 | 66 | 3.3 | 12 | Snd Lvl | 69.8 | 0.0 | 10 | -10.0 |
| 37 Storey Ave. 1263 | 38 | 2 | 0.0 | 66.1 | 66 | 66.1 | 12 | Snd Lvl | 66.1 | 0.0 | 10 | -10.0 |
| 38 Building 682/Cross Cultural Center | 39 | 0 | 65.5 | 63.0 | 66 | -2.5 | 12 | --- | 63.0 | 0.0 | 10 | -10.0 |
| 39 Building 661/Cavalry Stables Pen | 40 | 0 | 64.0 | 65.9 | 71 | 1.9 | 12 | --- | 65.9 | 0.0 | 10 | -10.0 |
| 40 Building 662/Cavalry Stables | 41 | 0 | 64.0 | 65.8 | 71 | 1.8 | 12 | --- | 65.8 | 0.0 | 10 | -10.0 |
| 41 Building 663/Cavalry Stables | 42 | 0 | 64.0 | 64.7 | 71 | 0.7 | 12 | --- | 64.7 | 0.0 | 10 | -10.0 |
| 42 Building 667/Cavalry Stable | 43 | 0 | 64.0 | 66.2 | 71 | 2.2 | 12 | --- | 66.2 | 0.0 | 10 | -10.0 |
| 43 National Cemetery Grave Site | 44 | 0 | 69.0 | 74.0 | 66 | 5.0 | 12 | Snd Lvl | 74.0 | 0.0 | 10 | -10.0 |
| 44 Building 129 | 46 | 1 | 0.0 | 62.7 | 66 | 62.7 | 12 | --- | 62.7 | 0.0 | 10 | -10.0 |
| 45 Building 122 | 47 | 0 | 0.0 | 72.1 | 71 | 72.1 | 12 | Snd Lvl | 72.1 | 0.0 | 10 | -10.0 |
| 46 Building 108 | 48 | 0 | 0.0 | 72.3 | 71 | 72.3 | 12 | Snd Lvl | 72.3 | 0.0 | 10 | -10.0 |
| 47 Building 107 | 49 | 0 | 0.0 | 74.0 | 71 | 74.0 | 12 | Snd Lvl | 74.0 | 0.0 | 10 | -10.0 |
| 48 Building 104 | 50 | 0 | 74.0 | 69.8 | 71 | -4.2 | 12 | --- | 69.8 | 0.0 | 10 | -10.0 |
| 49 Building 105 | 51 | 0 | 74.0 | 75.8 | 71 | 1.8 | 12 | Snd Lvl | 75.8 | 0.0 | 10 | -10.0 |
| 50 Building 106 | 52 | 0 | 76.0 | 77.2 | 71 | 1.2 | 12 | Snd Lvl | 77.2 | 0.0 | 10 | -10.0 |
| 51 Building 211 | 53 | 0 | 0.0 | 75.0 | 71 | 75.0 | 12 | Snd Lvl | 75.0 | 0.0 | 10 | -10.0 |
| 52 Building 204 | 54 | 0 | 0.0 | 68.5 | 71 | 68.5 | 12 | --- | 68.5 | 0.0 | 10 | -10.0 |
| 53 Building 210 | 55 | 0 | 0.0 | 70.6 | 71 | 70.6 | 12 | --- | 70.6 | 0.0 | 10 | -10.0 |
| 54 Building 201 | 56 | 0 | 0.0 | 66.3 | 71 | 66.3 | 12 | --- | 66.3 | 0.0 | 10 | -10.0 |
| 55 Building 220 | 57 | 0 | 0.0 | 63.9 | 71 | 63.9 | 12 | --- | 63.9 | 0.0 | 10 | -10.0 |
| 56 Building 231 | 58 | 0 | 0.0 | 65.9 | 71 | 65.9 | 12 | --- | 65.9 | 0.0 | 10 | -10.0 |
| 57 Building 228 | 59 | 0 | 0.0 | 64.9 | 71 | 64.9 | 12 | --- | 64.9 | 0.0 | 10 | -10.0 |
| 58 Building 229 | 60 | 0 | 0.0 | 63.6 | 71 | 63.6 | 12 | --- | 63.6 | 0.0 | 10 | -10.0 |
| 59 Building 223 | 61 | 0 | 0.0 | 59.4 | 71 | 59.4 | 12 | --- | 59.4 | 0.0 | 10 | -10.0 |
| 60 Building 230 | 62 | 0 | 0.0 | 66.3 | 71 | 66.3 | 12 | --- | 66.3 | 0.0 | 10 | -10.0 |
| 61 Building 1029/Swords to Plowshares | 63 | 100 | 57.0 | 62.5 | 66 | 5.5 | 12 | --- | 62.5 | 0.0 | 10 | -10.0 |
| 62 Building 1030/Swords to Plowshares | 64 | 100 | 57.0 | 60.6 | 66 | 3.6 | 12 | --- | 60.6 | 0.0 | 10 | -10.0 |
| 63 Building 1063 | 65 | 0 | 68.5 | 60.6 | 71 | -7.9 | 12 | --- | 60.6 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 Building 1062 | 66 | 0 | 68.5 | 58.6 | 71 | -9.9 | 12 | — | 58.6 | 0.0 | 10 | -10.0 |
| 65 Building 1060 | 67 | 0 | 68.5 | 57.8 | 71 | -10.7 | 12 | — | 57.8 | 0.0 | 10 | -10.0 |
| 66 Building 1167 | 68 | 0 | 68.5 | 63.8 | 71 | -4.7 | 12 | — | 63.8 | 0.0 | 10 | -10.0 |
| 67 Building 1163 | 69 | 0 | 0.0 | 62.4 | 71 | 62.4 | 12 | — | 62.4 | 0.0 | 10 | -10.0 |
| 68 Building 1169 | 70 | 0 | 68.0 | 64.8 | 71 | -3.2 | 12 | — | 64.8 | 0.0 | 10 | -10.0 |
| 69 Building 1162 | 71 | 0 | 0.0 | 61.7 | 71 | 61.7 | 12 | — | 61.7 | 0.0 | 10 | -10.0 |
| 70 Building 1170 | 72 | 0 | 0.0 | 68.0 | 71 | 68.0 | 12 | — | 68.0 | 0.0 | 10 | -10.0 |
| 71 Building 1161 | 73 | 0 | 0.0 | 65.2 | 71 | 65.2 | 12 | — | 65.2 | 0.0 | 10 | -10.0 |
| 72 Building 1160 | 74 | 0 | 0.0 | 69.8 | 71 | 69.8 | 12 | — | 69.8 | 0.0 | 10 | -10.0 |
| 73 Building 1152/YMCA | 75 | 0 | 0.0 | 69.0 | 66 | 69.0 | 12 | Snd Lvl | 69.0 | 0.0 | 10 | -10.0 |
| 74 Building 1151/YMCA Pool | 76 | 0 | 0.0 | 71.7 | 66 | 71.7 | 12 | Snd Lvl | 71.7 | 0.0 | 10 | -10.0 |
| 75 Building 1004 | 77 | 0 | 0.0 | 54.9 | 71 | 54.9 | 12 | — | 54.9 | 0.0 | 10 | -10.0 |
| 76 Residence at 3234 Lyon St. | 79 | 8 | 76.5 | 71.9 | 66 | -4.6 | 12 | Snd Lvl | 71.9 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 234 | 0.0 | 0.0 | 0.0 |
| All Impacted | 28 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |




| | | |
|---|---|---|
| Widen & Replace with Detours - 2010 AM | Sheet 1 of 1 | 30 Aug 2004 |
| | Environmental Science Associates, Inc. | |
| Plan View | Project/Contract No. Doyle Drive - 204235 | |
| Run name: DD widen-replace wo detours 2030 | TNM Version 2.5, Feb 2004 | |
| Scale: 50 | Analysis By: Win Lindeman | |

| | | | |
|---|---|---|---|
| Roadway: | | Ground Zone: | polygon |
| Receiver: | | Tree Zone: | dashed polygon |
| Barrier: | | Contour Zone: | polygon |
| Building Row: | | Parallel Barrier: | |
| Terrain Line: | | Skew Section: | |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace with Detours - 2010 AM

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

| Roadway | | Points | | | | | Flow Control | | | Segment | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | | | | | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle Drive to Marina | 11.0 | N End | 1 | -966.0 | 608.0 | 53.00 | | | | Average | |
| | | 2 | 2 | -720.0 | 302.0 | 56.00 | | | | Average | |
| | | 3 | 3 | -660.0 | 234.0 | 57.00 | | | | Average | |
| | | 4 | 4 | -614.0 | 196.0 | 55.00 | | | | Average | |
| | | 5 | 6 | -580.0 | 162.0 | 53.00 | | | | Average | |
| | | 6 | 7 | -579.0 | 162.0 | 53.00 | | | | Average | Y |
| | | 7 | 8 | -526.0 | 144.0 | 51.00 | | | | Average | Y |
| | | 8 | 9 | -392.0 | 92.0 | 46.00 | | | | Average | Y |
| | | 9 | 10 | -298.0 | 60.0 | 42.00 | | | | Average | Y |
| | | 9a | 210 | -274.0 | 49.0 | 41.00 | | | | Average | Y |
| | | 10 | 11 | -200.0 | 30.0 | 37.00 | | | | Average | Y |
| | | 11 | 13 | -64.0 | -4.0 | 29.00 | | | | Average | Y |
| | | 12 | 14 | -63.0 | -4.0 | 29.00 | | | | Average | |
| | | 13 | 15 | 196.0 | -58.0 | 29.00 | | | | Average | |
| | | 14 | 16 | 232.0 | -66.0 | 28.00 | | | | Average | |
| | | 15 | 17 | 294.0 | -71.0 | 27.00 | | | | Average | |
| | | 16 | 18 | 334.0 | -70.0 | 24.00 | | | | Average | |
| | | 17 | 20 | 335.0 | -70.0 | 24.00 | | | | Average | Y |
| | | 18 | 21 | 348.0 | -66.0 | 23.00 | | | | Average | Y |
| | | 19 | 22 | 390.0 | -56.0 | 21.40 | | | | Average | Y |
| | | 20 | 23 | 432.0 | -44.0 | 20.00 | | | | Average | Y |
| | | 21 | 24 | 468.0 | -26.0 | 18.40 | | | | Average | Y |
| | | 22 | 25 | 540.0 | 38.0 | 14.80 | | | | Average | Y |
| | | 23 | 26 | 566.0 | 40.0 | 13.40 | | | | Average | Y |
| | | 24 | 27 | 600.0 | 58.0 | 13.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 25 | 28 | 804.0 | 118.0 | 15.00 | | | | Average | Y |
| | | 26 | 29 | 1,036.0 | 210.0 | 18.80 | | | | Average | Y |
| | | 27 | 31 | 1,074.0 | 218.0 | 18.80 | | | | Average | Y |
| | | 28 | 32 | 1,230.0 | 220.0 | 12.00 | | | | Average | |
| | | 29 | 33 | 1,430.0 | 250.0 | 6.00 | | | | Average | |
| | | 30 | 35 | 1,504.0 | 286.0 | 4.00 | | | | Average | |
| | | 31 | 36 | 1,520.0 | 296.0 | 4.00 | | | | Average | |
| | | 32 | 37 | 1,560.0 | 318.0 | 4.00 | | | | | |
| WB Doyle Drive from Marina to 0+00 | 11.0 | 1 | 39 | 1,560.0 | 326.0 | 4.00 | | | | Average | |
| | | 2 | 40 | 1,504.0 | 300.0 | 4.00 | | | | Average | |
| | | 3 | 41 | 1,468.0 | 280.0 | 5.00 | | | | Average | |
| | | 4 | 42 | 1,428.0 | 256.0 | 6.00 | | | | Average | |
| | | 5 | 43 | 1,250.0 | 228.0 | 10.00 | | | | Average | |
| | | 6 | 44 | 1,212.0 | 226.0 | 16.00 | | | | Average | |
| | | 7 | 46 | 1,074.0 | 224.0 | 18.40 | | | | Average | Y |
| | | 8 | 47 | 1,034.0 | 214.0 | 18.80 | | | | Average | Y |
| | | 9 | 48 | 616.0 | 94.0 | 13.00 | | | | Average | Y |
| | | 10 | 49 | 602.0 | 90.0 | 13.40 | | | | Average | Y |
| | | 11 | 50 | 584.0 | 80.0 | 13.50 | | | | Average | Y |
| | | 12 | 51 | 570.0 | 68.0 | 14.00 | | | | Average | Y |
| | | 13 | 52 | 540.0 | 42.0 | 14.80 | | | | Average | Y |
| | | 14 | 53 | 480.0 | -8.0 | 17.00 | | | | Average | Y |
| | | 15 | 54 | 430.0 | -36.0 | 20.00 | | | | Average | Y |
| | | 16 | 55 | 350.0 | -56.0 | 22.00 | | | | Average | Y |
| | | 17 | 56 | 335.0 | -60.0 | 26.00 | | | | Average | Y |
| | | 18 | 57 | 334.0 | -60.0 | 26.00 | | | | Average | |
| | | 19 | 58 | 294.0 | -60.0 | 28.00 | | | | Average | |
| | | 20 | 59 | 252.0 | -60.0 | 29.00 | | | | Average | |
| | | 21 | 60 | 232.0 | -56.0 | 29.00 | | | | Average | |
| | | 22 | 61 | 50.0 | -12.0 | 29.00 | | | | Average | |
| | | 23 | 62 | -60.0 | 14.0 | 29.00 | | | | Average | |
| | | 24 | 63 | -61.0 | 14.0 | 29.00 | | | | Average | Y |
| | | 25 | 64 | -250.0 | 64.0 | 41.00 | | | | Average | Y |
| | | 26 | 65 | -484.0 | 142.0 | 50.00 | | | | Average | Y |
| | | 27 | 66 | -554.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 28 | 67 | -555.0 | 176.0 | 51.00 | | | | Average | |
| | | 29 | 68 | -576.0 | 182.0 | 49.00 | | | | Average | |
| | | 30 | 69 | -610.0 | 204.0 | 50.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 31 | 70 | -654.0 | 242.0 | 53.00 | | | | Average | |
| | | 32 | 71 | -720.0 | 322.0 | 56.00 | | | | Average | |
| | | 33 | 198 | -960.0 | 614.0 | 53.00 | | | | | |
| SB/EB Richardson from Doyle to Francis | 11.0 | 1 | 77 | 540.0 | 38.0 | 14.80 | | | | Average | Y |
| | | 2 | 78 | 600.0 | 68.0 | 13.00 | | | | Average | Y |
| | | 3 | 79 | 942.0 | 174.0 | 19.00 | | | | Average | Y |
| | | 4 | 80 | 1,036.0 | 180.0 | 18.80 | | | | Average | Y |
| | | 5 | 81 | 1,134.0 | 154.0 | 18.40 | | | | Average | Y |
| | | 6 | 82 | 1,175.0 | 138.0 | 17.40 | | | | Average | Y |
| | | 7 | 83 | 1,298.0 | 40.0 | 12.00 | | | | Average | Y |
| | | 8 | 84 | 1,344.0 | 0.0 | 12.00 | | | | Average | |
| | | 9 | 85 | 1,374.0 | -24.0 | 4.00 | | | | Average | |
| | | 10 | 86 | 1,405.0 | -48.0 | 2.00 | | | | Average | |
| | | 11 | 195 | 1,439.0 | -73.0 | 2.00 | | | | Average | |
| | | 12 | 196 | 1,470.0 | -94.0 | 4.00 | | | | Average | |
| | | 13 | 197 | 1,522.0 | -146.0 | 4.00 | | | | Average | |
| | | 14 | 87 | 1,650.0 | -280.0 | 4.00 | | | | | |
| NB/WB Richardson from Francisco to DD | 9.0 | 1 | 88 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 89 | 1,514.0 | -122.0 | 4.00 | | | | Average | |
| | | 3 | 90 | 1,374.0 | -18.0 | 4.00 | | | | Average | |
| | | 4 | 91 | 1,220.0 | 110.0 | 15.00 | | | | Average | Y |
| | | 5 | 92 | 1,172.0 | 144.0 | 17.40 | | | | Average | Y |
| | | 6 | 93 | 1,136.0 | 160.0 | 18.40 | | | | Average | Y |
| | | 7 | 94 | 1,098.0 | 174.0 | 18.60 | | | | Average | Y |
| | | 8 | 95 | 1,058.0 | 182.0 | 18.80 | | | | Average | Y |
| | | 9 | 96 | 996.0 | 188.0 | 18.80 | | | | Average | Y |
| | | 10 | 97 | 976.0 | 184.0 | 19.00 | | | | Average | Y |
| | | 11 | 208 | 934.0 | 178.0 | 19.00 | | | | Average | Y |
| | | 12 | 209 | 610.0 | 80.0 | 13.00 | | | | Average | Y |
| | | 13 | 98 | 574.0 | 62.0 | 13.40 | | | | Average | Y |
| | | 14 | 99 | 540.0 | 42.0 | 14.80 | | | | | |
| SB PP Ramp from WB Doyle Drive | 4.6 | 1 | 100 | -250.0 | 64.0 | 41.00 | | | | Average | Y |
| | | 2 | 101 | -376.0 | 124.0 | 45.00 | | | | Average | Y |
| | | 3 | 102 | -410.0 | 144.0 | 45.00 | | | | Average | Y |
| | | 4 | 103 | -411.0 | 144.0 | 45.00 | | | | Average | |
| | | 5 | 104 | -440.0 | 170.0 | 44.20 | | | | Average | |
| | | 6 | 105 | -460.0 | 176.0 | 44.00 | | | | Average | |
| | | 7 | 106 | -484.0 | 170.0 | 44.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 | 107 | -490.0 | 156.0 | 44.00 | | | | Average | |
| | | 9 | 108 | -504.0 | 144.0 | 44.50 | | | | Average | |
| | | 10 | 109 | -504.0 | 117.0 | 45.00 | | | | Average | |
| | | 11 | 110 | -488.0 | 94.0 | 43.50 | | | | Average | |
| | | 12 | 111 | -440.0 | 60.0 | 42.50 | | | | Average | |
| | | 13 | 203 | -416.0 | 30.0 | 42.00 | | | | Average | |
| | | 14 | 202 | -406.0 | 14.0 | 41.00 | | | | Average | |
| | | 15 | 204 | -388.0 | -28.0 | 38.00 | | | | | |
| SB PP Ramp from EB Doyle Drive | 4.8 | 1 | 113 | -579.0 | 160.0 | 53.00 | | | | Average | Y |
| | | 2 | 114 | -479.0 | 100.0 | 49.00 | | | | Average | Y |
| | | 3 | 115 | -478.0 | 100.0 | 49.00 | | | | Average | |
| | | 4 | 116 | -446.0 | 80.0 | 49.00 | | | | Average | |
| | | 5 | 117 | -420.0 | 54.0 | 48.00 | | | | Average | |
| | | 6 | 118 | -408.0 | 36.0 | 44.00 | | | | Average | |
| | | 7 | 119 | -400.0 | 17.0 | 40.00 | | | | Average | |
| | | 8 | 120 | -390.0 | 0.0 | 39.00 | | | | Average | |
| | | 9 | 205 | -388.0 | -28.0 | 38.00 | | | | Average | |
| | | 10 | 206 | -388.0 | -62.0 | 38.00 | | | | Average | |
| | | 11 | 121 | -388.0 | -238.0 | 38.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 4.6 | 1 | 122 | -380.0 | -320.0 | 37.00 | | | | Average | |
| | | 2 | 207 | -380.0 | -74.0 | 40.00 | | | | Average | |
| | | 3 | 123 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 4 | 124 | -380.0 | 80.0 | 37.00 | | | | Average | |
| | | 5 | 125 | -384.0 | 98.0 | 38.00 | | | | Average | |
| | | 6 | 126 | -396.0 | 138.0 | 38.00 | | | | Average | |
| | | 7 | 127 | -418.0 | 170.0 | 41.00 | | | | Average | |
| | | 8 | 128 | -450.0 | 196.0 | 44.00 | | | | Average | |
| | | 9 | 129 | -500.0 | 216.0 | 47.50 | | | | Average | |
| | | 10 | 130 | -620.0 | 246.0 | 54.00 | | | | Average | |
| | | 11 | 131 | -656.0 | 262.0 | 57.00 | | | | Average | |
| | | 12 | 132 | -686.0 | 290.0 | 58.00 | | | | Average | |
| | | 13 | 191 | -703.0 | 306.0 | 58.00 | | | | Average | |
| | | 14 | 133 | -720.0 | 322.0 | 56.00 | | | | | |
| NB PP ramp to EB Doyle Drive | 4.6 | 1 | 134 | -380.0 | -74.0 | 40.00 | | | | Average | |
| | | 2 | 199 | -364.0 | -10.0 | 38.20 | | | | Average | |
| | | 3 | 200 | -360.0 | 5.0 | 38.80 | | | | Average | |
| | | 4 | 201 | -348.0 | 20.0 | 40.20 | | | | Average | |
| | | 5 | 135 | -336.0 | 34.0 | 41.40 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 6 | 136 | -320.0 | 42.0 | 41.80 | | | | Average | |
| | | 7 | 137 | -300.0 | 48.0 | 41.20 | | | | Average | |
| | | 8 | 138 | -274.0 | 49.0 | 41.00 | | | | | |
| Mason Street | 7.3 | 1 | 139 | -188.0 | 150.0 | 3.00 | | | | Average | |
| | | 2 | 140 | -16.0 | 114.0 | 3.00 | | | | Average | |
| | | 3 | 141 | 340.0 | 70.0 | 4.00 | | | | Average | |
| | | 4 | 142 | 370.0 | 70.0 | 4.00 | | | | Average | |
| | | 5 | 143 | 416.0 | 92.0 | 4.00 | | | | Average | |
| | | 6 | 144 | 428.0 | 118.0 | 4.00 | | | | Average | |
| | | 7 | 145 | 486.0 | 142.0 | 4.00 | | | | Average | |
| | | 8 | 194 | 938.0 | 214.0 | 4.00 | | | | Average | |
| | | 9 | 146 | 1,486.0 | 310.0 | 4.00 | | | | Average | |
| | | 10 | 147 | 1,584.0 | 340.0 | 4.00 | | | | Average | |
| | | 11 | 148 | 1,680.0 | 344.0 | 4.00 | | | | | |
| Lincoln Blvd. | 7.3 | 1 | 149 | 36.0 | -70.0 | 33.00 | | | | Average | |
| | | 2 | 150 | 74.0 | -53.0 | 33.00 | | | | Average | |
| | | 3 | 151 | 106.0 | -56.0 | 32.00 | | | | Average | |
| | | 4 | 152 | 180.0 | -86.0 | 30.00 | | | | Average | |
| | | 5 | 153 | 226.0 | -92.0 | 29.00 | | | | Average | |
| | | 6 | 154 | 246.0 | -90.0 | 29.00 | | | | Average | |
| | | 7 | 155 | 268.0 | -90.0 | 29.00 | | | | Average | |
| | | 8 | 156 | 308.0 | -100.0 | 29.00 | | | | Average | |
| | | 9 | 157 | 334.0 | -108.0 | 27.00 | | | | Average | |
| | | 10 | 158 | 368.0 | -105.0 | 26.00 | | | | Average | |
| | | 11 | 159 | 490.0 | -66.0 | 19.00 | | | | Average | |
| | | 12 | 160 | 520.0 | -56.0 | 17.00 | | | | Average | |
| | | 13 | 161 | 568.0 | -30.0 | 16.00 | | | | Average | |
| | | 14 | 162 | 596.0 | -14.0 | 13.00 | | | | Average | |
| | | 15 | 163 | 620.0 | 0.0 | 14.00 | | | | Average | |
| | | 16 | 164 | 636.0 | 6.0 | 12.00 | | | | Average | |
| | | 17 | 165 | 680.0 | -14.0 | 13.00 | | | | Average | |
| | | 18 | 166 | 700.0 | -34.0 | 14.00 | | | | Average | |
| | | 19 | 167 | 718.0 | -44.0 | 14.00 | | | | Average | |
| | | 20 | 168 | 784.0 | -66.0 | 15.00 | | | | Average | |
| | | 21 | 169 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 22 | 170 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 23 | 171 | 1,054.0 | -210.0 | 14.00 | | | | | |
| Gorgas Avenue | 6.0 | 1 | 172 | 1,522.0 | -146.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 173 | 1,510.0 | -158.0 | 4.00 | | | | Average | |
| | | 3 | 174 | 1,488.0 | -160.0 | 4.00 | | | | Average | |
| | | 4 | 175 | 1,420.0 | -108.0 | 2.00 | | | | Average | |
| | | 5 | 176 | 1,400.0 | -98.0 | 2.00 | | | | Average | |
| | | 6 | 177 | 1,344.0 | -66.0 | 2.00 | | | | Average | |
| | | 7 | 178 | 1,112.0 | 120.0 | 3.00 | | | | | |
| Halleck Street | 7.3 | 1 | 179 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 2 | 180 | 957.0 | 106.0 | 6.00 | | | | Average | |
| | | 3 | 181 | 938.0 | 214.0 | 4.00 | | | | | |
| Girard Road | 7.3 | 1 | 182 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 2 | 183 | 1,074.0 | -38.0 | 3.00 | | | | Average | |
| | | 3 | 184 | 1,090.0 | -33.0 | 4.00 | | | | Average | |
| | | 4 | 185 | 1,108.0 | -40.0 | 5.00 | | | | | |
| Baker Street | 11.6 | 1 | 186 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 187 | 1,584.0 | 340.0 | 4.00 | | | | | |
| Montgomery Street | 9.2 | 1 | 188 | 510.0 | -300.0 | 15.00 | | | | Average | |
| | | 2 | 189 | 664.0 | -30.0 | 12.00 | | | | Average | |
| | | 3 | 190 | 718.0 | -44.0 | 14.00 | | | | | |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace with Detours - 2010 AM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle Drive to Marina | N End | 1 | 6383 | 88 | 66 | 88 | 13 | 88 | 66 | 88 | 66 | 88 |
| | 2 | 2 | 6383 | 88 | 66 | 88 | 13 | 88 | 66 | 88 | 66 | 88 |
| | 3 | 3 | 6383 | 88 | 66 | 88 | 13 | 88 | 66 | 88 | 66 | 88 |
| | 4 | 4 | 6383 | 88 | 66 | 88 | 13 | 88 | 66 | 88 | 66 | 88 |
| | 5 | 6 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 6 | 7 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 7 | 8 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 8 | 9 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 9 | 10 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 9a | 210 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 10 | 11 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 11 | 13 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 12 | 14 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 13 | 15 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 14 | 16 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 15 | 17 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 16 | 18 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 17 | 20 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 18 | 21 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 19 | 22 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 20 | 23 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 21 | 24 | 4490 | 88 | 46 | 88 | 9 | 88 | 46 | 88 | 46 | 88 |
| | 22 | 25 | 1362 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 23 | 26 | 1362 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 24 | 27 | 1362 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 25 | 28 | 1362 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 26 | 29 | 1362 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 27 | 31 | 1362 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 28 | 32 | 1362 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 29 | 33 | 1362 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 30 | 35 | 1362 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 31 | 36 | 1362 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 32 | 37 | | | | | | | | | | |
| WB Doyle Drive from Marina to 0+00 | 1 | 39 | 505 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 40 | 505 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 41 | 505 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 42 | 505 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 43 | 505 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 44 | 505 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 46 | 505 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 47 | 505 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 48 | 505 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 49 | 505 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 50 | 505 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 51 | 505 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 | 52 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 14 | 53 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 15 | 54 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 16 | 55 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 17 | 56 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 18 | 57 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 19 | 58 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 20 | 59 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 21 | 60 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 22 | 61 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 23 | 62 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 24 | 63 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 25 | 64 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 26 | 65 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 27 | 66 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 28 | 67 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 29 | 68 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 30 | 69 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 31 | 70 | 1919 | 88 | 20 | 88 | 26 | 88 | 12 | 88 | 20 | 88 |
| | 32 | 71 | 4098 | 88 | 41 | 88 | 55 | 88 | 26 | 88 | 41 | 88 |
| | 33 | 198 | | | | | | | | | | |
| SB/EB Richardson from Doyle to Francis | 1 | 77 | 2769 | 56 | 28 | 56 | 6 | 56 | 28 | 56 | 28 | 56 |
| | 2 | 78 | 2769 | 56 | 28 | 56 | 6 | 56 | 28 | 56 | 28 | 56 |
| | 3 | 79 | 2769 | 56 | 28 | 56 | 6 | 56 | 28 | 56 | 28 | 56 |
| | 4 | 80 | 2769 | 56 | 28 | 56 | 6 | 56 | 28 | 56 | 28 | 56 |
| | 5 | 81 | 2769 | 56 | 28 | 56 | 6 | 56 | 28 | 56 | 28 | 56 |
| | 6 | 82 | 2769 | 56 | 28 | 56 | 6 | 56 | 28 | 56 | 28 | 56 |
| | 7 | 83 | 2769 | 56 | 28 | 56 | 6 | 56 | 28 | 56 | 28 | 56 |
| | 8 | 84 | 2769 | 56 | 28 | 56 | 6 | 56 | 28 | 56 | 28 | 56 |
| | 9 | 85 | 2769 | 56 | 28 | 56 | 6 | 56 | 28 | 56 | 28 | 56 |
| | 10 | 86 | 2769 | 56 | 28 | 56 | 6 | 56 | 28 | 56 | 28 | 56 |
| | 11 | 195 | 2769 | 56 | 28 | 56 | 6 | 56 | 28 | 56 | 28 | 56 |
| | 12 | 196 | 2769 | 56 | 28 | 56 | 6 | 56 | 28 | 56 | 28 | 56 |
| | 13 | 197 | 2769 | 56 | 28 | 56 | 6 | 56 | 28 | 56 | 28 | 56 |
| | 14 | 87 | | | | | | | | | | |
| NB/WB Richardson from Francisco to DD | 1 | 88 | 1419 | 56 | 15 | 56 | 18 | 56 | 9 | 56 | 15 | 56 |
| | 2 | 89 | 1419 | 56 | 15 | 56 | 18 | 56 | 9 | 56 | 15 | 56 |
| | 3 | 90 | 1419 | 56 | 15 | 56 | 18 | 56 | 9 | 56 | 15 | 56 |
| | 4 | 91 | 1419 | 56 | 15 | 56 | 18 | 56 | 9 | 56 | 15 | 56 |
| | 5 | 92 | 1419 | 56 | 15 | 56 | 18 | 56 | 9 | 56 | 15 | 56 |
| | 6 | 93 | 1419 | 56 | 15 | 56 | 18 | 56 | 9 | 56 | 15 | 56 |
| | 7 | 94 | 1419 | 56 | 15 | 56 | 18 | 56 | 9 | 56 | 15 | 56 |
| | 8 | 95 | 1419 | 56 | 15 | 56 | 18 | 56 | 9 | 56 | 15 | 56 |
| | 9 | 96 | 1419 | 56 | 15 | 56 | 18 | 56 | 9 | 56 | 15 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | 97 | 1419 | 56 | 15 | 56 | 18 | 56 | 9 | 56 | 15 | 56 |
| | 11 | 208 | 1419 | 56 | 15 | 56 | 18 | 56 | 9 | 56 | 15 | 56 |
| | 12 | 209 | 1419 | 56 | 15 | 56 | 18 | 56 | 9 | 56 | 15 | 56 |
| | 13 | 98 | 1419 | 56 | 15 | 56 | 18 | 56 | 9 | 56 | 15 | 56 |
| | 14 | 99 | | | | | | | | | | |
| SB PP Ramp from WB Doyle Drive | 1 | 100 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 2 | 101 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 3 | 102 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 4 | 103 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 5 | 104 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 6 | 105 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 7 | 106 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 8 | 107 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 9 | 108 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 10 | 109 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 11 | 110 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 12 | 111 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 13 | 203 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 14 | 202 | 1879 | 56 | 20 | 56 | 25 | 56 | 12 | 56 | 20 | 56 |
| | 15 | 204 | | | | | | | | | | |
| SB PP Ramp from EB Doyle Drive | 1 | 113 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 114 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 115 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 116 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 117 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 118 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 119 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 120 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 205 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 206 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 121 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 | 122 | 2206 | 56 | 23 | 56 | 23 | 56 | 0 | 0 | 16 | 56 |
| | 2 | 207 | 2206 | 56 | 23 | 56 | 23 | 56 | 0 | 0 | 16 | 56 |
| | 3 | 123 | 2206 | 56 | 23 | 56 | 23 | 56 | 0 | 0 | 16 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 | 124 | 2206 | 56 | 23 | 56 | 23 | 56 | 0 | 0 | 16 | 56 |
| | 5 | 125 | 2206 | 56 | 23 | 56 | 23 | 56 | 0 | 0 | 16 | 56 |
| | 6 | 126 | 2206 | 56 | 23 | 56 | 23 | 56 | 0 | 0 | 16 | 56 |
| | 7 | 127 | 2206 | 56 | 23 | 56 | 23 | 56 | 0 | 0 | 16 | 56 |
| | 8 | 128 | 2206 | 56 | 23 | 56 | 23 | 56 | 0 | 0 | 16 | 56 |
| | 9 | 129 | 2206 | 56 | 23 | 56 | 23 | 56 | 0 | 0 | 16 | 56 |
| | 10 | 130 | 2206 | 56 | 23 | 56 | 23 | 56 | 0 | 0 | 16 | 56 |
| | 11 | 131 | 2206 | 56 | 23 | 56 | 23 | 56 | 0 | 0 | 16 | 56 |
| | 12 | 132 | 2206 | 56 | 23 | 56 | 23 | 56 | 0 | 0 | 16 | 56 |
| | 13 | 191 | 2206 | 56 | 23 | 56 | 23 | 56 | 0 | 0 | 16 | 56 |
| | 14 | 133 | | | | | | | | | | |
| NB PP ramp to EB Doyle Drive | 1 | 134 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 199 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 200 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 201 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 135 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 136 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 137 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 138 | | | | | | | | | | |
| Mason Street | 1 | 139 | 1 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 140 | 1 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 141 | 1 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 142 | 1 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 143 | 1 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 144 | 1 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 145 | 1 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 194 | 14 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 146 | 14 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 147 | 13 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 148 | | | | | | | | | | |
| Lincoln Blvd. | 1 | 149 | 105 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 2 | 150 | 131 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 3 | 151 | 131 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 4 | 152 | 131 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 153 | 131 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 6 | 154 | 131 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 7 | 155 | 131 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 8 | 156 | 143 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 9 | 157 | 48 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 10 | 158 | 48 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 11 | 159 | 48 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 12 | 160 | 48 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 13 | 161 | 48 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 14 | 162 | 48 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 15 | 163 | 48 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 16 | 164 | 48 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 17 | 165 | 48 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 18 | 166 | 48 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 19 | 167 | 144 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 20 | 168 | 172 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 21 | 169 | 187 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 22 | 170 | 256 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 23 | 171 | | | | | | | | | | |
| Gorgas Avenue | 1 | 172 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 173 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 174 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 175 | 14 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 176 | 14 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 177 | 14 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 178 | | | | | | | | | | |
| Halleck Street | 1 | 179 | 39 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 180 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 181 | | | | | | | | | | |
| Girard Road | 1 | 182 | 83 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 183 | 83 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 184 | 83 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 185 | | | | | | | | | | |
| Baker Street | 1 | 186 | 95 | 32 | 3 | 32 | 0 | 0 | 0 | 0 | 3 | 32 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 187 | | | | | | | | | | |
| Montgomery Street | 1 | 188 | 96 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 189 | 96 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 190 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

30 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace with Detours - 2010 AM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 1,426.0 | 0.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 1,446.0 | 202.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 6-Building 1184/1185 | 7 | 0 | 1,206.0 | 208.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7-Building 603/Crissy Center | 8 | 0 | 880.0 | 176.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 9-Post Commissary/Sports Basement | 10 | 0 | 552.0 | 16.0 | 4.00 | 1.50 | 69.00 | 71 | 12.0 | 10.0 | Y |
| 10-Battery Blaney/635 | 11 | 0 | 270.0 | -34.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11-Battery Slaughter | 12 | 0 | 208.0 | -40.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12-Battery Sherwood/636 | 13 | 0 | 80.0 | 6.0 | 29.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13-Battery Baldwin | 14 | 0 | 4.0 | 15.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14-Building 644 | 15 | 0 | 42.0 | 66.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15-Building 649 | 16 | 0 | -64.0 | 48.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16-Building 650/Stilwell Hall | 17 | 0 | -140.0 | 52.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17-1253 Armistead Road | 18 | 1 | -502.0 | 258.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18-Home on Armistead Road | 19 | 1 | -674.0 | 320.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19-Building 969 | 20 | 0 | -604.0 | 748.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20-Building 968 | 21 | 0 | -788.0 | 762.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21-Building 967 | 22 | 0 | -910.0 | 750.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22-Building 966 | 23 | 0 | -920.0 | 754.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 23-Building 964 | 24 | 1 | -818.0 | 846.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24-Building 963 | 25 | 1 | -840.0 | 804.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25-Building 962 | 26 | 1 | -814.0 | 816.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26-Unknown Building | 27 | 0 | -1,132.0 | 697.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 27-Log Cabin | 28 | 0 | -720.0 | 188.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28-Unknown Building | 29 | 0 | -988.0 | 408.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29-Building 1298 Storey Ave. | 30 | 2 | -682.0 | 136.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30-Building 1297 Storey Ave. | 31 | 2 | -664.0 | 140.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31-Building 1295 Storey Ave. | 32 | 2 | -632.0 | 130.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32-Building 1294 Storey Ave. | 33 | 2 | -614.0 | 132.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33-Building 1293 Storey Ave. | 34 | 2 | -580.0 | 122.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34-Building 1291 Storey Ave. | 35 | 2 | -552.0 | 112.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35-Building 1290 Storey Ave. | 36 | 2 | -528.0 | 100.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36-Building 1289 Storey Ave. | 37 | 2 | -510.0 | 66.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37-Building 1263 Storey Ave. | 38 | 2 | -420.0 | -114.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38-Building 682/Cross Cultural Center | 39 | 0 | -350.0 | -228.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | -256.0 | -26.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40-Building 662/Cavalry Stable | 41 | 0 | -214.0 | -50.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41-Building 663/Cavalry Stable | 42 | 0 | -220.0 | -80.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42-Building 667/Cavalry Stable | 43 | 0 | -80.0 | -78.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43-National Cemetery Grave Site | 44 | 0 | 300.0 | -102.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44-Building 129 | 45 | 1 | 414.0 | -100.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45-Building 122 | 46 | 0 | 460.0 | -90.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46-Building 108 | 47 | 0 | 536.0 | -64.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47-Building 107 | 48 | 0 | 546.0 | -48.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48-Building 104 | 49 | 0 | 566.0 | -72.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49-Building 105 | 50 | 0 | 598.0 | -20.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50-Building 106 | 51 | 0 | 632.0 | 0.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51-Building 211 | 52 | 0 | 744.0 | 28.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52-Building 204 | 53 | 0 | 834.0 | 68.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53-Building 210 | 54 | 0 | 734.0 | -16.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54-Building 201 | 55 | 0 | 940.0 | 106.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55-Building 220 | 56 | 0 | 908.0 | -16.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56-Building 231 | 57 | 0 | 970.0 | 80.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57-Building 228 | 58 | 0 | 958.0 | 60.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 58-Building 229 | 60 | 0 | 950.0 | 32.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59-Building 223 | 61 | 0 | 950.0 | -14.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60-Building 230 | 62 | 0 | 1,050.0 | 112.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 1,020.0 | 16.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 1,014.0 | -20.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63-Building 1063 | 66 | 0 | 1,160.0 | 44.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64-Building 1062 | 68 | 0 | 1,178.0 | 0.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65-Building 1060 | 69 | 0 | 1,224.0 | -22.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66-Building 1167 | 70 | 0 | 1,216.0 | 94.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67-Building 1163 | 71 | 0 | 1,212.0 | 76.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68-Building 1169 | 72 | 0 | 1,275.0 | 50.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69-Building 1162 | 73 | 0 | 1,266.0 | 32.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70-Building 1170 | 74 | 0 | 1,352.0 | -16.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71-Building 1161 | 75 | 0 | 1,368.0 | -48.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72-Building 1160 | 76 | 0 | 1,398.0 | -50.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73-Building 1152/YMCA | 77 | 0 | 1,420.0 | -76.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74-Building 1151/YMCA Pool | 78 | 0 | 1,476.0 | -114.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75-Building 1004 | 79 | 0 | 1,300.0 | -140.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76-Home at 3234 Lyon St. | 81 | 8 | 1,560.0 | -150.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace with Detours - 2010 AM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

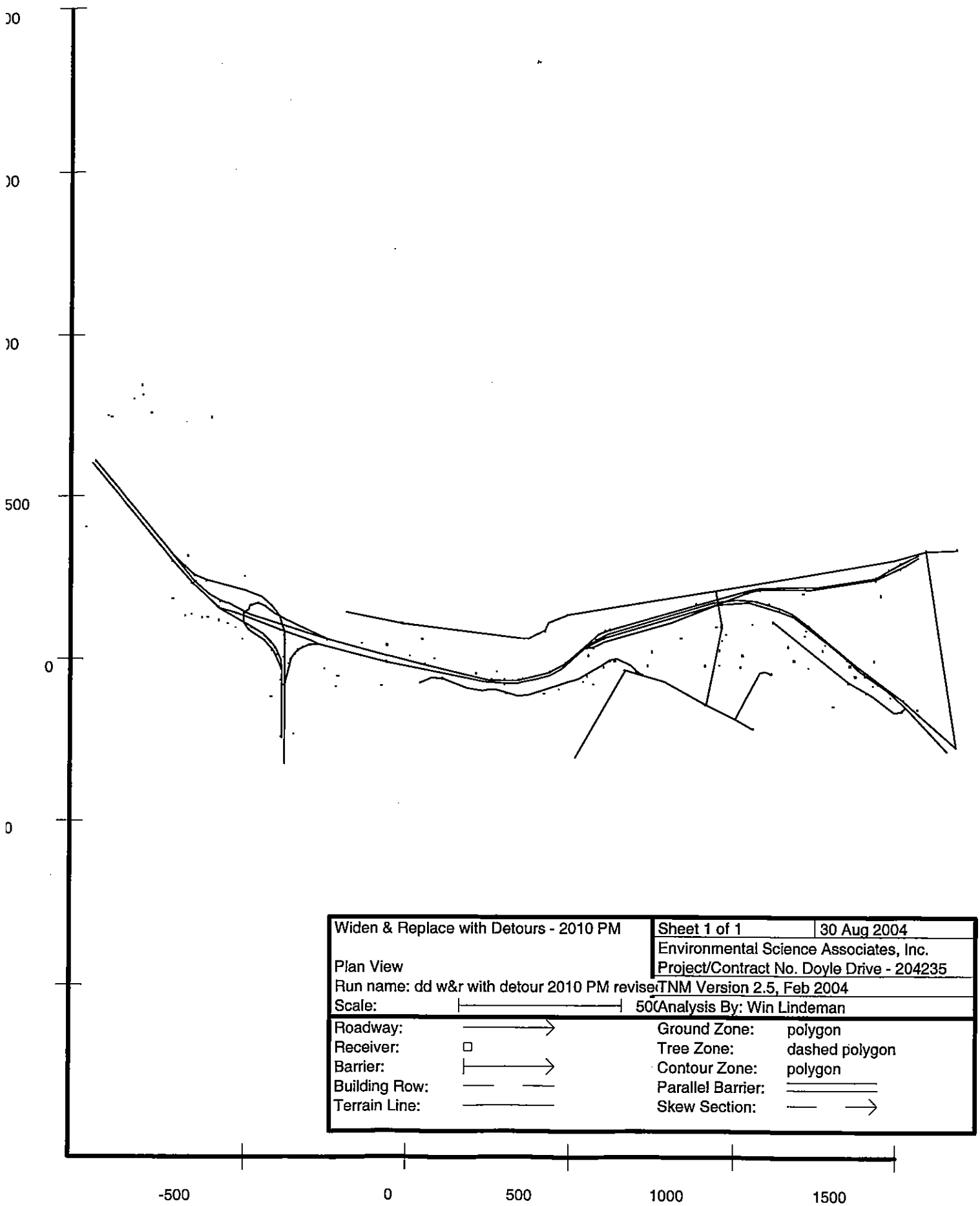
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 61.9 | 66 | 61.9 | 12 | — | 61.9 | 0.0 | 10 | -10.0 |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 57.6 | 66 | 57.6 | 12 | — | 57.6 | 0.0 | 10 | -10.0 |
| 6-Building 1184/1185 | 7 | 0 | 81.0 | 60.0 | 71 | -21.0 | 12 | — | 60.0 | 0.0 | 10 | -10.0 |
| 7-Building 603/Crissy Center | 8 | 0 | 72.0 | 59.5 | 71 | -12.5 | 12 | — | 59.5 | 0.0 | 10 | -10.0 |
| 9-Post Commissary/Sports Basement | 10 | 0 | 69.0 | 64.5 | 71 | -4.5 | 12 | — | 64.5 | 0.0 | 10 | -10.0 |
| 10-Battery Blaney/635 | 11 | 0 | 68.0 | 68.3 | 66 | 0.3 | 12 | Snd Lvl | 68.3 | 0.0 | 10 | -10.0 |
| 11-Battery Slaughter | 12 | 0 | 68.0 | 78.1 | 66 | 10.1 | 12 | Snd Lvl | 78.1 | 0.0 | 10 | -10.0 |
| 12-Battery Sherwood/636 | 13 | 0 | 68.0 | 74.3 | 66 | 6.3 | 12 | Snd Lvl | 74.3 | 0.0 | 10 | -10.0 |
| 13-Battery Baldwin | 14 | 0 | 68.0 | 63.5 | 66 | -4.5 | 12 | — | 63.5 | 0.0 | 10 | -10.0 |
| 14-Building 644 | 15 | 0 | 0.0 | 59.4 | 71 | 59.4 | 12 | — | 59.4 | 0.0 | 10 | -10.0 |
| 15-Building 649 | 16 | 0 | 0.0 | 59.0 | 66 | 59.0 | 12 | — | 59.0 | 0.0 | 10 | -10.0 |
| 16-Building 650/Stilwell Hall | 17 | 0 | 70.0 | 58.8 | 66 | -11.2 | 12 | — | 58.8 | 0.0 | 10 | -10.0 |
| 17-1253 Armistead Road | 18 | 1 | 66.0 | 65.2 | 66 | -0.8 | 12 | — | 65.2 | 0.0 | 10 | -10.0 |
| 18-Home on Armistead Road | 19 | 1 | 66.0 | 72.1 | 66 | 6.1 | 12 | Snd Lvl | 72.1 | 0.0 | 10 | -10.0 |
| 19-Building 969 | 20 | 0 | 0.0 | 51.7 | 71 | 51.7 | 12 | — | 51.7 | 0.0 | 10 | -10.0 |
| 20-Building 968 | 21 | 0 | 0.0 | 53.3 | 71 | 53.3 | 12 | — | 53.3 | 0.0 | 10 | -10.0 |
| 21-Building 967 | 22 | 0 | 0.0 | 55.3 | 71 | 55.3 | 12 | — | 55.3 | 0.0 | 10 | -10.0 |
| 22-Building 966 | 23 | 0 | 0.0 | 55.4 | 71 | 55.4 | 12 | — | 55.4 | 0.0 | 10 | -10.0 |
| 23-Building 964 | 24 | 1 | 0.0 | 53.3 | 66 | 53.3 | 12 | — | 53.3 | 0.0 | 10 | -10.0 |
| 24-Building 963 | 25 | 1 | 0.0 | 54.1 | 66 | 54.1 | 12 | — | 54.1 | 0.0 | 10 | -10.0 |
| 25-Building 962 | 26 | 1 | 0.0 | 54.0 | 66 | 54.0 | 12 | — | 54.0 | 0.0 | 10 | -10.0 |
| 26-Unknown Building | 27 | 0 | 0.0 | 57.2 | 71 | 57.2 | 12 | — | 57.2 | 0.0 | 10 | -10.0 |
| 27-Log Cabin | 28 | 0 | 63.0 | 67.7 | 66 | 4.7 | 12 | Snd Lvl | 67.7 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28-Unknown Building | 29 | 0 | 0.0 | 61.0 | 71 | 61.0 | 12 | — | 61.0 | 0.0 | 10 | -10.0 |
| 29-Building 1298 Storey Ave. | 30 | 2 | 66.5 | 66.7 | 66 | 0.2 | 12 | Snd Lvl | 66.7 | 0.0 | 10 | -10.0 |
| 30-Building 1297 Storey Ave. | 31 | 2 | 66.5 | 68.3 | 66 | 1.8 | 12 | Snd Lvl | 68.3 | 0.0 | 10 | -10.0 |
| 31-Building 1295 Storey Ave. | 32 | 2 | 66.5 | 70.3 | 66 | 3.8 | 12 | Snd Lvl | 70.3 | 0.0 | 10 | -10.0 |
| 32-Building 1294 Storey Ave. | 33 | 2 | 66.5 | 72.2 | 66 | 5.7 | 12 | Snd Lvl | 72.2 | 0.0 | 10 | -10.0 |
| 33-Building 1293 Storey Ave. | 34 | 2 | 66.5 | 73.2 | 66 | 6.7 | 12 | Snd Lvl | 73.2 | 0.0 | 10 | -10.0 |
| 34-Building 1291 Storey Ave. | 35 | 2 | 66.5 | 73.3 | 66 | 6.8 | 12 | Snd Lvl | 73.3 | 0.0 | 10 | -10.0 |
| 35-Building 1290 Storey Ave. | 36 | 2 | 66.5 | 73.4 | 66 | 6.9 | 12 | Snd Lvl | 73.4 | 0.0 | 10 | -10.0 |
| 36-Building 1289 Storey Ave. | 37 | 2 | 66.5 | 70.9 | 66 | 4.4 | 12 | Snd Lvl | 70.9 | 0.0 | 10 | -10.0 |
| 37-Building 1263 Storey Ave. | 38 | 2 | 0.0 | 66.6 | 66 | 66.6 | 12 | Snd Lvl | 66.6 | 0.0 | 10 | -10.0 |
| 38-Building 682/Cross Cultural Center | 39 | 0 | 65.5 | 62.5 | 66 | -3.0 | 12 | — | 62.5 | 0.0 | 10 | -10.0 |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | 64.0 | 65.1 | 71 | 1.1 | 12 | — | 65.1 | 0.0 | 10 | -10.0 |
| 40-Building 662/Cavalry Stable | 41 | 0 | 64.0 | 65.3 | 71 | 1.3 | 12 | — | 65.3 | 0.0 | 10 | -10.0 |
| 41-Building 663/Cavalry Stable | 42 | 0 | 64.0 | 64.2 | 71 | 0.2 | 12 | — | 64.2 | 0.0 | 10 | -10.0 |
| 42-Building 667/Cavalry Stable | 43 | 0 | 64.0 | 64.4 | 71 | 0.4 | 12 | — | 64.4 | 0.0 | 10 | -10.0 |
| 43-National Cemetery Grave Site | 44 | 0 | 69.0 | 74.2 | 66 | 5.2 | 12 | Snd Lvl | 74.2 | 0.0 | 10 | -10.0 |
| 44-Building 129 | 45 | 1 | 0.0 | 60.0 | 66 | 60.0 | 12 | — | 60.0 | 0.0 | 10 | -10.0 |
| 45-Building 122 | 46 | 0 | 0.0 | 70.6 | 71 | 70.6 | 12 | — | 70.6 | 0.0 | 10 | -10.0 |
| 46-Building 108 | 47 | 0 | 0.0 | 67.7 | 71 | 67.7 | 12 | — | 67.7 | 0.0 | 10 | -10.0 |
| 47-Building 107 | 48 | 0 | 0.0 | 67.1 | 71 | 67.1 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 48-Building 104 | 49 | 0 | 74.0 | 64.2 | 71 | -9.8 | 12 | — | 64.2 | 0.0 | 10 | -10.0 |
| 49-Building 105 | 50 | 0 | 74.0 | 67.0 | 71 | -7.0 | 12 | — | 67.0 | 0.0 | 10 | -10.0 |
| 50-Building 106 | 51 | 0 | 76.0 | 65.2 | 71 | -10.8 | 12 | — | 65.2 | 0.0 | 10 | -10.0 |
| 51-Building 211 | 52 | 0 | 0.0 | 65.9 | 71 | 65.9 | 12 | — | 65.9 | 0.0 | 10 | -10.0 |
| 52-Building 204 | 53 | 0 | 0.0 | 63.9 | 71 | 63.9 | 12 | — | 63.9 | 0.0 | 10 | -10.0 |
| 53-Building 210 | 54 | 0 | 0.0 | 62.5 | 71 | 62.5 | 12 | — | 62.5 | 0.0 | 10 | -10.0 |
| 54-Building 201 | 55 | 0 | 0.0 | 63.1 | 71 | 63.1 | 12 | — | 63.1 | 0.0 | 10 | -10.0 |
| 55-Building 220 | 56 | 0 | 0.0 | 59.6 | 71 | 59.6 | 12 | — | 59.6 | 0.0 | 10 | -10.0 |
| 56-Building 231 | 57 | 0 | 0.0 | 61.7 | 71 | 61.7 | 12 | — | 61.7 | 0.0 | 10 | -10.0 |
| 57-Building 228 | 58 | 0 | 0.0 | 60.7 | 71 | 60.7 | 12 | — | 60.7 | 0.0 | 10 | -10.0 |
| 58-Building 229 | 60 | 0 | 0.0 | 59.3 | 71 | 59.3 | 12 | — | 59.3 | 0.0 | 10 | -10.0 |
| 59-Building 223 | 61 | 0 | 0.0 | 57.6 | 71 | 57.6 | 12 | — | 57.6 | 0.0 | 10 | -10.0 |
| 60-Building 230 | 62 | 0 | 0.0 | 62.6 | 71 | 62.6 | 12 | — | 62.6 | 0.0 | 10 | -10.0 |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 57.0 | 59.1 | 66 | 2.1 | 12 | — | 59.1 | 0.0 | 10 | -10.0 |
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 57.0 | 57.7 | 66 | 0.7 | 12 | — | 57.7 | 0.0 | 10 | -10.0 |
| 63-Building 1063 | 66 | 0 | 68.5 | 59.6 | 71 | -8.9 | 12 | — | 59.6 | 0.0 | 10 | -10.0 |
| 64-Building 1062 | 68 | 0 | 68.5 | 58.4 | 71 | -10.1 | 12 | — | 58.4 | 0.0 | 10 | -10.0 |
| 65-Building 1060 | 69 | 0 | 68.5 | 58.4 | 71 | -10.1 | 12 | — | 58.4 | 0.0 | 10 | -10.0 |
| 66-Building 1167 | 70 | 0 | 68.0 | 59.4 | 71 | -8.6 | 12 | — | 59.4 | 0.0 | 10 | -10.0 |
| 67-Building 1163 | 71 | 0 | 0.0 | 60.6 | 71 | 60.6 | 12 | — | 60.6 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 68-Building 1169 | 72 | 0 | 68.0 | 59.7 | 71 | -8.3 | 12 | — | 59.7 | 0.0 | 10 | -10.0 |
| 69-Building 1162 | 73 | 0 | 0.0 | 60.9 | 71 | 60.9 | 12 | — | 60.9 | 0.0 | 10 | -10.0 |
| 70-Building 1170 | 74 | 0 | 68.0 | 63.0 | 71 | -5.0 | 12 | — | 63.0 | 0.0 | 10 | -10.0 |
| 71-Building 1161 | 75 | 0 | 0.0 | 66.8 | 71 | 66.8 | 12 | — | 66.8 | 0.0 | 10 | -10.0 |
| 72-Building 1160 | 76 | 0 | 0.0 | 73.4 | 71 | 73.4 | 12 | Snd Lvl | 73.4 | 0.0 | 10 | -10.0 |
| 73-Building 1152/YMCA | 77 | 0 | 0.0 | 69.5 | 66 | 69.5 | 12 | Snd Lvl | 69.5 | 0.0 | 10 | -10.0 |
| 74-Building 1151/YMCA Pool | 78 | 0 | 0.0 | 72.0 | 66 | 72.0 | 12 | Snd Lvl | 72.0 | 0.0 | 10 | -10.0 |
| 75-Building 1004 | 79 | 0 | 0.0 | 56.0 | 71 | 56.0 | 12 | — | 56.0 | 0.0 | 10 | -10.0 |
| 76-Home at 3234 Lyon St. | 81 | 8 | 76.5 | 70.7 | 66 | -5.8 | 12 | Snd Lvl | 70.7 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 232 | 0.0 | 0.0 | 0.0 |
| All Impacted | 27 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |




| | | |
|---|---|---|
| Widen & Replace with Detours - 2010 PM | Sheet 1 of 1 | 30 Aug 2004 |
| | Environmental Science Associates, Inc. | |
| Plan View | Project/Contract No. Doyle Drive - 204235 | |
| Run name: dd w&r with detour 2010 PM revise | TNM Version 2.5, Feb 2004 | |
| Scale: 500 | Analysis By: Win Lindeman | |

| | | | |
|---|---|---|---|
| Roadway: | | Ground Zone: | polygon |
| Receiver: | | Tree Zone: | dashed polygon |
| Barrier: | | Contour Zone: | polygon |
| Building Row: | | Parallel Barrier: | |
| Terrain Line: | | Skew Section: | |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace with Detours - 2010 PM

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

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle Drive to Marina | 11.0 | N End | 1 | -966.0 | 608.0 | 53.00 | | | | Average | |
| | | 2 | 2 | -720.0 | 302.0 | 56.00 | | | | Average | |
| | | 3 | 3 | -660.0 | 234.0 | 57.00 | | | | Average | |
| | | 4 | 4 | -614.0 | 196.0 | 55.00 | | | | Average | |
| | | 5 | 6 | -580.0 | 162.0 | 53.00 | | | | Average | |
| | | 6 | 7 | -579.0 | 162.0 | 53.00 | | | | Average | Y |
| | | 7 | 8 | -526.0 | 144.0 | 51.00 | | | | Average | Y |
| | | 8 | 9 | -392.0 | 92.0 | 46.00 | | | | Average | Y |
| | | 9 | 10 | -298.0 | 60.0 | 42.00 | | | | Average | Y |
| | | 9a | 210 | -274.0 | 49.0 | 41.00 | | | | Average | Y |
| | | 10 | 11 | -200.0 | 30.0 | 37.00 | | | | Average | Y |
| | | 11 | 13 | -64.0 | -4.0 | 29.00 | | | | Average | Y |
| | | 12 | 14 | -63.0 | -4.0 | 29.00 | | | | Average | |
| | | 13 | 15 | 196.0 | -58.0 | 29.00 | | | | Average | |
| | | 14 | 16 | 232.0 | -66.0 | 28.00 | | | | Average | |
| | | 15 | 17 | 294.0 | -71.0 | 27.00 | | | | Average | |
| | | 16 | 18 | 334.0 | -70.0 | 24.00 | | | | Average | |
| | | 17 | 20 | 335.0 | -70.0 | 24.00 | | | | Average | Y |
| | | 18 | 21 | 348.0 | -66.0 | 23.00 | | | | Average | Y |
| | | 19 | 22 | 390.0 | -56.0 | 21.40 | | | | Average | Y |
| | | 20 | 23 | 432.0 | -44.0 | 20.00 | | | | Average | Y |
| | | 21 | 24 | 468.0 | -26.0 | 18.40 | | | | Average | Y |
| | | 22 | 25 | 540.0 | 38.0 | 14.80 | | | | Average | Y |
| | | 23 | 26 | 566.0 | 40.0 | 13.40 | | | | Average | Y |
| | | 24 | 27 | 600.0 | 58.0 | 13.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 25 | 28 | 804.0 | 118.0 | 15.00 | | | | Average | Y |
| | | 26 | 29 | 1,036.0 | 210.0 | 18.80 | | | | Average | Y |
| | | 27 | 31 | 1,074.0 | 218.0 | 18.80 | | | | Average | Y |
| | | 28 | 32 | 1,230.0 | 220.0 | 12.00 | | | | Average | |
| | | 29 | 33 | 1,430.0 | 250.0 | 6.00 | | | | Average | |
| | | 30 | 35 | 1,504.0 | 286.0 | 4.00 | | | | Average | |
| | | 31 | 36 | 1,520.0 | 296.0 | 4.00 | | | | Average | |
| | | 32 | 37 | 1,560.0 | 318.0 | 4.00 | | | | | |
| WB Doyle Drive from Marina to 0+00 | 11.0 | 1 | 39 | 1,560.0 | 326.0 | 4.00 | | | | Average | |
| | | 2 | 40 | 1,504.0 | 300.0 | 4.00 | | | | Average | |
| | | 3 | 41 | 1,468.0 | 280.0 | 5.00 | | | | Average | |
| | | 4 | 42 | 1,428.0 | 256.0 | 6.00 | | | | Average | |
| | | 5 | 43 | 1,250.0 | 228.0 | 10.00 | | | | Average | |
| | | 6 | 44 | 1,212.0 | 226.0 | 16.00 | | | | Average | |
| | | 7 | 46 | 1,074.0 | 224.0 | 18.40 | | | | Average | Y |
| | | 8 | 47 | 1,034.0 | 214.0 | 18.80 | | | | Average | Y |
| | | 9 | 48 | 616.0 | 94.0 | 13.00 | | | | Average | Y |
| | | 10 | 49 | 602.0 | 90.0 | 13.40 | | | | Average | Y |
| | | 11 | 50 | 584.0 | 80.0 | 13.50 | | | | Average | Y |
| | | 12 | 51 | 570.0 | 68.0 | 14.00 | | | | Average | Y |
| | | 13 | 52 | 540.0 | 42.0 | 14.80 | | | | Average | Y |
| | | 14 | 53 | 480.0 | -8.0 | 17.00 | | | | Average | Y |
| | | 15 | 54 | 430.0 | -36.0 | 20.00 | | | | Average | Y |
| | | 16 | 55 | 350.0 | -56.0 | 22.00 | | | | Average | Y |
| | | 17 | 56 | 335.0 | -60.0 | 26.00 | | | | Average | Y |
| | | 18 | 57 | 334.0 | -60.0 | 26.00 | | | | Average | |
| | | 19 | 58 | 294.0 | -60.0 | 28.00 | | | | Average | |
| | | 20 | 59 | 252.0 | -60.0 | 29.00 | | | | Average | |
| | | 21 | 60 | 232.0 | -56.0 | 29.00 | | | | Average | |
| | | 22 | 61 | 50.0 | -12.0 | 29.00 | | | | Average | |
| | | 23 | 62 | -60.0 | 14.0 | 29.00 | | | | Average | |
| | | 24 | 63 | -61.0 | 14.0 | 29.00 | | | | Average | Y |
| | | 25 | 64 | -250.0 | 64.0 | 41.00 | | | | Average | Y |
| | | 26 | 65 | -484.0 | 142.0 | 50.00 | | | | Average | Y |
| | | 27 | 66 | -554.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 28 | 67 | -555.0 | 176.0 | 51.00 | | | | Average | |
| | | 29 | 68 | -576.0 | 182.0 | 49.00 | | | | Average | |
| | | 30 | 69 | -610.0 | 204.0 | 50.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 31 | 70 | -654.0 | 242.0 | 53.00 | | | | Average | |
| | | 32 | 71 | -720.0 | 322.0 | 56.00 | | | | Average | |
| | | 33 | 198 | -960.0 | 614.0 | 53.00 | | | | | |
| SB/EB Richardson from Doyle to Francis | 11.0 | 1 | 77 | 540.0 | 38.0 | 14.80 | | | | Average | Y |
| | | 2 | 78 | 600.0 | 68.0 | 13.00 | | | | Average | Y |
| | | 3 | 79 | 942.0 | 174.0 | 19.00 | | | | Average | Y |
| | | 4 | 80 | 1,036.0 | 180.0 | 18.80 | | | | Average | Y |
| | | 5 | 81 | 1,134.0 | 154.0 | 18.40 | | | | Average | Y |
| | | 6 | 82 | 1,175.0 | 138.0 | 17.40 | | | | Average | Y |
| | | 7 | 83 | 1,298.0 | 40.0 | 12.00 | | | | Average | Y |
| | | 8 | 84 | 1,344.0 | 0.0 | 12.00 | | | | Average | |
| | | 9 | 85 | 1,374.0 | -24.0 | 4.00 | | | | Average | |
| | | 10 | 86 | 1,405.0 | -48.0 | 2.00 | | | | Average | |
| | | 11 | 195 | 1,439.0 | -73.0 | 2.00 | | | | Average | |
| | | 12 | 196 | 1,470.0 | -94.0 | 4.00 | | | | Average | |
| | | 13 | 197 | 1,522.0 | -146.0 | 4.00 | | | | Average | |
| | | 14 | 87 | 1,650.0 | -280.0 | 4.00 | | | | | |
| NB/WB Richardson from Francisco to DD | 9.0 | 1 | 88 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 89 | 1,514.0 | -122.0 | 4.00 | | | | Average | |
| | | 3 | 90 | 1,374.0 | -18.0 | 4.00 | | | | Average | |
| | | 4 | 91 | 1,220.0 | 110.0 | 15.00 | | | | Average | Y |
| | | 5 | 92 | 1,172.0 | 144.0 | 17.40 | | | | Average | Y |
| | | 6 | 93 | 1,136.0 | 160.0 | 18.40 | | | | Average | Y |
| | | 7 | 94 | 1,098.0 | 174.0 | 18.60 | | | | Average | Y |
| | | 8 | 95 | 1,058.0 | 182.0 | 18.80 | | | | Average | Y |
| | | 9 | 96 | 996.0 | 188.0 | 18.80 | | | | Average | Y |
| | | 10 | 97 | 976.0 | 184.0 | 19.00 | | | | Average | Y |
| | | 11 | 208 | 934.0 | 178.0 | 19.00 | | | | Average | Y |
| | | 12 | 209 | 610.0 | 80.0 | 13.00 | | | | Average | Y |
| | | 13 | 98 | 574.0 | 62.0 | 13.40 | | | | Average | Y |
| | | 14 | 99 | 540.0 | 42.0 | 14.80 | | | | | |
| SB PP Ramp from WB Doyle Drive | 4.6 | 1 | 100 | -250.0 | 64.0 | 41.00 | | | | Average | Y |
| | | 2 | 101 | -376.0 | 124.0 | 45.00 | | | | Average | Y |
| | | 3 | 102 | -410.0 | 144.0 | 45.00 | | | | Average | Y |
| | | 4 | 103 | -411.0 | 144.0 | 45.00 | | | | Average | |
| | | 5 | 104 | -440.0 | 170.0 | 44.20 | | | | Average | |
| | | 6 | 105 | -460.0 | 176.0 | 44.00 | | | | Average | |
| | | 7 | 106 | -484.0 | 170.0 | 44.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 | 107 | -490.0 | 156.0 | 44.00 | | | | Average | |
| | | 9 | 108 | -504.0 | 144.0 | 44.50 | | | | Average | |
| | | 10 | 109 | -504.0 | 117.0 | 45.00 | | | | Average | |
| | | 11 | 110 | -488.0 | 94.0 | 43.50 | | | | Average | |
| | | 12 | 111 | -440.0 | 60.0 | 42.50 | | | | Average | |
| | | 13 | 203 | -416.0 | 30.0 | 42.00 | | | | Average | |
| | | 14 | 202 | -406.0 | 14.0 | 41.00 | | | | Average | |
| | | 15 | 204 | -388.0 | -28.0 | 38.00 | | | | | |
| SB PP Ramp from EB Doyle Drive | 4.8 | 1 | 113 | -579.0 | 160.0 | 53.00 | | | | Average | Y |
| | | 2 | 114 | -479.0 | 100.0 | 49.00 | | | | Average | Y |
| | | 3 | 115 | -478.0 | 100.0 | 49.00 | | | | Average | |
| | | 4 | 116 | -446.0 | 80.0 | 49.00 | | | | Average | |
| | | 5 | 117 | -420.0 | 54.0 | 48.00 | | | | Average | |
| | | 6 | 118 | -408.0 | 36.0 | 44.00 | | | | Average | |
| | | 7 | 119 | -400.0 | 17.0 | 40.00 | | | | Average | |
| | | 8 | 120 | -390.0 | 0.0 | 39.00 | | | | Average | |
| | | 9 | 205 | -388.0 | -28.0 | 38.00 | | | | Average | |
| | | 10 | 206 | -388.0 | -62.0 | 38.00 | | | | Average | |
| | | 11 | 121 | -388.0 | -238.0 | 38.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 4.6 | 1 | 122 | -380.0 | -320.0 | 37.00 | | | | Average | |
| | | 2 | 207 | -380.0 | -74.0 | 40.00 | | | | Average | |
| | | 3 | 123 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 4 | 124 | -380.0 | 80.0 | 37.00 | | | | Average | |
| | | 5 | 125 | -384.0 | 98.0 | 38.00 | | | | Average | |
| | | 6 | 126 | -396.0 | 138.0 | 38.00 | | | | Average | |
| | | 7 | 127 | -418.0 | 170.0 | 41.00 | | | | Average | |
| | | 8 | 128 | -450.0 | 196.0 | 44.00 | | | | Average | |
| | | 9 | 129 | -500.0 | 216.0 | 47.50 | | | | Average | |
| | | 10 | 130 | -620.0 | 246.0 | 54.00 | | | | Average | |
| | | 11 | 131 | -656.0 | 262.0 | 57.00 | | | | Average | |
| | | 12 | 132 | -686.0 | 290.0 | 58.00 | | | | Average | |
| | | 13 | 191 | -703.0 | 306.0 | 58.00 | | | | Average | |
| | | 14 | 133 | -720.0 | 322.0 | 56.00 | | | | | |
| NB PP ramp to EB Doyle Drive | 4.6 | 1 | 134 | -380.0 | -74.0 | 40.00 | | | | Average | |
| | | 2 | 199 | -364.0 | -10.0 | 38.20 | | | | Average | |
| | | 3 | 200 | -360.0 | 5.0 | 38.80 | | | | Average | |
| | | 4 | 201 | -348.0 | 20.0 | 40.20 | | | | Average | |
| | | 5 | 135 | -336.0 | 34.0 | 41.40 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 6 | 136 | -320.0 | 42.0 | 41.80 | | | | Average | |
| | | 7 | 137 | -300.0 | 48.0 | 41.20 | | | | Average | |
| | | 8 | 138 | -274.0 | 49.0 | 41.00 | | | | | |
| Mason Street | 7.3 | 1 | 139 | -188.0 | 150.0 | 3.00 | | | | Average | |
| | | 2 | 140 | -16.0 | 114.0 | 3.00 | | | | Average | |
| | | 3 | 141 | 340.0 | 70.0 | 4.00 | | | | Average | |
| | | 4 | 142 | 370.0 | 70.0 | 4.00 | | | | Average | |
| | | 5 | 143 | 416.0 | 92.0 | 4.00 | | | | Average | |
| | | 6 | 144 | 428.0 | 118.0 | 4.00 | | | | Average | |
| | | 7 | 145 | 486.0 | 142.0 | 4.00 | | | | Average | |
| | | 8 | 194 | 938.0 | 214.0 | 4.00 | | | | Average | |
| | | 9 | 146 | 1,486.0 | 310.0 | 4.00 | | | | Average | |
| | | 10 | 147 | 1,584.0 | 340.0 | 4.00 | | | | Average | |
| | | 11 | 148 | 1,680.0 | 344.0 | 4.00 | | | | | |
| Lincoln Blvd. | 7.3 | 1 | 149 | 36.0 | -70.0 | 33.00 | | | | Average | |
| | | 2 | 150 | 74.0 | -53.0 | 33.00 | | | | Average | |
| | | 3 | 151 | 106.0 | -56.0 | 32.00 | | | | Average | |
| | | 4 | 152 | 180.0 | -86.0 | 30.00 | | | | Average | |
| | | 5 | 153 | 226.0 | -92.0 | 29.00 | | | | Average | |
| | | 6 | 154 | 246.0 | -90.0 | 29.00 | | | | Average | |
| | | 7 | 155 | 268.0 | -90.0 | 29.00 | | | | Average | |
| | | 8 | 156 | 308.0 | -100.0 | 29.00 | | | | Average | |
| | | 9 | 157 | 334.0 | -108.0 | 27.00 | | | | Average | |
| | | 10 | 158 | 368.0 | -105.0 | 26.00 | | | | Average | |
| | | 11 | 159 | 490.0 | -66.0 | 19.00 | | | | Average | |
| | | 12 | 160 | 520.0 | -56.0 | 17.00 | | | | Average | |
| | | 13 | 161 | 568.0 | -30.0 | 16.00 | | | | Average | |
| | | 14 | 162 | 596.0 | -14.0 | 13.00 | | | | Average | |
| | | 15 | 163 | 620.0 | 0.0 | 14.00 | | | | Average | |
| | | 16 | 164 | 636.0 | 6.0 | 12.00 | | | | Average | |
| | | 17 | 165 | 680.0 | -14.0 | 13.00 | | | | Average | |
| | | 18 | 166 | 700.0 | -34.0 | 14.00 | | | | Average | |
| | | 19 | 167 | 718.0 | -44.0 | 14.00 | | | | Average | |
| | | 20 | 168 | 784.0 | -66.0 | 15.00 | | | | Average | |
| | | 21 | 169 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 22 | 170 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 23 | 171 | 1,054.0 | -210.0 | 14.00 | | | | | |
| Gorgas Avenue | 6.0 | 1 | 172 | 1,522.0 | -146.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 173 | 1,510.0 | -158.0 | 4.00 | | | | Average | |
| | | 3 | 174 | 1,488.0 | -160.0 | 4.00 | | | | Average | |
| | | 4 | 175 | 1,420.0 | -108.0 | 2.00 | | | | Average | |
| | | 5 | 176 | 1,400.0 | -98.0 | 2.00 | | | | Average | |
| | | 6 | 177 | 1,344.0 | -66.0 | 2.00 | | | | Average | |
| | | 7 | 178 | 1,112.0 | 120.0 | 3.00 | | | | | |
| Halleck Street | 7.3 | 1 | 179 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 2 | 180 | 957.0 | 106.0 | 6.00 | | | | Average | |
| | | 3 | 181 | 938.0 | 214.0 | 4.00 | | | | | |
| Girard Road | 7.3 | 1 | 182 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 2 | 183 | 1,074.0 | -38.0 | 3.00 | | | | Average | |
| | | 3 | 184 | 1,090.0 | -33.0 | 4.00 | | | | Average | |
| | | 4 | 185 | 1,108.0 | -40.0 | 5.00 | | | | | |
| Baker Street | 11.6 | 1 | 186 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 187 | 1,584.0 | 340.0 | 4.00 | | | | | |
| Montgomery Street | 9.2 | 1 | 188 | 510.0 | -300.0 | 15.00 | | | | Average | |
| | | 2 | 189 | 664.0 | -30.0 | 12.00 | | | | Average | |
| | | 3 | 190 | 718.0 | -44.0 | 14.00 | | | | | |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace with Detours - 2010 PM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle Drive to Marina | N End | 1 | 4519 | 88 | 14 | 88 | 61 | 88 | 51 | 88 | 14 | 88 |
| | 2 | 2 | 4519 | 88 | 14 | 88 | 61 | 88 | 51 | 88 | 14 | 88 |
| | 3 | 3 | 4519 | 88 | 14 | 88 | 61 | 88 | 51 | 88 | 14 | 88 |
| | 4 | 4 | 4519 | 88 | 14 | 88 | 61 | 88 | 51 | 88 | 14 | 88 |
| | 5 | 6 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 6 | 7 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 7 | 8 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 8 | 9 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 9 | 10 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 9a | 210 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 10 | 11 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 11 | 13 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 12 | 14 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 13 | 15 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 14 | 16 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 15 | 17 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 16 | 18 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 17 | 20 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 18 | 21 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 19 | 22 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 20 | 23 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 21 | 24 | 2545 | 88 | 8 | 88 | 34 | 88 | 29 | 88 | 8 | 88 |
| | 22 | 25 | 824 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 23 | 26 | 824 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 24 | 27 | 824 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 25 | 28 | 824 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 26 | 29 | 824 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 27 | 31 | 824 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 28 | 32 | 824 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 29 | 33 | 824 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 30 | 35 | 824 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 31 | 36 | 824 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 32 | 37 | | | | | | | | | | |
| WB Doyle Drive from Marina to 0+00 | 1 | 39 | 1553 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 40 | 1553 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 41 | 1553 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 42 | 1553 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 43 | 1553 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 44 | 1553 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 46 | 1553 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 47 | 1553 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 48 | 1553 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 49 | 1553 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 50 | 1553 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 51 | 1553 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 | 52 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 14 | 53 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 15 | 54 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 16 | 55 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 17 | 56 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 18 | 57 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 19 | 58 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 20 | 59 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 21 | 60 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 22 | 61 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 23 | 62 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 24 | 63 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 25 | 64 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 26 | 65 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 27 | 66 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 28 | 67 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 29 | 68 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 30 | 69 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 31 | 70 | 4091 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 32 | 71 | 6505 | 88 | 0 | 0 | 13 | 88 | 174 | 88 | 65 | 88 |
| | 33 | 198 | | | | | | | | | | |
| SB/EB Richardson from Doyle to Francis | 1 | 77 | 1607 | 56 | 5 | 56 | 22 | 56 | 18 | 56 | 5 | 56 |
| | 2 | 78 | 1607 | 56 | 5 | 56 | 22 | 56 | 18 | 56 | 5 | 56 |
| | 3 | 79 | 1607 | 56 | 5 | 56 | 22 | 56 | 18 | 56 | 5 | 56 |
| | 4 | 80 | 1607 | 56 | 5 | 56 | 22 | 56 | 18 | 56 | 5 | 56 |
| | 5 | 81 | 1607 | 56 | 5 | 56 | 22 | 56 | 18 | 56 | 5 | 56 |
| | 6 | 82 | 1607 | 56 | 5 | 56 | 22 | 56 | 18 | 56 | 5 | 56 |
| | 7 | 83 | 1607 | 56 | 5 | 56 | 22 | 56 | 18 | 56 | 5 | 56 |
| | 8 | 84 | 1607 | 56 | 5 | 56 | 22 | 56 | 18 | 56 | 5 | 56 |
| | 9 | 85 | 1607 | 56 | 5 | 56 | 22 | 56 | 18 | 56 | 5 | 56 |
| | 10 | 86 | 1607 | 56 | 5 | 56 | 22 | 56 | 18 | 56 | 5 | 56 |
| | 11 | 195 | 1607 | 56 | 5 | 56 | 22 | 56 | 18 | 56 | 5 | 56 |
| | 12 | 196 | 1607 | 56 | 5 | 56 | 22 | 56 | 18 | 56 | 5 | 56 |
| | 13 | 197 | 1607 | 56 | 5 | 56 | 22 | 56 | 18 | 56 | 5 | 56 |
| | 14 | 87 | | | | | | | | | | |
| NB/WB Richardson from Francisco to DD | 1 | 88 | 2315 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 2 | 89 | 2315 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 3 | 90 | 2315 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 4 | 91 | 2315 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 5 | 92 | 2315 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 6 | 93 | 2315 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 7 | 94 | 198` | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 8 | 95 | 2315 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 9 | 96 | 2315 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | 97 | 2315 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 11 | 208 | 2315 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 12 | 209 | 2315 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 13 | 98 | 2315 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 14 | 99 | | | | | | | | | | |
| SB PP Ramp from WB Doyle Drive | 1 | 100 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 2 | 101 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 3 | 102 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 4 | 103 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 5 | 104 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 6 | 105 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 7 | 106 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 8 | 107 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 9 | 108 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 10 | 109 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 11 | 110 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 12 | 111 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 13 | 203 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 14 | 202 | 531 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 15 | 204 | | | | | | | | | | |
| SB PP Ramp from EB Doyle Drive | 1 | 113 | 1975 | 56 | 6 | 56 | 26 | 56 | 22 | 56 | 6 | 56 |
| | 2 | 114 | 1975 | 56 | 6 | 56 | 26 | 56 | 22 | 56 | 6 | 56 |
| | 3 | 115 | 1975 | 56 | 6 | 56 | 26 | 56 | 22 | 56 | 6 | 56 |
| | 4 | 116 | 1975 | 56 | 6 | 56 | 26 | 56 | 22 | 56 | 6 | 56 |
| | 5 | 117 | 1975 | 56 | 6 | 56 | 26 | 56 | 22 | 56 | 6 | 56 |
| | 6 | 118 | 1975 | 56 | 6 | 56 | 26 | 56 | 22 | 56 | 6 | 56 |
| | 7 | 119 | 1975 | 56 | 6 | 56 | 26 | 56 | 22 | 56 | 6 | 56 |
| | 8 | 120 | 1975 | 56 | 6 | 56 | 26 | 56 | 22 | 56 | 6 | 56 |
| | 9 | 205 | 1975 | 56 | 6 | 56 | 26 | 56 | 22 | 56 | 6 | 56 |
| | 10 | 206 | 1975 | 56 | 6 | 56 | 26 | 56 | 22 | 56 | 6 | 56 |
| | 11 | 121 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 | 122 | 2145 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 2 | 207 | 2145 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 3 | 123 | 2145 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 | 124 | 2145 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 5 | 125 | 2145 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 6 | 126 | 2145 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 7 | 127 | 2145 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 8 | 128 | 2145 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 9 | 129 | 2145 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 10 | 130 | 2145 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 11 | 131 | 2145 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 12 | 132 | 2145 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 13 | 191 | 2145 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 14 | 133 | | | | | | | | | | |
| NB PP ramp to EB Doyle Drive | 1 | 134 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 199 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 200 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 201 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 135 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 136 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 137 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 138 | | | | | | | | | | |
| Mason Street | 1 | 139 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 140 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 141 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 142 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 143 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 144 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 145 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 194 | 20 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 146 | 23 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 147 | 23 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 148 | | | | | | | | | | |
| Lincoln Blvd. | 1 | 149 | 183 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 2 | 150 | 275 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 3 | 151 | 275 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 4 | 152 | 275 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 153 | 275 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 6 | 154 | 275 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 7 | 155 | 275 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 8 | 156 | 308 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 9 | 157 | 181 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 10 | 158 | 181 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 11 | 159 | 181 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 12 | 160 | 181 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 13 | 161 | 181 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 14 | 162 | 181 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 15 | 163 | 181 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 16 | 164 | 181 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 17 | 165 | 181 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 18 | 166 | 181 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 19 | 167 | 318 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 20 | 168 | 318 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 0 | 0 |
| | 21 | 169 | 396 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 0 | 0 |
| | 22 | 170 | 450 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 0 | 0 |
| | 23 | 171 | | | | | | | | | | |
| Gorgas Avenue | 1 | 172 | 314 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 173 | 314 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 174 | 314 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 175 | 27 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 176 | 27 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 177 | 27 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 178 | | | | | | | | | | |
| Halleck Street | 1 | 179 | 59 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 180 | 44 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 181 | | | | | | | | | | |
| Girard Road | 1 | 182 | 150 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 183 | 150 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 184 | 150 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 185 | | | | | | | | | | |
| Baker Street | 1 | 186 | 296 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 187 | | | | | | | | | | |
| Montgomery Street | 1 | 188 | 138 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 189 | 138 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 190 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

30 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace with Detours - 2010 PM

Receiver

| Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 1,426.0 | 0.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 1,446.0 | 202.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 6-Building 1184/1185 | 7 | 0 | 1,206.0 | 208.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7-Building 603/Crissy Center | 8 | 0 | 880.0 | 176.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 9-Post Commissary/Sports Basement | 10 | 0 | 552.0 | 16.0 | 4.00 | 1.50 | 69.00 | 71 | 12.0 | 10.0 | Y |
| 10-Battery Blaney/635 | 11 | 0 | 270.0 | -34.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11-Battery Slaughter | 12 | 0 | 208.0 | -40.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12-Battery Sherwood/636 | 13 | 0 | 80.0 | 6.0 | 29.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13-Battery Baldwin | 14 | 0 | 4.0 | 15.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14-Building 644 | 15 | 0 | 42.0 | 66.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15-Building 649 | 16 | 0 | -64.0 | 48.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16-Building 650/Stilwell Hall | 17 | 0 | -140.0 | 52.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17-1253 Armistead Road | 18 | 1 | -502.0 | 258.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18-Home on Armistead Road | 19 | 1 | -674.0 | 320.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19-Building 969 | 20 | 0 | -604.0 | 748.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20-Building 968 | 21 | 0 | -788.0 | 762.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21-Building 967 | 22 | 0 | -910.0 | 750.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22-Building 966 | 23 | 0 | -920.0 | 754.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 23-Building 964 | 24 | 1 | -818.0 | 846.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24-Building 963 | 25 | 1 | -840.0 | 804.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25-Building 962 | 26 | 1 | -814.0 | 816.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26-Unknown Building | 27 | 0 | -1,132.0 | 697.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 27-Log Cabin | 28 | 0 | -720.0 | 188.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28-Unknown Building | 29 | 0 | -988.0 | 408.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29-Building 1298 Storey Ave. | 30 | 2 | -682.0 | 136.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30-Building 1297 Storey Ave. | 31 | 2 | -664.0 | 140.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31-Building 1295 Storey Ave. | 32 | 2 | -632.0 | 130.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32-Building 1294 Storey Ave. | 33 | 2 | -614.0 | 132.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33-Building 1293 Storey Ave. | 34 | 2 | -580.0 | 122.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34-Building 1291 Storey Ave. | 35 | 2 | -552.0 | 112.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35-Building 1290 Storey Ave. | 36 | 2 | -528.0 | 100.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36-Building 1289 Storey Ave. | 37 | 2 | -510.0 | 66.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37-Building 1263 Storey Ave. | 38 | 2 | -420.0 | -114.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38-Building 682/Cross Cultural Center | 39 | 0 | -350.0 | -228.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | -256.0 | -26.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40-Building 662/Cavalry Stable | 41 | 0 | -214.0 | -50.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41-Building 663/Cavalry Stable | 42 | 0 | -220.0 | -80.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42-Building 667/Cavalry Stable | 43 | 0 | -80.0 | -78.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43-National Cemetery Grave Site | 44 | 0 | 300.0 | -102.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44-Building 129 | 45 | 1 | 414.0 | -100.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45-Building 122 | 46 | 0 | 460.0 | -90.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46-Building 108 | 47 | 0 | 536.0 | -64.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47-Building 107 | 48 | 0 | 546.0 | -48.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48-Building 104 | 49 | 0 | 566.0 | -72.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49-Building 105 | 50 | 0 | 598.0 | -20.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50-Building 106 | 51 | 0 | 632.0 | 0.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51-Building 211 | 52 | 0 | 744.0 | 28.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52-Building 204 | 53 | 0 | 834.0 | 68.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53-Building 210 | 54 | 0 | 734.0 | -16.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54-Building 201 | 55 | 0 | 940.0 | 106.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55-Building 220 | 56 | 0 | 908.0 | -16.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56-Building 231 | 57 | 0 | 970.0 | 80.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57-Building 228 | 58 | 0 | 958.0 | 60.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 58-Building 229 | 60 | 0 | 950.0 | 32.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59-Building 223 | 61 | 0 | 950.0 | -14.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60-Building 230 | 62 | 0 | 1,050.0 | 112.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 1,020.0 | 16.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 1,014.0 | -20.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63-Building 1063 | 66 | 0 | 1,160.0 | 44.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64-Building 1062 | 68 | 0 | 1,178.0 | 0.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65-Building 1060 | 69 | 0 | 1,224.0 | -22.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66-Building 1167 | 70 | 0 | 1,216.0 | 94.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67-Building 1163 | 71 | 0 | 1,212.0 | 76.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68-Building 1169 | 72 | 0 | 1,275.0 | 50.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69-Building 1162 | 73 | 0 | 1,266.0 | 32.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70-Building 1170 | 74 | 0 | 1,352.0 | -16.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71-Building 1161 | 75 | 0 | 1,368.0 | -48.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72-Building 1160 | 76 | 0 | 1,398.0 | -50.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73-Building 1152/YMCA | 77 | 0 | 1,420.0 | -76.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74-Building 1151/YMCA Pool | 78 | 0 | 1,476.0 | -114.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75-Building 1004 | 79 | 0 | 1,300.0 | -140.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76-Home at 3234 Lyon St. | 81 | 8 | 1,560.0 | -150.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace with Detours - 2010 PM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

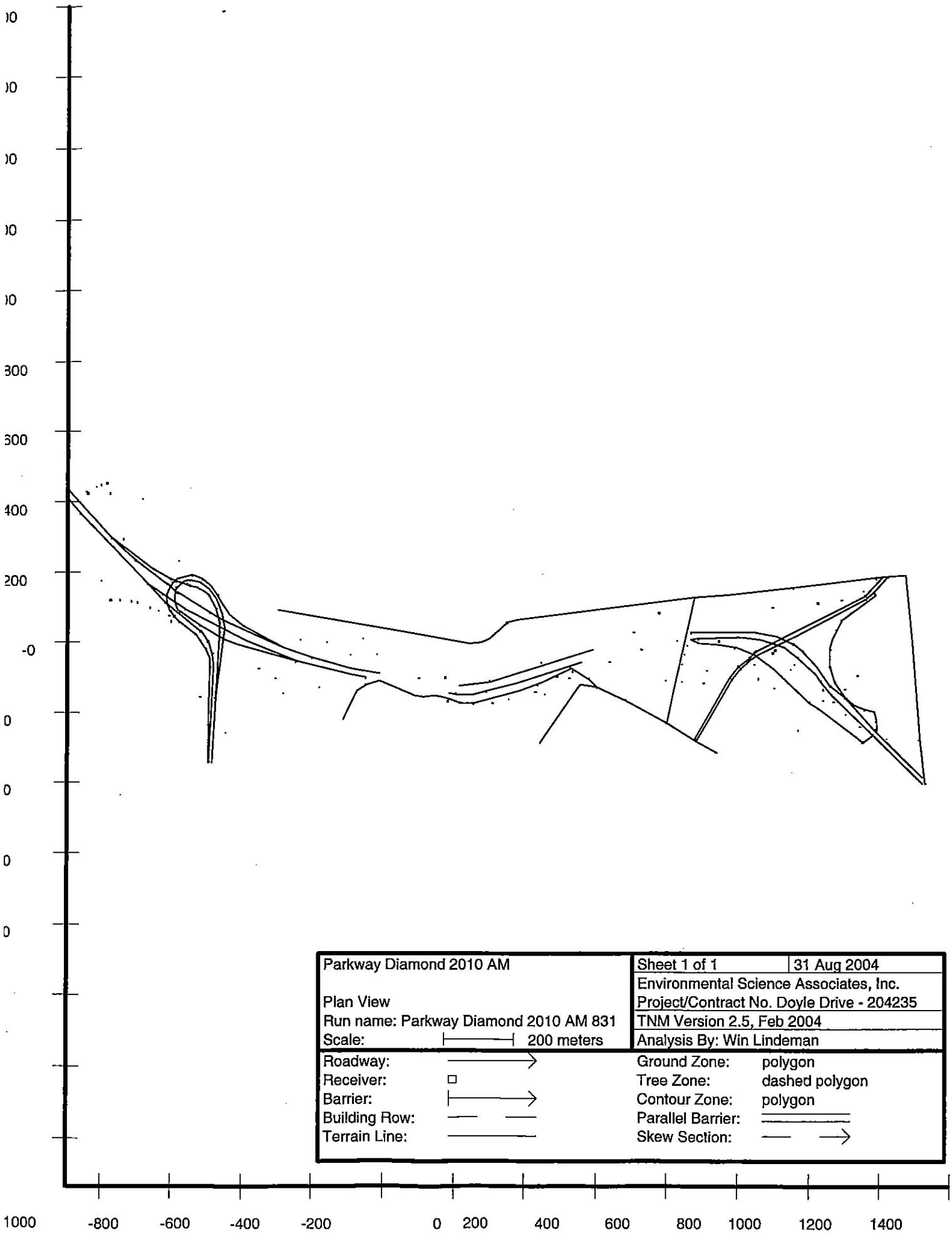
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 62.4 | 66 | 62.4 | 12 | — | 62.4 | 0.0 | 10 | -10.0 |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 57.5 | 66 | 57.5 | 12 | — | 57.5 | 0.0 | 10 | -10.0 |
| 6-Building 1184/1185 | 7 | 0 | 81.0 | 59.8 | 71 | -21.2 | 12 | — | 59.8 | 0.0 | 10 | -10.0 |
| 7-Building 603/Crissy Center | 8 | 0 | 72.0 | 59.6 | 71 | -12.4 | 12 | — | 59.6 | 0.0 | 10 | -10.0 |
| 9-Post Commissary/Sports Basement | 10 | 0 | 69.0 | 64.9 | 71 | -4.1 | 12 | — | 64.9 | 0.0 | 10 | -10.0 |
| 10-Battery Blaney/635 | 11 | 0 | 68.0 | 69.7 | 66 | 1.7 | 12 | Snd Lvl | 69.7 | 0.0 | 10 | -10.0 |
| 11-Battery Slaughter | 12 | 0 | 68.0 | 79.3 | 66 | 11.3 | 12 | Snd Lvl | 79.3 | 0.0 | 10 | -10.0 |
| 12-Battery Sherwood/636 | 13 | 0 | 68.0 | 75.2 | 66 | 7.2 | 12 | Snd Lvl | 75.2 | 0.0 | 10 | -10.0 |
| 13-Battery Baldwin | 14 | 0 | 68.0 | 64.1 | 66 | -3.9 | 12 | — | 64.1 | 0.0 | 10 | -10.0 |
| 14-Building 644 | 15 | 0 | 0.0 | 60.2 | 71 | 60.2 | 12 | — | 60.2 | 0.0 | 10 | -10.0 |
| 15-Building 649 | 16 | 0 | 0.0 | 59.7 | 66 | 59.7 | 12 | — | 59.7 | 0.0 | 10 | -10.0 |
| 16-Building 650/Stilwell Hall | 17 | 0 | 70.0 | 58.7 | 66 | -11.3 | 12 | — | 58.7 | 0.0 | 10 | -10.0 |
| 17-1253 Armistead Road | 18 | 1 | 66.0 | 65.2 | 66 | -0.8 | 12 | — | 65.2 | 0.0 | 10 | -10.0 |
| 18-Home on Armistead Road | 19 | 1 | 66.0 | 72.0 | 66 | 6.0 | 12 | Snd Lvl | 72.0 | 0.0 | 10 | -10.0 |
| 19-Building 969 | 20 | 0 | 0.0 | 52.4 | 71 | 52.4 | 12 | — | 52.4 | 0.0 | 10 | -10.0 |
| 20-Building 968 | 21 | 0 | 0.0 | 54.1 | 71 | 54.1 | 12 | — | 54.1 | 0.0 | 10 | -10.0 |
| 21-Building 967 | 22 | 0 | 0.0 | 56.1 | 71 | 56.1 | 12 | — | 56.1 | 0.0 | 10 | -10.0 |
| 22-Building 966 | 23 | 0 | 0.0 | 56.0 | 71 | 56.0 | 12 | — | 56.0 | 0.0 | 10 | -10.0 |
| 23-Building 964 | 24 | 1 | 0.0 | 53.5 | 66 | 53.5 | 12 | — | 53.5 | 0.0 | 10 | -10.0 |
| 24-Building 963 | 25 | 1 | 0.0 | 54.5 | 66 | 54.5 | 12 | — | 54.5 | 0.0 | 10 | -10.0 |
| 25-Building 962 | 26 | 1 | 0.0 | 54.2 | 66 | 54.2 | 12 | — | 54.2 | 0.0 | 10 | -10.0 |
| 26-Unknown Building | 27 | 0 | 0.0 | 57.3 | 71 | 57.3 | 12 | — | 57.3 | 0.0 | 10 | -10.0 |
| 27-Log Cabin | 28 | 0 | 63.0 | 67.3 | 66 | 4.3 | 12 | Snd Lvl | 67.3 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28-Unknown Building | 29 | 0 | 0.0 | 61.5 | 71 | 61.5 | 12 | — | 61.5 | 0.0 | 10 | -10.0 |
| 29-Building 1298 Storey Ave. | 30 | 2 | 66.5 | 66.3 | 66 | -0.2 | 12 | Snd Lvl | 66.3 | 0.0 | 10 | -10.0 |
| 30-Building 1297 Storey Ave. | 31 | 2 | 66.5 | 67.9 | 66 | 1.4 | 12 | Snd Lvl | 67.9 | 0.0 | 10 | -10.0 |
| 31-Building 1295 Storey Ave. | 32 | 2 | 66.5 | 69.8 | 66 | 3.3 | 12 | Snd Lvl | 69.8 | 0.0 | 10 | -10.0 |
| 32-Building 1294 Storey Ave. | 33 | 2 | 66.5 | 71.5 | 66 | 5.0 | 12 | Snd Lvl | 71.5 | 0.0 | 10 | -10.0 |
| 33-Building 1293 Storey Ave. | 34 | 2 | 66.5 | 72.8 | 66 | 6.3 | 12 | Snd Lvl | 72.8 | 0.0 | 10 | -10.0 |
| 34-Building 1291 Storey Ave. | 35 | 2 | 66.5 | 73.3 | 66 | 6.8 | 12 | Snd Lvl | 73.3 | 0.0 | 10 | -10.0 |
| 35-Building 1290 Storey Ave. | 36 | 2 | 66.5 | 73.3 | 66 | 6.8 | 12 | Snd Lvl | 73.3 | 0.0 | 10 | -10.0 |
| 36-Building 1289 Storey Ave. | 37 | 2 | 66.5 | 70.9 | 66 | 4.4 | 12 | Snd Lvl | 70.9 | 0.0 | 10 | -10.0 |
| 37-Building 1263 Storey Ave. | 38 | 2 | 0.0 | 67.3 | 66 | 67.3 | 12 | Snd Lvl | 67.3 | 0.0 | 10 | -10.0 |
| 38-Building 682/Cross Cultural Center | 39 | 0 | 65.5 | 63.2 | 66 | -2.3 | 12 | — | 63.2 | 0.0 | 10 | -10.0 |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | 64.0 | 65.1 | 71 | 1.1 | 12 | — | 65.1 | 0.0 | 10 | -10.0 |
| 40-Building 662/Cavalry Stable | 41 | 0 | 64.0 | 65.2 | 71 | 1.2 | 12 | — | 65.2 | 0.0 | 10 | -10.0 |
| 41-Building 663/Cavalry Stable | 42 | 0 | 64.0 | 64.0 | 71 | 0.0 | 12 | — | 64.0 | 0.0 | 10 | -10.0 |
| 42-Building 667/Cavalry Stable | 43 | 0 | 64.0 | 64.2 | 71 | 0.2 | 12 | — | 64.2 | 0.0 | 10 | -10.0 |
| 43-National Cemetery Grave Site | 44 | 0 | 69.0 | 74.0 | 66 | 5.0 | 12 | Snd Lvl | 74.0 | 0.0 | 10 | -10.0 |
| 44-Building 129 | 45 | 1 | 0.0 | 60.1 | 66 | 60.1 | 12 | — | 60.1 | 0.0 | 10 | -10.0 |
| 45-Building 122 | 46 | 0 | 0.0 | 70.4 | 71 | 70.4 | 12 | — | 70.4 | 0.0 | 10 | -10.0 |
| 46-Building 108 | 47 | 0 | 0.0 | 67.5 | 71 | 67.5 | 12 | — | 67.5 | 0.0 | 10 | -10.0 |
| 47-Building 107 | 48 | 0 | 0.0 | 67.3 | 71 | 67.3 | 12 | — | 67.3 | 0.0 | 10 | -10.0 |
| 48-Building 104 | 49 | 0 | 74.0 | 64.1 | 71 | -9.9 | 12 | — | 64.1 | 0.0 | 10 | -10.0 |
| 49-Building 105 | 50 | 0 | 74.0 | 67.1 | 71 | -6.9 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 50-Building 106 | 51 | 0 | 76.0 | 65.3 | 71 | -10.7 | 12 | — | 65.3 | 0.0 | 10 | -10.0 |
| 51-Building 211 | 52 | 0 | 0.0 | 65.8 | 71 | 65.8 | 12 | — | 65.8 | 0.0 | 10 | -10.0 |
| 52-Building 204 | 53 | 0 | 0.0 | 64.2 | 71 | 64.2 | 12 | — | 64.2 | 0.0 | 10 | -10.0 |
| 53-Building 210 | 54 | 0 | 0.0 | 62.5 | 71 | 62.5 | 12 | — | 62.5 | 0.0 | 10 | -10.0 |
| 54-Building 201 | 55 | 0 | 0.0 | 63.5 | 71 | 63.5 | 12 | — | 63.5 | 0.0 | 10 | -10.0 |
| 55-Building 220 | 56 | 0 | 0.0 | 59.9 | 71 | 59.9 | 12 | — | 59.9 | 0.0 | 10 | -10.0 |
| 56-Building 231 | 57 | 0 | 0.0 | 61.9 | 71 | 61.9 | 12 | — | 61.9 | 0.0 | 10 | -10.0 |
| 57-Building 228 | 58 | 0 | 0.0 | 60.9 | 71 | 60.9 | 12 | — | 60.9 | 0.0 | 10 | -10.0 |
| 58-Building 229 | 60 | 0 | 0.0 | 59.5 | 71 | 59.5 | 12 | — | 59.5 | 0.0 | 10 | -10.0 |
| 59-Building 223 | 61 | 0 | 0.0 | 57.8 | 71 | 57.8 | 12 | — | 57.8 | 0.0 | 10 | -10.0 |
| 60-Building 230 | 62 | 0 | 0.0 | 62.7 | 71 | 62.7 | 12 | — | 62.7 | 0.0 | 10 | -10.0 |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 57.0 | 59.2 | 66 | 2.2 | 12 | — | 59.2 | 0.0 | 10 | -10.0 |
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 57.0 | 57.9 | 66 | 0.9 | 12 | — | 57.9 | 0.0 | 10 | -10.0 |
| 63-Building 1063 | 66 | 0 | 68.5 | 59.4 | 71 | -9.1 | 12 | — | 59.4 | 0.0 | 10 | -10.0 |
| 64-Building 1062 | 68 | 0 | 68.5 | 58.2 | 71 | -10.3 | 12 | — | 58.2 | 0.0 | 10 | -10.0 |
| 65-Building 1060 | 69 | 0 | 68.5 | 58.1 | 71 | -10.4 | 12 | — | 58.1 | 0.0 | 10 | -10.0 |
| 66-Building 1167 | 70 | 0 | 68.0 | 59.2 | 71 | -8.8 | 12 | — | 59.2 | 0.0 | 10 | -10.0 |
| 67-Building 1163 | 71 | 0 | 0.0 | 60.5 | 71 | 60.5 | 12 | — | 60.5 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 68-Building 1169 | 72 | 0 | 68.0 | 59.5 | 71 | -8.5 | 12 | --- | 59.5 | 0.0 | 10 | -10.0 |
| 69-Building 1162 | 73 | 0 | 0.0 | 60.9 | 71 | 60.9 | 12 | --- | 60.9 | 0.0 | 10 | -10.0 |
| 70-Building 1170 | 74 | 0 | 68.0 | 62.0 | 71 | -6.0 | 12 | --- | 62.0 | 0.0 | 10 | -10.0 |
| 71-Building 1161 | 75 | 0 | 0.0 | 66.4 | 71 | 66.4 | 12 | --- | 66.4 | 0.0 | 10 | -10.0 |
| 72-Building 1160 | 76 | 0 | 0.0 | 71.9 | 71 | 71.9 | 12 | Snd Lvl | 71.9 | 0.0 | 10 | -10.0 |
| 73-Building 1152/YMCA | 77 | 0 | 0.0 | 68.4 | 66 | 68.4 | 12 | Snd Lvl | 68.4 | 0.0 | 10 | -10.0 |
| 74-Building 1151/YMCA Pool | 78 | 0 | 0.0 | 71.7 | 66 | 71.7 | 12 | Snd Lvl | 71.7 | 0.0 | 10 | -10.0 |
| 75-Building 1004 | 79 | 0 | 0.0 | 55.9 | 71 | 55.9 | 12 | --- | 55.9 | 0.0 | 10 | -10.0 |
| 76-Home at 3234 Lyon St. | 81 | 8 | 76.5 | 71.5 | 66 | -5.0 | 12 | Snd Lvl | 71.5 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 232 | 0.0 | 0.0 | 0.0 |
| All Impacted | 27 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |


Parkway Diamond 2010 AM
Plan View
Run name: Parkway Diamond 2010 AM 831
Scale: 200 meters
Sheet 1 of 1
31 Aug 2004
Environmental Science Associates, Inc.
Project/Contract No. Doyle Drive - 204235
TNM Version 2.5, Feb 2004
Analysis By: Win Lindeman
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
-800
-600
-400
-200
0
200
400
600
800
1000
1200
1400

Environmental Science Associates, Inc.
Win Lindeman

31 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2010 AM

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

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle to North Tunnel | 18.0 | 1 - North | 11 | -1,185.0 | 519.0 | 53.00 | | | | Average | |
| | | 2 - 1+97.5 | 10 | -1,060.0 | 368.0 | 56.00 | | | | Average | |
| | | 3 - 4+74 | 9 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 4 - 5+27 | 8 | -827.0 | 138.0 | 51.50 | | | | Average | |
| | | 5 - 5+27 | 7 | -826.0 | 138.0 | 51.50 | | | | Average | Y |
| | | 6 - 6+00 | 6 | -764.0 | 95.0 | 49.00 | | | | Average | Y |
| | | 7 - 8+00 | 5 | -588.0 | 7.0 | 40.00 | | | | Average | Y |
| | | 8 - 9+57 | 4 | -450.0 | -50.0 | 33.00 | | | | Average | Y |
| | | 9 - 11+10 | 3 | -294.0 | -88.0 | 27.00 | | | | Average | Y |
| | | 10 - 11+10 | 2 | -293.0 | -88.0 | 27.00 | | | | Average | |
| | | 11 - 11+53 | 1 | -253.0 | -96.0 | 26.00 | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 18.0 | 1 - 13+93 | 18 | -17.0 | -142.0 | 16.00 | | | | Average | |
| | | 2 - 14+10 | 17 | 0.0 | -143.0 | 16.00 | | | | Average | |
| | | 3 - 14+60 | 16 | 49.0 | -143.0 | 14.00 | | | | Average | |
| | | 4 - 15+00 | 15 | 88.0 | -135.0 | 12.00 | | | | Average | |
| | | 5 - 15+85. | 14 | 170.0 | -112.0 | 9.00 | | | | Average | |
| | | 6 - 17+33. | 13 | 310.0 | -65.0 | 5.00 | | | | Average | |
| | | 7 - 17+80 | 12 | 354.0 | -52.0 | 4.00 | | | | | |
| EB Doyle from South Tunnel to Francisco | 18.0 | 1 - 20+95 | 19 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 21+20 | 20 | 684.0 | 14.0 | 3.00 | | | | Average | |
| | | 3 - 21+20 | 21 | 685.0 | 14.0 | 3.00 | | | | Average | Y |
| | | 4 - 22+42. | 22 | 807.0 | 18.0 | 5.00 | | | | Average | Y |
| | | 5 - 23+00 | 23 | 859.0 | 12.0 | 6.00 | | | | Average | Y |
| | | 6 - 23+25 | 24 | 925.0 | -10.0 | 6.00 | | | | Average | Y |
| | | 7 - 23+25 | 25 | 926.0 | -10.0 | 6.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 - 24+20 | 26 | 966.0 | -41.0 | 5.00 | | | | Average | |
| | | 9 - 24+85. | 27 | 1,016.0 | -88.0 | 4.00 | | | | Average | |
| | | 10 - 25+17 | 28 | 1,030.0 | -108.0 | 3.50 | | | | Average | |
| | | 11 - 25+64 | 29 | 1,062.0 | -146.0 | 3.00 | | | | Average | |
| | | 12 - Gorg | 30 | 1,178.0 | -259.0 | 4.00 | | | | Average | |
| | | 13 - Franc | 31 | 1,320.0 | -400.0 | 4.00 | | | | | |
| WB Doyle from Fancisco to South Tunnel | 10.8 | 1 - Francis | 32 | 1,320.0 | -380.0 | 4.00 | | | | Average | |
| | | 2 - 27+20. | 33 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 3 - 26+00 | 34 | 1,095.0 | -152.0 | 3.50 | | | | Average | |
| | | 4 - 25+40 | 35 | 1,055.0 | -120.0 | 3.50 | | | | Average | |
| | | 5 - 24+73 | 36 | 1,018.0 | -65.0 | 4.00 | | | | Average | |
| | | 6 - 24+20 | 37 | 977.0 | -21.0 | 5.00 | | | | Average | |
| | | 7 - 23+75 | 38 | 950.0 | 0.0 | 6.00 | | | | Average | |
| | | 8 - 23+75 | 39 | 949.0 | 0.0 | 6.00 | | | | Average | Y |
| | | 9 - 23+22 | 40 | 900.0 | 22.0 | 6.00 | | | | Average | Y |
| | | 10 - 23+22 | 41 | 899.0 | 22.0 | 6.00 | | | | Average | |
| | | 11 - 22+68 | 42 | 843.0 | 34.0 | 6.00 | | | | Average | |
| | | 12 - 22+00 | 43 | 775.0 | 33.0 | 4.00 | | | | Average | |
| | | 13 - 20+85 | 44 | 661.0 | 31.0 | 2.00 | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 10.8 | 1 - 18+05 | 45 | 386.0 | -15.0 | 3.50 | | | | Average | |
| | | 2 - 15+00 | 46 | 96.0 | -107.0 | 10.00 | | | | Average | |
| | | 3 - 14+10 | 47 | 10.0 | -119.0 | 14.00 | | | | | |
| WB Doyle from North Tunnel to North End | 13.2 | 1 - 11+80 | 51 | -216.0 | -85.0 | 24.00 | | | | Average | |
| | | 2 - 11+00 | 52 | -295.0 | -69.0 | 27.00 | | | | Average | |
| | | 3 - 11+00 | 53 | -296.0 | -69.0 | 27.00 | | | | Average | Y |
| | | 4 - 9+80 | 54 | -407.0 | -39.0 | 32.00 | | | | Average | Y |
| | | 5 - 8+73 | 55 | -488.0 | -9.0 | 36.00 | | | | Average | Y |
| | | 6 - 7+00 | 56 | -661.0 | 69.0 | 44.00 | | | | Average | Y |
| | | 7 - 6+60 | 57 | -696.0 | 88.0 | 46.00 | | | | Average | Y |
| | | 8 - 6+60 | 58 | -697.0 | 88.0 | 46.00 | | | | Average | |
| | | 9 - 5+54 | 59 | -789.0 | 145.0 | 50.00 | | | | Average | |
| | | 10 - 5+54 | 60 | -790.0 | 145.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+14 | 61 | -817.0 | 169.0 | 52.00 | | | | Average | Y |
| | | 12 - 5+14 | 62 | -818.0 | 169.0 | 52.00 | | | | Average | |
| | | 13 - 4+00 | 63 | -907.0 | 237.0 | 56.00 | | | | Average | |
| | | 14 - 3+10 | 64 | -975.0 | 300.0 | 56.00 | | | | Average | |
| | | 15 - 0+00 | 65 | -1,170.0 | 522.0 | 53.00 | | | | | |
| WB Doyle off ramp to SB Park Presidio | 7.0 | 1 - 0+00 | 66 | -488.0 | -9.0 | 42.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 - 1+30 | 67 | -600.0 | 52.0 | 42.00 | | | | Average | Y |
| | | 3 - 1+80 | 68 | -639.0 | 82.0 | 42.00 | | | | Average | Y |
| | | 4 - 2+20 | 69 | -661.0 | 114.0 | 42.00 | | | | Average | Y |
| | | 5 - 2+20 | 70 | -662.0 | 114.0 | 42.00 | | | | Average | |
| | | 6 - 2+48 | 71 | -673.0 | 139.0 | 42.00 | | | | Average | |
| | | 7 - 3+09 | 72 | -693.0 | 165.0 | 42.00 | | | | Average | |
| | | 8 - 3+40 | 73 | -718.0 | 184.0 | 42.00 | | | | Average | |
| | | 9 - 3+60 | 74 | -746.0 | 194.0 | 42.00 | | | | Average | |
| | | 10 - 3+80 | 75 | -787.0 | 185.0 | 42.00 | | | | Average | |
| | | 11 - 4+00 | 76 | -803.0 | 171.0 | 42.00 | | | | Average | |
| | | 12 - 4+20 | 77 | -813.0 | 153.0 | 42.00 | | | | Average | |
| | | 13 - 4+40 | 78 | -818.0 | 134.0 | 42.00 | | | | Average | |
| | | 14 - 4+59 | 79 | -815.0 | 112.0 | 42.00 | | | | Average | |
| | | 15 - 4+80 | 80 | -807.0 | 93.0 | 42.00 | | | | Average | |
| | | 16 - 5+00 | 81 | -796.0 | 76.0 | 41.00 | | | | Average | |
| | | 17 - 5+20 | 82 | -782.0 | 61.0 | 40.00 | | | | Average | |
| | | 18 - 5+80 | 83 | -735.0 | 24.0 | 40.00 | | | | Average | |
| | | 19 - 6+06 | 84 | -719.0 | 5.0 | 40.00 | | | | Average | |
| | | 20 - 6+31 | 85 | -706.0 | -15.0 | 40.00 | | | | Average | |
| | | 21 - 6+60 | 86 | -696.0 | -42.0 | 40.00 | | | | Average | |
| | | 22 - 6+88 | 87 | -694.0 | -68.0 | 40.00 | | | | Average | |
| | | 23 - 8+23 | 169 | -699.0 | -203.0 | 40.00 | | | | Average | |
| | | 24 - 5+88. | 88 | -698.0 | -337.0 | 40.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 10.2 | 1 - 0+00 | 89 | -690.0 | -337.0 | 40.00 | | | | Average | |
| | | 2A | 170 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 3+72.3 | 90 | -667.0 | 32.0 | 37.00 | | | | Average | |
| | | 3 - 4+00 | 91 | -667.0 | 61.0 | 38.00 | | | | Average | |
| | | 4 - 4+40 | 92 | -677.0 | 101.0 | 40.00 | | | | Average | |
| | | 5 - 4+60 | 93 | -698.0 | 137.0 | 48.00 | | | | Average | |
| | | 6 - 5+00 | 94 | -715.0 | 150.0 | 48.00 | | | | Average | |
| | | 7 - 5+20 | 95 | -734.0 | 160.0 | 49.00 | | | | Average | |
| | | 8 - 5+40 | 96 | -753.0 | 165.0 | 49.00 | | | | Average | |
| | | 9 - 5+53 | 97 | -760.0 | 168.0 | 50.00 | | | | Average | |
| | | 10 - 5+53 | 98 | -761.0 | 168.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+80 | 99 | -792.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 12 - 5+98 | 100 | -807.0 | 183.0 | 52.00 | | | | Average | Y |
| | | 13 - 5+98 | 101 | -808.0 | 183.0 | 52.00 | | | | Average | |
| | | 14 - 6+58. | 102 | -857.0 | 212.0 | 53.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15 - 8+04. | 103 | -975.0 | 300.0 | 56.00 | | | | | |
| NB Park Presidio to EB Doyle Drive | 7.0 | 1 - 0+00 | 104 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 1+35.9 | 105 | -657.0 | 20.0 | 36.00 | | | | Average | |
| | | 3 - 1+60 | 106 | -654.0 | 44.0 | 40.00 | | | | Average | |
| | | 4 - 1+80 | 107 | -657.0 | 65.0 | 40.00 | | | | Average | |
| | | 5 - 2+00 | 108 | -661.0 | 85.0 | 40.00 | | | | Average | |
| | | 6 - 2+20 | 109 | -667.0 | 104.0 | 42.00 | | | | Average | |
| | | 7 - 2+40 | 110 | -675.0 | 123.0 | 42.00 | | | | Average | |
| | | 8 - 2+60 | 111 | -686.0 | 140.0 | 42.00 | | | | Average | |
| | | 9 - 2+81.9 | 112 | -700.0 | 157.0 | 42.00 | | | | Average | |
| | | 10 - 3+09. | 113 | -723.0 | 175.0 | 42.00 | | | | Average | |
| | | 11 - 3+40 | 114 | -754.0 | 180.0 | 42.00 | | | | Average | |
| | | 12 - 3+60 | 115 | -775.0 | 173.0 | 42.00 | | | | Average | |
| | | 13 - 3+80 | 116 | -790.0 | 158.0 | 42.00 | | | | Average | |
| | | 14 - 4+00 | 117 | -796.0 | 138.0 | 42.00 | | | | Average | |
| | | 15 - 4+20 | 118 | -795.0 | 116.0 | 42.00 | | | | Average | |
| | | 16 - 4+40 | 119 | -788.0 | 97.0 | 42.00 | | | | Average | |
| | | 17 - 4+53. | 120 | -778.0 | 88.0 | 42.00 | | | | Average | |
| | | 18 - 5+20 | 121 | -722.0 | 51.0 | 42.00 | | | | Average | |
| | | 19 - 5+20 | 122 | -721.0 | 51.0 | 42.00 | | | | Average | Y |
| | | 20 - 6+00 | 123 | -652.0 | 11.0 | 42.00 | | | | Average | Y |
| | | 21 - 6+40 | 124 | -614.0 | -3.0 | 42.00 | | | | Average | |
| | | 22 - 8+19. | 125 | -450.0 | -50.0 | 33.00 | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 10.0 | 1 - 0+00 | 128 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 2 - 0+65 | 129 | -823.0 | 116.0 | 52.00 | | | | Average | |
| | | 3 - 0+65 | 130 | -822.0 | 116.0 | 52.00 | | | | Average | Y |
| | | 4 - 2+00 | 131 | -723.0 | 35.0 | 44.00 | | | | Average | Y |
| | | 5 - 2+00 | 132 | -722.0 | 35.0 | 44.00 | | | | Average | |
| | | 6 - 2+40 | 133 | -700.0 | 5.0 | 42.00 | | | | Average | |
| | | 7 - 2+80 | 134 | -687.0 | -30.0 | 40.00 | | | | Average | |
| | | 8 - 3+14.5 | 135 | -685.0 | -63.0 | 37.00 | | | | Average | |
| | | 9 - 5+88.1 | 136 | -698.0 | -337.0 | 40.00 | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 6.0 | 1 - 0+00 | 137 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 0+42 | 138 | 685.0 | 0.0 | 2.00 | | | | Average | |
| | | 3 - 0+42 | 139 | 686.0 | 0.0 | 2.00 | | | | Average | Y |
| | | 4 - 1+00 | 140 | 740.0 | -2.0 | 2.00 | | | | Average | Y |
| | | 5 - 1+50 | 141 | 786.0 | -11.0 | 2.00 | | | | Average | Y |
| | | 6 - 1+50 | 142 | 787.0 | -11.0 | 2.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 - 2+12.1 | 143 | 843.0 | -30.0 | 1.00 | | | | Average | Y |
| | | 8 - EC 0+7 | 144 | 898.0 | -75.0 | 1.50 | | | | Average | |
| | | 9 | 145 | 998.0 | -167.0 | 3.00 | | | | Average | |
| | | 10 | 146 | 1,024.0 | -186.0 | 3.00 | | | | Average | |
| | | 11 | 147 | 1,128.0 | -265.0 | 4.00 | | | | Average | |
| | | 12 | 148 | 1,148.0 | -281.0 | 4.00 | | | | Average | |
| | | 13 - Inters | 149 | 1,178.0 | -259.0 | 4.00 | | | | | |
| NB Girard Rd. from Marina to Lincoln | 3.7 | 1 - 0+00 | 150 | 1,201.0 | 188.0 | 4.00 | | | | Average | |
| | | 2 - 0+65 | 151 | 1,153.0 | 136.0 | 3.60 | | | | Average | |
| | | 3 - 2+80 | 152 | 965.0 | 40.0 | 0.50 | | | | Average | |
| | | 4 - 4+09.9 | 153 | 843.0 | -23.0 | 0.00 | | | | Average | |
| | | 5 - 4+40 | 154 | 828.0 | -40.0 | 1.00 | | | | Average | |
| | | 6 - 4+80 | 155 | 796.0 | -65.0 | 4.70 | | | | Average | |
| | | 7 - 5+20 | 156 | 772.0 | -98.0 | 5.50 | | | | Average | |
| | | 8 - 7+20 | 157 | 673.0 | -273.0 | 11.50 | | | | | |
| SB Girard Rd. from Lincoln to Marina | 3.7 | 1 - 7+20 | 158 | 678.0 | -273.0 | 11.50 | | | | Average | |
| | | 2 - 5+20 | 159 | 779.0 | -102.0 | 5.50 | | | | Average | |
| | | 3 - 4+80 | 160 | 803.0 | -70.0 | 4.70 | | | | Average | |
| | | 4 - 4+40 | 161 | 831.0 | -44.0 | 1.00 | | | | Average | |
| | | 5 - 4+09.9 | 162 | 852.0 | -31.0 | 0.00 | | | | Average | |
| | | 6 - 2+80 | 163 | 965.0 | 27.0 | 0.50 | | | | Average | |
| | | 7 - 0+65 | 164 | 1,156.0 | 127.0 | 3.60 | | | | Average | |
| | | 8 - Palace | 239 | 1,178.0 | 146.0 | 4.00 | | | | Average | |
| | | 9 - Mason | 165 | 1,218.0 | 191.0 | 4.00 | | | | | |
| Halleck St. from Lincon to Mason | 7.2 | 1 - 3+65 | 166 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 2 - 2+77.9 | 167 | 612.0 | -139.0 | 10.00 | | | | Average | |
| | | 3 - 0+00 | 168 | 673.0 | 130.0 | 4.00 | | | | | |
| Lincoln from McDowell to Letterman | 7.3 | 1 | 180 | -316.0 | -214.0 | 33.00 | | | | Average | |
| | | 2 | 181 | -279.0 | -132.0 | 33.00 | | | | Average | |
| | | 3 | 182 | -251.0 | -115.0 | 33.00 | | | | Average | |
| | | 4 | 183 | -216.0 | -104.0 | 32.00 | | | | Average | |
| | | 5 | 184 | -118.0 | -147.0 | 31.00 | | | | Average | |
| | | 6 | 185 | -93.0 | -152.0 | 29.00 | | | | Average | |
| | | 7 | 186 | -59.0 | -148.0 | 29.00 | | | | Average | |
| | | 8 | 187 | -38.0 | -151.0 | 29.00 | | | | Average | |
| | | 9 | 188 | -14.0 | -158.0 | 29.00 | | | | Average | |
| | | 10 | 189 | 13.0 | -167.0 | 27.00 | | | | Average | |
| | | 11 | 190 | 50.0 | -170.0 | 26.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12 | 191 | 182.0 | -134.0 | 19.00 | | | | Average | |
| | | 13 | 192 | 245.0 | -108.0 | 15.00 | | | | Average | |
| | | 14 | 193 | 324.0 | -68.0 | 12.00 | | | | Average | |
| | | 15 | 194 | 376.0 | -100.0 | 13.00 | | | | Average | |
| | | 16 | 195 | 396.0 | -124.0 | 13.00 | | | | Average | |
| | | 17 | 196 | 478.0 | -160.0 | 12.00 | | | | Average | |
| | | 18 | 197 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 19 | 198 | 673.0 | -273.0 | 11.50 | | | | Average | |
| | | 20 | 199 | 735.0 | -310.0 | 12.00 | | | | | |
| Mason St. from Crissy Ave. to Marina | 7.3 | 1 | 200 | -500.0 | 96.0 | 3.00 | | | | Average | |
| | | 2 | 201 | 40.0 | 0.0 | 4.00 | | | | Average | |
| | | 3 | 202 | 72.0 | 4.0 | 4.00 | | | | Average | |
| | | 4 | 203 | 96.0 | 15.0 | 4.00 | | | | Average | |
| | | 5 | 204 | 144.0 | 60.0 | 4.00 | | | | Average | |
| | | 6 | 205 | 174.0 | 68.0 | 4.00 | | | | Average | |
| | | 7 | 206 | 673.0 | 130.0 | 4.00 | | | | Average | |
| | | 8 | 207 | 768.0 | 138.0 | 4.00 | | | | Average | |
| | | 9 | 208 | 952.0 | 159.0 | 4.00 | | | | Average | |
| | | 10 | 209 | 1,185.0 | 187.0 | 4.00 | | | | Average | |
| | | 11 | 210 | 1,218.0 | 191.0 | 4.00 | | | | Average | |
| | | 12 | 211 | 1,270.0 | 196.0 | 4.00 | | | | | |
| Baker St. from Marina to Richardson | 7.3 | 1 | 212 | 1,270.0 | 196.0 | 4.00 | | | | Average | |
| | | 2 | 213 | 1,280.0 | 93.0 | 4.00 | | | | Average | |
| | | 3 | 214 | 1,290.0 | -7.0 | 4.00 | | | | Average | |
| | | 4 | 215 | 1,310.0 | -276.0 | 4.00 | | | | Average | |
| | | 5 | 216 | 1,327.0 | -400.0 | 4.00 | | | | | |
| Palace Drive from Richardson to Marina | 7.3 | 1 | 217 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 2 | 218 | 1,186.0 | -245.0 | 4.00 | | | | Average | |
| | | 3 | 219 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 4 | 220 | 1,180.0 | -195.0 | 3.50 | | | | Average | |
| | | 5 | 221 | 1,151.0 | -188.0 | 3.00 | | | | Average | |
| | | 6 | 222 | 1,125.0 | -175.0 | 3.00 | | | | Average | |
| | | 7 | 223 | 1,100.0 | -153.0 | 3.00 | | | | Average | |
| | | 8 | 224 | 1,081.0 | -130.0 | 3.00 | | | | Average | |
| | | 9 | 225 | 1,069.0 | -108.0 | 3.00 | | | | Average | |
| | | 10 | 226 | 1,060.0 | -83.0 | 3.00 | | | | Average | |
| | | 11 | 227 | 1,055.0 | -63.5 | 4.00 | | | | Average | |
| | | 12 | 228 | 1,053.0 | -39.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 13 | 229 | 1,055.0 | -14.0 | 4.00 | | | | Average | |
| | | 14 | 230 | 1,061.0 | 10.0 | 4.00 | | | | Average | |
| | | 15 | 231 | 1,073.0 | 40.0 | 4.00 | | | | Average | |
| | | 16 | 232 | 1,088.0 | 68.0 | 4.00 | | | | Average | |
| | | 17 | 233 | 1,116.0 | 91.0 | 4.00 | | | | Average | |
| | | 18 | 234 | 1,185.0 | 139.0 | 4.00 | | | | Average | |
| | | 19 | 235 | 1,178.0 | 146.0 | 4.00 | | | | | |
| Montgomery St. from Sherlan to Lincoln | 9.2 | 1 | 236 | 237.0 | -280.0 | 16.00 | | | | Average | |
| | | 2 | 237 | 350.0 | -117.0 | 13.00 | | | | Average | |
| | | 3 | 238 | 396.0 | -124.0 | 13.00 | | | | | |

Environmental Science Associates, Inc.
Win Lindeman

31 August 2004
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2010 AM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle to North Tunnel | 1 - North End | 11 | 5813 | 88 | 60 | 88 | 12 | 88 | 60 | 88 | 60 | 88 |
| | 2 - 1+97.539 | 10 | 5813 | 88 | 60 | 88 | 12 | 88 | 60 | 88 | 60 | 88 |
| | 3 - 4+74 | 9 | 3920 | 88 | 41 | 88 | 8 | 88 | 41 | 88 | 41 | 88 |
| | 4 - 5+27 | 8 | 3920 | 88 | 41 | 88 | 8 | 88 | 41 | 88 | 41 | 88 |
| | 5 - 5+27 | 7 | 3920 | 88 | 41 | 88 | 8 | 88 | 41 | 88 | 41 | 88 |
| | 6 - 6+00 | 6 | 3920 | 88 | 41 | 88 | 8 | 88 | 41 | 88 | 41 | 88 |
| | 7 - 8+00 | 5 | 3920 | 88 | 41 | 88 | 8 | 88 | 41 | 88 | 41 | 88 |
| | 8 - 9+57 | 4 | 4725 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 9 - 11+10 | 3 | 4725 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 10 - 11+10 | 2 | 4725 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 11 - 11+53 | 1 | | | | | | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 1 - 13+93 | 18 | 4725 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 2 - 14+10 | 17 | 4725 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 3 - 14+60 | 16 | 4725 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 4 - 15+00 | 15 | 4725 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 5 - 15+85.44 | 14 | 4725 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 6 - 17+33.198 | 13 | 4725 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 7 - 17+80 | 12 | | | | | | | | | | |
| EB Doyle from South Tunnel to Francisco | 1 - 20+95 | 19 | 2981 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 2 - 21+20 | 20 | 2981 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 3 - 21+20 | 21 | 2981 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 22+42.630 | 22 | 2981 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 5 - 23+00 | 23 | 2981 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 6 - 23+25 | 24 | 2981 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 7 - 23+25 | 25 | 2981 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 8 - 24+20 | 26 | 2981 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 9 - 24+85.060 | 27 | 2981 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 10 - 25+17.10 | 28 | 2981 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 11 - 25+64.74 | 29 | 2981 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 12 - Gorgas I | 30 | 2981 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 13 - Francisc | 31 | | | | | | | | | | |
| WB Doyle from Fanclsco to South Tunnel | 1 - Francisco | 32 | 1576 | 56 | 16 | 56 | 21 | 56 | 10 | 56 | 16 | 56 |
| | 2 - 27+20.608 | 33 | 1576 | 56 | 16 | 56 | 21 | 56 | 10 | 56 | 16 | 56 |
| | 3 - 26+00 | 34 | 1576 | 56 | 16 | 56 | 21 | 56 | 10 | 56 | 16 | 56 |
| | 4 - 25+40 | 35 | 1576 | 56 | 16 | 56 | 21 | 56 | 10 | 56 | 16 | 56 |
| | 5 - 24+73 | 36 | 1576 | 56 | 16 | 56 | 21 | 56 | 10 | 56 | 16 | 56 |
| | 6 - 24+20 | 37 | 1576 | 56 | 16 | 56 | 21 | 56 | 10 | 56 | 16 | 56 |
| | 7 - 23+75 | 38 | 1576 | 56 | 16 | 56 | 21 | 56 | 10 | 56 | 16 | 56 |
| | 8 - 23+75 | 39 | 1576 | 56 | 16 | 56 | 21 | 56 | 10 | 56 | 16 | 56 |
| | 9 - 23+22 | 40 | 1576 | 56 | 16 | 56 | 21 | 56 | 10 | 56 | 16 | 56 |
| | 10 - 23+22 | 41 | 1576 | 56 | 16 | 56 | 21 | 56 | 10 | 56 | 16 | 56 |
| | 11 - 22+68 | 42 | 1576 | 56 | 16 | 56 | 21 | 56 | 10 | 56 | 16 | 56 |
| | 12 - 22+00 | 43 | 1576 | 56 | 16 | 56 | 21 | 56 | 10 | 56 | 16 | 56 |
| | 13 - 20+85 | 44 | | | | | | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 1 - 18+05 | 45 | 2033 | 88 | 21 | 88 | 28 | 88 | 13 | 88 | 21 | 88 |
| | 2 - 15+00 | 46 | 2033 | 88 | 21 | 88 | 28 | 88 | 13 | 88 | 21 | 88 |
| | 3 - 14+10 | 47 | | | | | | | | | | |
| WB Doyle from North Tunnel to North End | 1 - 11+80 | 51 | 2033 | 88 | 21 | 88 | 28 | 88 | 13 | 88 | 21 | 88 |
| | 2 - 11+00 | 52 | 2033 | 88 | 21 | 88 | 28 | 88 | 13 | 88 | 21 | 88 |
| | 3 - 11+00 | 53 | 2033 | 88 | 21 | 88 | 28 | 88 | 13 | 88 | 21 | 88 |
| | 4 - 9+80 | 54 | 2033 | 88 | 21 | 88 | 28 | 88 | 13 | 88 | 21 | 88 |
| | 5 - 8+73 | 55 | 1688 | 88 | 18 | 88 | 23 | 88 | 11 | 88 | 18 | 88 |
| | 6 - 7+00 | 56 | 1688 | 88 | 18 | 88 | 23 | 88 | 11 | 88 | 18 | 88 |
| | 7 - 6+60 | 57 | 1688 | 88 | 18 | 88 | 23 | 88 | 11 | 88 | 18 | 88 |
| | 8 - 6+60 | 58 | 1688 | 88 | 18 | 88 | 23 | 88 | 11 | 88 | 18 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9 - 5+54 | 59 | 1688 | 88 | 18 | 88 | 23 | 88 | 11 | 88 | 18 | 88 |
| | 10 - 5+54 | 60 | 1688 | 88 | 18 | 88 | 23 | 88 | 11 | 88 | 18 | 88 |
| | 11 - 5+14 | 61 | 1688 | 88 | 18 | 88 | 23 | 88 | 11 | 88 | 18 | 88 |
| | 12 - 5+14 | 62 | 1688 | 88 | 18 | 88 | 23 | 88 | 11 | 88 | 18 | 88 |
| | 13 - 4+00 | 63 | 1688 | 88 | 18 | 88 | 23 | 88 | 11 | 88 | 18 | 88 |
| | 14 - 3+10 | 64 | 3340 | 88 | 35 | 88 | 45 | 88 | 21 | 88 | 35 | 88 |
| | 15 - 0+00 | 65 | | | | | | | | | | |
| WB Doyle off ramp to SB Park Presidio | 1 - 0+00 | 66 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 2 - 1+30 | 67 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 3 - 1+80 | 68 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 4 - 2+20 | 69 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 5 - 2+20 | 70 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 6 - 2+48 | 71 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 7 - 3+09 | 72 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 8 - 3+40 | 73 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 9 - 3+60 | 74 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 10 - 3+80 | 75 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 11 - 4+00 | 76 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 12 - 4+20 | 77 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 13 - 4+40 | 78 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 14 - 4+59 | 79 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 15 - 4+80 | 80 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 16 - 5+00 | 81 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 17 - 5+20 | 82 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 18 - 5+80 | 83 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 19 - 6+06 | 84 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 20 - 6+31 | 85 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 21 - 6+60 | 86 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 22 - 6+88 | 87 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 23 - 8+23 | 169 | 345 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 24 - 5+88.184 | 88 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 - 0+00 | 89 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 2A | 170 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 2 - 3+72.391 | 90 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 - 4+00 | 91 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 4 - 4+40 | 92 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 5 - 4+60 | 93 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 6 - 5+00 | 94 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 7 - 5+20 | 95 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 8 - 5+40 | 96 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 9 - 5+53 | 97 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 10 - 5+53 | 98 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 11 - 5+80 | 99 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 12 - 5+98 | 100 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 13 - 5+98 | 101 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 14 - 6+58.037 | 102 | 1674 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 15 - 8+04.414 | 103 | | | | | | | | | | |
| NB Park Presidio to EB Doyle Drive | 1 - 0+00 | 104 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 2 - 1+35.965 | 105 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 3 - 1+60 | 106 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 4 - 1+80 | 107 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 5 - 2+00 | 108 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 6 - 2+20 | 109 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 7 - 2+40 | 110 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 8 - 2+60 | 111 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 9 - 2+81.908 | 112 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 10 - 3+09.875 | 113 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 11 - 3+40 | 114 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 12 - 3+60 | 115 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 13 - 3+80 | 116 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 14 - 4+00 | 117 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 15 - 4+20 | 118 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 16 - 4+40 | 119 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 17 - 4+53.16 | 120 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 18 - 5+20 | 121 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 19 - 5+20 | 122 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 20 - 6+00 | 123 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 21 - 6+40 | 124 | 803 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 22 - 8+19.142 | 125 | | | | | | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 1 - 0+00 | 128 | 1893 | 56 | 20 | 56 | 4 | 56 | 20 | 56 | 20 | 56 |
| | 2 - 0+65 | 129 | 1893 | 56 | 20 | 56 | 4 | 56 | 20 | 56 | 20 | 56 |
| | 3 - 0+65 | 130 | 1893 | 56 | 20 | 56 | 4 | 56 | 20 | 56 | 20 | 56 |
| | 4 - 2+00 | 131 | 1893 | 56 | 20 | 56 | 4 | 56 | 20 | 56 | 20 | 56 |
| | 5 - 2+00 | 132 | 1893 | 56 | 20 | 56 | 4 | 56 | 20 | 56 | 20 | 56 |
| | 6 - 2+40 | 133 | 1893 | 56 | 20 | 56 | 4 | 56 | 20 | 56 | 20 | 56 |
| | 7 - 2+80 | 134 | 1893 | 56 | 20 | 56 | 4 | 56 | 20 | 56 | 20 | 56 |
| | 8 - 3+14.595 | 135 | 1893 | 56 | 20 | 56 | 4 | 56 | 20 | 56 | 20 | 56 |
| | 9 - 5+88.184 | 136 | | | | | | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 1 - 0+00 | 137 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+42 | 138 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+42 | 139 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 1+00 | 140 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 1+50 | 141 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 1+50 | 142 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 2+12.133 | 143 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - EC 0+74.1 | 144 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 145 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 146 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 147 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 148 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 - Intersect | 149 | | | | | | | | | | |
| NB Girard Rd. from Marina to Lincoln | 1 - 0+00 | 150 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+65 | 151 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 2+80 | 152 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 4+09.995 | 153 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+40 | 154 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 4+80 | 155 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 5+20 | 156 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - 7+20 | 157 | | | | | | | | | | |
| SB Girard Rd. from Lincoln to Marina | 1 - 7+20 | 158 | 34 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 5+20 | 159 | 34 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 4+80 | 160 | 34 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 4+40 | 161 | 34 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+09.995 | 162 | 34 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 2+80 | 163 | 34 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 0+65 | 164 | 34 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - Palace Dr | 239 | 34 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 - Mason/Mc | 165 | | | | | | | | | | |
| Halleck St. from Lincon to Mason | 1 - 3+65 | 166 | 499 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 2+77.948 | 167 | 499 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+00 | 168 | | | | | | | | | | |
| Lincoln from McDowell to Letterman | 1 | 180 | 82 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 2 | 181 | 82 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 3 | 182 | 82 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 4 | 183 | 110 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 5 | 184 | 110 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 6 | 185 | 110 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 7 | 186 | 110 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 8 | 187 | 110 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 9 | 188 | 110 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 10 | 189 | 122 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 11 | 190 | 57 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 12 | 191 | 57 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 13 | 192 | 57 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 14 | 193 | 57 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 15 | 194 | 57 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 16 | 195 | 149 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 17 | 196 | 197 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 18 | 197 | 617 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 19 | 198 | 679 | 32 | 7 | 32 | 0 | 0 | 7 | 32 | 0 | 0 |
| | 20 | 199 | | | | | | | | | | |
| Mason St. from Crissy Ave. to Marina | 1 | 200 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 201 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 202 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 203 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 204 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 205 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 206 | 25 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 207 | 25 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 208 | 27 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 209 | 27 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 210 | 1785 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 211 | | | | | | | | | | |
| Baker St. from Marina to Richardson | 1 | 212 | 67 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 213 | 12 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 214 | 12 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 215 | 22 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 216 | | | | | | | | | | |
| Palace Drive from Richardson to Marina | 1 | 217 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 218 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 219 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 220 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 221 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 222 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 223 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 224 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 225 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 226 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 227 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 228 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 | 229 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 14 | 230 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 15 | 231 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 16 | 232 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 17 | 233 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 18 | 234 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 19 | 235 | | | | | | | | | | |
| Montgomery St. from Sherian to Lincoln | 1 | 236 | 95 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 237 | 95 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 238 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

31 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2010 AM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 1,098.0 | -130.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 1,133.0 | -91.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3 Buildings 1187/1188 | 3 | 0 | 1,148.0 | 150.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4 Building 1182 | 4 | 0 | 1,087.0 | 125.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5 Buildings 1183/1186 | 5 | 0 | 1,020.0 | 116.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6 Buildings 1184/1185 | 6 | 0 | 893.0 | 103.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7 Building 603/Crissy Center | 7 | 0 | 571.0 | 88.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8 PX Building | 8 | 0 | 500.0 | 33.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9 Post Commissary/Sports Basement | 9 | 0 | 240.0 | -54.0 | 4.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 10 Battery Blaney | 10 | 0 | -30.0 | -96.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11 Battery Slaughter | 11 | 0 | -104.0 | -98.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12 Battery Sherwood | 12 | 0 | -223.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13 Battery Baldwin | 13 | 0 | -297.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14 Building 644 | 14 | 0 | -260.0 | 16.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15 Building 649 | 15 | 0 | -364.0 | 4.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16 Building 650/Stilwell Hall | 16 | 0 | -437.0 | 11.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17 1253 Armistead Road | 17 | 1 | -785.0 | 235.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18 Home on Armistead Road | 18 | 1 | -939.0 | 296.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19 Building 969 | 19 | 0 | -887.0 | 410.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20 Building 968 | 20 | 0 | -978.0 | 427.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21 Building 967 | 21 | 0 | -1,040.0 | 427.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22 Building 966 | 22 | 0 | -1,044.0 | 433.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 Building 964 | 23 | 0 | -1,016.0 | 446.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24 Building 963 | 24 | 0 | -1,002.0 | 452.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25 Building 962 | 25 | 0 | -987.0 | 455.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26 Unknown Building | 26 | 0 | -1,153.0 | 421.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27 Building 1299/Log Cabin | 27 | 0 | -1,003.0 | 177.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28 Building 1387 | 28 | 0 | -1,105.0 | 268.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29 Building 1298 Storey Ave. | 29 | 2 | -977.0 | 123.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30 Building 1297 Storey Ave. | 30 | 2 | -950.0 | 123.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31 Building 1295 Storey Ave. | 31 | 2 | -919.0 | 119.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32 Building 1294 Storey Ave. | 32 | 2 | -900.0 | 116.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33 Building 1293 Storey Ave. | 33 | 2 | -865.0 | 102.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34 Building 1291 Storey Ave. | 34 | 2 | -841.0 | 92.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35 Building 1290 Storey Ave. | 35 | 2 | -811.0 | 78.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36 Building 1289 Storey Ave. | 36 | 2 | -804.0 | 63.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37 Building 1263 Storey Ave. | 37 | 2 | -722.0 | -152.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38 Building 682/Cross Cultural Center | 38 | 0 | -650.0 | -254.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | -556.0 | -70.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40 Building 662/Cavalry Stable | 40 | 0 | -508.0 | -97.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41 Building 663/Cavalry Stable | 41 | 0 | -488.0 | -140.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42 Building 667/Cavalry Stable | 42 | 0 | -384.0 | -122.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43 National Cemetery Grave Site | 43 | 0 | -23.0 | -163.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44 Building 129 | 44 | 1 | 104.0 | -168.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45 Building 122 | 45 | 0 | 148.0 | -157.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46 Building 108 | 46 | 0 | 225.0 | -136.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47 Building 107 | 47 | 0 | 230.0 | -120.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48 Building 104 | 48 | 0 | 252.0 | -143.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49 Building 105 | 49 | 0 | 285.0 | -93.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50 Building 106 | 50 | 0 | 328.0 | -78.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51 Building 211 | 51 | 0 | 433.0 | -52.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52 Building 204 | 52 | 0 | 522.0 | -17.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53 Building 210 | 53 | 0 | 320.0 | -97.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54 Building 201 | 54 | 0 | 623.0 | 8.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55 Building 220 | 55 | 0 | 590.0 | -104.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56 Building 231 | 56 | 0 | 650.0 | -5.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57 Building 228 | 57 | 0 | 643.0 | -31.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 Building 229 | 58 | 0 | 637.0 | -60.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59 Building 223 | 59 | 0 | 636.0 | -108.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60 Building 230 | 60 | 0 | 740.0 | 6.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 706.0 | -77.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 698.0 | -113.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63 Building 1063 | 63 | 0 | 842.0 | -60.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64 Building 1062 | 64 | 0 | 852.0 | -100.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65 Building 1060 | 65 | 0 | 898.0 | -127.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66 Building 1167 | 66 | 0 | 900.0 | -18.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67 Building 1163 | 67 | 0 | 892.0 | -26.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68 Building 1169 | 68 | 0 | 955.0 | -58.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69 Building 1162 | 69 | 0 | 943.0 | -73.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70 Building 1170 | 70 | 0 | 1,035.0 | -132.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71 Building 1161 | 71 | 0 | 1,035.0 | -161.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72 Building 1160 | 72 | 0 | 1,066.0 | -166.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73 Building 1152/YMCA | 73 | 0 | 1,100.0 | -200.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74 Building 1151/YMCA Pool | 74 | 0 | 1,140.0 | -235.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75 Building 1004 | 75 | 0 | 965.0 | -246.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 1,216.0 | -270.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

31 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2010 AM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

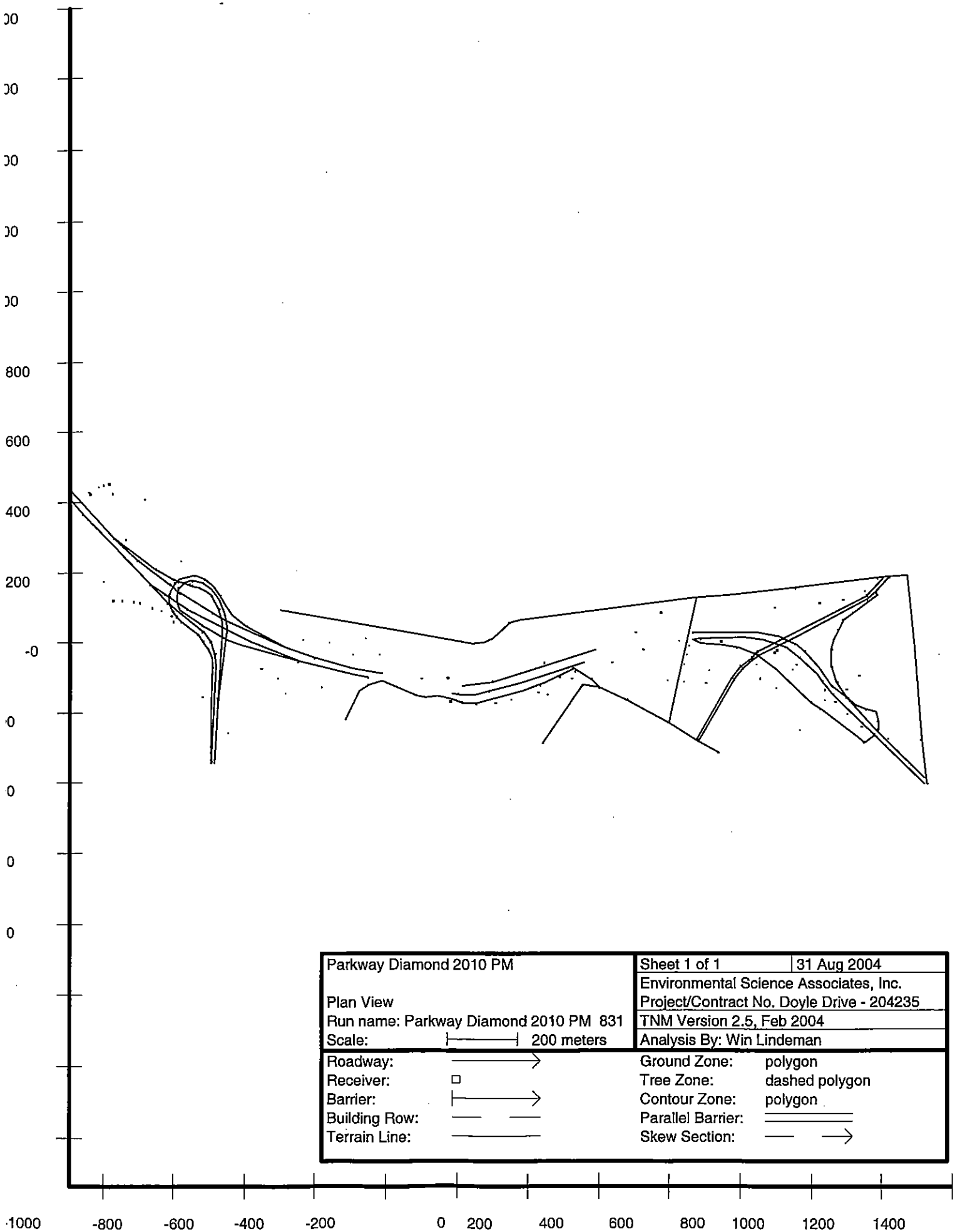
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 68.3 | 66 | 68.3 | 12 | Snd Lvl | 68.3 | 0.0 | 10 | -10.0 |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 60.9 | 66 | 60.9 | 12 | — | 60.9 | 0.0 | 10 | -10.0 |
| 3 Buildings 1187/1188 | 3 | 0 | 81.0 | 55.8 | 71 | -25.2 | 12 | — | 55.8 | 0.0 | 10 | -10.0 |
| 4 Building 1182 | 4 | 0 | 81.0 | 54.8 | 71 | -26.2 | 12 | — | 54.8 | 0.0 | 10 | -10.0 |
| 5 Buildings 1183/1186 | 5 | 0 | 81.0 | 55.6 | 71 | -25.4 | 12 | — | 55.6 | 0.0 | 10 | -10.0 |
| 6 Buildings 1184/1185 | 6 | 0 | 81.0 | 58.3 | 71 | -22.7 | 12 | — | 58.3 | 0.0 | 10 | -10.0 |
| 7 Building 603/Crissy Center | 7 | 0 | 72.0 | 55.5 | 71 | -16.5 | 12 | — | 55.5 | 0.0 | 10 | -10.0 |
| 8 PX Building | 8 | 0 | 0.0 | 58.4 | 71 | 58.4 | 12 | — | 58.4 | 0.0 | 10 | -10.0 |
| 9 Post Commissary/Sports Basement | 9 | 0 | 69.0 | 68.5 | 66 | -0.5 | 12 | Snd Lvl | 68.5 | 0.0 | 10 | -10.0 |
| 10 Battery Blaney | 10 | 0 | 68.0 | 68.9 | 66 | 0.9 | 12 | Snd Lvl | 68.9 | 0.0 | 10 | -10.0 |
| 11 Battery Slaughter | 11 | 0 | 68.0 | 64.8 | 66 | -3.2 | 12 | — | 64.8 | 0.0 | 10 | -10.0 |
| 12 Battery Sherwood | 12 | 0 | 68.0 | 64.1 | 66 | -3.9 | 12 | — | 64.1 | 0.0 | 10 | -10.0 |
| 13 Battery Baldwin | 13 | 0 | 68.0 | 66.7 | 66 | -1.3 | 12 | Snd Lvl | 66.7 | 0.0 | 10 | -10.0 |
| 14 Building 644 | 14 | 0 | 0.0 | 59.2 | 71 | 59.2 | 12 | — | 59.2 | 0.0 | 10 | -10.0 |
| 15 Building 649 | 15 | 0 | 0.0 | 59.9 | 66 | 59.9 | 12 | — | 59.9 | 0.0 | 10 | -10.0 |
| 16 Building 650/Stilwell Hall | 16 | 0 | 70.0 | 58.6 | 66 | -11.4 | 12 | — | 58.6 | 0.0 | 10 | -10.0 |
| 17 1253 Armistead Road | 17 | 1 | 66.0 | 63.7 | 66 | -2.3 | 12 | — | 63.7 | 0.0 | 10 | -10.0 |
| 18 Home on Armistead Road | 18 | 1 | 66.0 | 75.6 | 66 | 9.6 | 12 | Snd Lvl | 75.6 | 0.0 | 10 | -10.0 |
| 19 Building 969 | 19 | 0 | 0.0 | 57.1 | 71 | 57.1 | 12 | — | 57.1 | 0.0 | 10 | -10.0 |
| 20 Building 968 | 20 | 0 | 0.0 | 58.7 | 71 | 58.7 | 12 | — | 58.7 | 0.0 | 10 | -10.0 |
| 21 Building 967 | 21 | 0 | 0.0 | 63.9 | 71 | 63.9 | 12 | — | 63.9 | 0.0 | 10 | -10.0 |
| 22 Building 966 | 22 | 0 | 0.0 | 63.9 | 71 | 63.9 | 12 | — | 63.9 | 0.0 | 10 | -10.0 |
| 23 Building 964 | 23 | 0 | 0.0 | 62.1 | 66 | 62.1 | 12 | — | 62.1 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 Building 963 | 24 | 0 | 0.0 | 61.5 | 66 | 61.5 | 12 | — | 61.5 | 0.0 | 10 | -10.0 |
| 25 Building 962 | 25 | 0 | 0.0 | 60.8 | 66 | 60.8 | 12 | — | 60.8 | 0.0 | 10 | -10.0 |
| 26 Unknown Building | 26 | 0 | 0.0 | 74.3 | 71 | 74.3 | 12 | Snd Lvl | 74.3 | 0.0 | 10 | -10.0 |
| 27 Building 1299/Log Cabin | 27 | 0 | 63.0 | 68.0 | 66 | 5.0 | 12 | Snd Lvl | 68.0 | 0.0 | 10 | -10.0 |
| 28 Building 1387 | 28 | 0 | 0.0 | 66.5 | 71 | 66.5 | 12 | — | 66.5 | 0.0 | 10 | -10.0 |
| 29 Building 1298 Storey Ave. | 29 | 2 | 66.5 | 65.8 | 66 | -0.7 | 12 | — | 65.8 | 0.0 | 10 | -10.0 |
| 30 Building 1297 Storey Ave. | 30 | 2 | 66.5 | 67.8 | 66 | 1.3 | 12 | Snd Lvl | 67.8 | 0.0 | 10 | -10.0 |
| 31 Building 1295 Storey Ave. | 31 | 2 | 66.5 | 69.9 | 66 | 3.4 | 12 | Snd Lvl | 69.9 | 0.0 | 10 | -10.0 |
| 32 Building 1294 Storey Ave. | 32 | 2 | 66.5 | 70.5 | 66 | 4.0 | 12 | Snd Lvl | 70.5 | 0.0 | 10 | -10.0 |
| 33 Building 1293 Storey Ave. | 33 | 2 | 66.5 | 71.6 | 66 | 5.1 | 12 | Snd Lvl | 71.6 | 0.0 | 10 | -10.0 |
| 34 Building 1291 Storey Ave. | 34 | 2 | 66.5 | 72.2 | 66 | 5.7 | 12 | Snd Lvl | 72.2 | 0.0 | 10 | -10.0 |
| 35 Building 1290 Storey Ave. | 35 | 2 | 66.5 | 73.0 | 66 | 6.5 | 12 | Snd Lvl | 73.0 | 0.0 | 10 | -10.0 |
| 36 Building 1289 Storey Ave. | 36 | 2 | 66.5 | 72.1 | 66 | 5.6 | 12 | Snd Lvl | 72.1 | 0.0 | 10 | -10.0 |
| 37 Building 1263 Storey Ave. | 37 | 2 | 0.0 | 68.3 | 66 | 68.3 | 12 | Snd Lvl | 68.3 | 0.0 | 10 | -10.0 |
| 38 Building 682/Cross Cultural Center | 38 | 0 | 65.5 | 64.1 | 66 | -1.4 | 12 | — | 64.1 | 0.0 | 10 | -10.0 |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | 64.0 | 59.8 | 71 | -4.2 | 12 | — | 59.8 | 0.0 | 10 | -10.0 |
| 40 Building 662/Cavalry Stable | 40 | 0 | 64.0 | 61.8 | 71 | -2.2 | 12 | — | 61.8 | 0.0 | 10 | -10.0 |
| 41 Building 663/Cavalry Stable | 41 | 0 | 64.0 | 62.9 | 71 | -1.1 | 12 | — | 62.9 | 0.0 | 10 | -10.0 |
| 42 Building 667/Cavalry Stable | 42 | 0 | 64.0 | 66.6 | 71 | 2.6 | 12 | — | 66.6 | 0.0 | 10 | -10.0 |
| 43 National Cemetery Grave Site | 43 | 0 | 69.0 | 62.2 | 66 | -6.8 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 44 Building 129 | 44 | 1 | 0.0 | 56.4 | 66 | 56.4 | 12 | — | 56.4 | 0.0 | 10 | -10.0 |
| 45 Building 122 | 45 | 0 | 0.0 | 61.2 | 71 | 61.2 | 12 | — | 61.2 | 0.0 | 10 | -10.0 |
| 46 Building 108 | 46 | 0 | 0.0 | 61.2 | 71 | 61.2 | 12 | — | 61.2 | 0.0 | 10 | -10.0 |
| 47 Building 107 | 47 | 0 | 0.0 | 66.4 | 71 | 66.4 | 12 | — | 66.4 | 0.0 | 10 | -10.0 |
| 48 Building 104 | 48 | 0 | 74.0 | 57.7 | 71 | -16.3 | 12 | — | 57.7 | 0.0 | 10 | -10.0 |
| 49 Building 105 | 49 | 0 | 74.0 | 72.4 | 71 | -1.6 | 12 | Snd Lvl | 72.4 | 0.0 | 10 | -10.0 |
| 50 Building 106 | 50 | 0 | 76.0 | 70.9 | 71 | -5.1 | 12 | — | 70.9 | 0.0 | 10 | -10.0 |
| 51 Building 211 | 51 | 0 | 0.0 | 64.6 | 71 | 64.6 | 12 | — | 64.6 | 0.0 | 10 | -10.0 |
| 52 Building 204 | 52 | 0 | 0.0 | 58.4 | 71 | 58.4 | 12 | — | 58.4 | 0.0 | 10 | -10.0 |
| 53 Building 210 | 53 | 0 | 0.0 | 61.4 | 71 | 61.4 | 12 | — | 61.4 | 0.0 | 10 | -10.0 |
| 54 Building 201 | 54 | 0 | 0.0 | 55.8 | 71 | 55.8 | 12 | — | 55.8 | 0.0 | 10 | -10.0 |
| 55 Building 220 | 55 | 0 | 0.0 | 54.1 | 71 | 54.1 | 12 | — | 54.1 | 0.0 | 10 | -10.0 |
| 56 Building 231 | 56 | 0 | 0.0 | 65.6 | 71 | 65.6 | 12 | — | 65.6 | 0.0 | 10 | -10.0 |
| 57 Building 228 | 57 | 0 | 0.0 | 62.7 | 71 | 62.7 | 12 | — | 62.7 | 0.0 | 10 | -10.0 |
| 58 Building 229 | 58 | 0 | 0.0 | 60.8 | 71 | 60.8 | 12 | — | 60.8 | 0.0 | 10 | -10.0 |
| 59 Building 223 | 59 | 0 | 0.0 | 58.0 | 71 | 58.0 | 12 | — | 58.0 | 0.0 | 10 | -10.0 |
| 60 Building 230 | 60 | 0 | 0.0 | 71.1 | 71 | 71.1 | 12 | Snd Lvl | 71.1 | 0.0 | 10 | -10.0 |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 57.0 | 59.5 | 66 | 2.5 | 12 | — | 59.5 | 0.0 | 10 | -10.0 |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 57.0 | 57.0 | 66 | 0.0 | 12 | — | 57.0 | 0.0 | 10 | -10.0 |
| 63 Building 1063 | 63 | 0 | 68.5 | 60.5 | 71 | -8.0 | 12 | — | 60.5 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 Building 1062 | 64 | 0 | 68.5 | 58.1 | 71 | -10.4 | 12 | — | 58.1 | 0.0 | 10 | -10.0 |
| 65 Building 1060 | 65 | 0 | 68.5 | 58.2 | 71 | -10.3 | 12 | — | 58.2 | 0.0 | 10 | -10.0 |
| 66 Building 1167 | 66 | 0 | 68.0 | 63.6 | 71 | -4.4 | 12 | — | 63.6 | 0.0 | 10 | -10.0 |
| 67 Building 1163 | 67 | 0 | 0.0 | 63.8 | 71 | 63.8 | 12 | — | 63.8 | 0.0 | 10 | -10.0 |
| 68 Building 1169 | 68 | 0 | 68.0 | 64.1 | 71 | -3.9 | 12 | — | 64.1 | 0.0 | 10 | -10.0 |
| 69 Building 1162 | 69 | 0 | 0.0 | 62.2 | 71 | 62.2 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 70 Building 1170 | 70 | 0 | 68.0 | 71.1 | 71 | 3.1 | 12 | Snd Lvl | 71.1 | 0.0 | 10 | -10.0 |
| 71 Building 1161 | 71 | 0 | 0.0 | 66.4 | 71 | 66.4 | 12 | — | 66.4 | 0.0 | 10 | -10.0 |
| 72 Building 1160 | 72 | 0 | 0.0 | 71.3 | 71 | 71.3 | 12 | Snd Lvl | 71.3 | 0.0 | 10 | -10.0 |
| 73 Building 1152/YMCA | 73 | 0 | 0.0 | 70.8 | 66 | 70.8 | 12 | Snd Lvl | 70.8 | 0.0 | 10 | -10.0 |
| 74 Building 1151/YMCA Pool | 74 | 0 | 0.0 | 72.3 | 66 | 72.3 | 12 | Snd Lvl | 72.3 | 0.0 | 10 | -10.0 |
| 75 Building 1004 | 75 | 0 | 0.0 | 55.9 | 71 | 55.9 | 12 | — | 55.9 | 0.0 | 10 | -10.0 |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 76.5 | 72.6 | 66 | -3.9 | 12 | Snd Lvl | 72.6 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 229 | 0.0 | 0.0 | 0.0 |
| All Impacted | 25 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |




| | | |
|---|---|---|
| Parkway Diamond 2010 PM | Sheet 1 of 1 | 31 Aug 2004 |
| | Environmental Science Associates, Inc. | |
| Plan View | Project/Contract No. Doyle Drive - 204235 | |
| Run name: Parkway Diamond 2010 PM 831 | TNM Version 2.5, Feb 2004 | |
| Scale: 200 meters | Analysis By: Win Lindeman | |

| | | | |
|---|---|---|---|
| Roadway: | | Ground Zone: | polygon |
| Receiver: | | Tree Zone: | dashed polygon |
| Barrier: | | Contour Zone: | polygon |
| Building Row: | | Parallel Barrier: | |
| Terrain Line: | | Skew Section: | |

Environmental Science Associates, Inc.
Win Lindeman

31 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2010 PM

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

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle to North Tunnel | 18.0 | 1 - North E | 11 | -1,185.0 | 519.0 | 53.00 | | | | Average | |
| | | 2 - 1+97.5 | 10 | -1,060.0 | 368.0 | 56.00 | | | | Average | |
| | | 3 - 4+74 | 9 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 4 - 5+27 | 8 | -827.0 | 138.0 | 51.50 | | | | Average | |
| | | 5 - 5+27 | 7 | -826.0 | 138.0 | 51.50 | | | | Average | Y |
| | | 6 - 6+00 | 6 | -764.0 | 95.0 | 49.00 | | | | Average | Y |
| | | 7 - 8+00 | 5 | -588.0 | 7.0 | 40.00 | | | | Average | Y |
| | | 8 - 9+57 | 4 | -450.0 | -50.0 | 33.00 | | | | Average | Y |
| | | 9 - 11+10 | 3 | -294.0 | -88.0 | 27.00 | | | | Average | Y |
| | | 10 - 11+10 | 2 | -293.0 | -88.0 | 27.00 | | | | Average | |
| | | 11 - 11+53 | 1 | -253.0 | -96.0 | 26.00 | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 18.0 | 1 - 13+93 | 18 | -17.0 | -142.0 | 16.00 | | | | Average | |
| | | 2 - 14+10 | 17 | 0.0 | -143.0 | 16.00 | | | | Average | |
| | | 3 - 14+60 | 16 | 49.0 | -143.0 | 14.00 | | | | Average | |
| | | 4 - 15+00 | 15 | 88.0 | -135.0 | 12.00 | | | | Average | |
| | | 5 - 15+85. | 14 | 170.0 | -112.0 | 9.00 | | | | Average | |
| | | 6 - 17+33. | 13 | 310.0 | -65.0 | 5.00 | | | | Average | |
| | | 7 - 17+80 | 12 | 354.0 | -52.0 | 4.00 | | | | | |
| EB Doyle from South Tunnel to Francisco | 18.0 | 1 - 20+95 | 19 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 21+20 | 20 | 684.0 | 14.0 | 3.00 | | | | Average | |
| | | 3 - 21+20 | 21 | 685.0 | 14.0 | 3.00 | | | | Average | Y |
| | | 4 - 22+42. | 22 | 807.0 | 18.0 | 5.00 | | | | Average | Y |
| | | 5 - 23+00 | 23 | 859.0 | 12.0 | 6.00 | | | | Average | Y |
| | | 6 - 23+25 | 24 | 925.0 | -10.0 | 6.00 | | | | Average | Y |
| | | 7 - 23+25 | 25 | 926.0 | -10.0 | 6.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 - 24+20 | 26 | 966.0 | -41.0 | 5.00 | | | | Average | |
| | | 9 - 24+85. | 27 | 1,016.0 | -88.0 | 4.00 | | | | Average | |
| | | 10 - 25+17 | 28 | 1,030.0 | -108.0 | 3.50 | | | | Average | |
| | | 11 - 25+64 | 29 | 1,062.0 | -146.0 | 3.00 | | | | Average | |
| | | 12 - Gorg | 30 | 1,178.0 | -259.0 | 4.00 | | | | Average | |
| | | 13 - Franc | 31 | 1,320.0 | -400.0 | 4.00 | | | | | |
| WB Doyle from Fancisco to South Tunnel | 10.8 | 1 - Francis | 32 | 1,320.0 | -380.0 | 4.00 | | | | Average | |
| | | 2 - 27+20. | 33 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 3 - 26+00 | 34 | 1,095.0 | -152.0 | 3.50 | | | | Average | |
| | | 4 - 25+40 | 35 | 1,055.0 | -120.0 | 3.50 | | | | Average | |
| | | 5 - 24+73 | 36 | 1,018.0 | -65.0 | 4.00 | | | | Average | |
| | | 6 - 24+20 | 37 | 977.0 | -21.0 | 5.00 | | | | Average | |
| | | 7 - 23+75 | 38 | 950.0 | 0.0 | 6.00 | | | | Average | |
| | | 8 - 23+75 | 39 | 949.0 | 0.0 | 6.00 | | | | Average | Y |
| | | 9 - 23+22 | 40 | 900.0 | 22.0 | 6.00 | | | | Average | Y |
| | | 10 - 23+22 | 41 | 899.0 | 22.0 | 6.00 | | | | Average | |
| | | 11 - 22+68 | 42 | 843.0 | 34.0 | 6.00 | | | | Average | |
| | | 12 - 22+00 | 43 | 775.0 | 33.0 | 4.00 | | | | Average | |
| | | 13 - 20+85 | 44 | 661.0 | 31.0 | 2.00 | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 10.8 | 1 - 18+05 | 45 | 386.0 | -15.0 | 3.50 | | | | Average | |
| | | 2 - 15+00 | 46 | 96.0 | -107.0 | 10.00 | | | | Average | |
| | | 3 - 14+10 | 47 | 10.0 | -119.0 | 14.00 | | | | | |
| WB Doyle from North Tunnel to North End | 13.2 | 1 - 11+80 | 51 | -216.0 | -85.0 | 24.00 | | | | Average | |
| | | 2 - 11+00 | 52 | -295.0 | -69.0 | 27.00 | | | | Average | |
| | | 3 - 11+00 | 53 | -296.0 | -69.0 | 27.00 | | | | Average | Y |
| | | 4 - 9+80 | 54 | -407.0 | -39.0 | 32.00 | | | | Average | Y |
| | | 5 - 8+73 | 55 | -488.0 | -9.0 | 36.00 | | | | Average | Y |
| | | 6 - 7+00 | 56 | -661.0 | 69.0 | 44.00 | | | | Average | Y |
| | | 7 - 6+60 | 57 | -696.0 | 88.0 | 46.00 | | | | Average | Y |
| | | 8 - 6+60 | 58 | -697.0 | 88.0 | 46.00 | | | | Average | |
| | | 9 - 5+54 | 59 | -789.0 | 145.0 | 50.00 | | | | Average | |
| | | 10 - 5+54 | 60 | -790.0 | 145.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+14 | 61 | -817.0 | 169.0 | 52.00 | | | | Average | Y |
| | | 12 - 5+14 | 62 | -818.0 | 169.0 | 52.00 | | | | Average | |
| | | 13 - 4+00 | 63 | -907.0 | 237.0 | 56.00 | | | | Average | |
| | | 14 - 3+10 | 64 | -975.0 | 300.0 | 56.00 | | | | Average | |
| | | 15 - 0+00 | 65 | -1,170.0 | 522.0 | 53.00 | | | | | |
| WB Doyle off ramp to SB Park Presidio | 7.0 | 1 - 0+00 | 66 | -488.0 | -9.0 | 42.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 - 1+30 | 67 | -600.0 | 52.0 | 42.00 | | | | Average | Y |
| | | 3 - 1+80 | 68 | -639.0 | 82.0 | 42.00 | | | | Average | Y |
| | | 4 - 2+20 | 69 | -661.0 | 114.0 | 42.00 | | | | Average | Y |
| | | 5 - 2+20 | 70 | -662.0 | 114.0 | 42.00 | | | | Average | |
| | | 6 - 2+48 | 71 | -673.0 | 139.0 | 42.00 | | | | Average | |
| | | 7 - 3+09 | 72 | -693.0 | 165.0 | 42.00 | | | | Average | |
| | | 8 - 3+40 | 73 | -718.0 | 184.0 | 42.00 | | | | Average | |
| | | 9 - 3+60 | 74 | -746.0 | 194.0 | 42.00 | | | | Average | |
| | | 10 - 3+80 | 75 | -787.0 | 185.0 | 42.00 | | | | Average | |
| | | 11 - 4+00 | 76 | -803.0 | 171.0 | 42.00 | | | | Average | |
| | | 12 - 4+20 | 77 | -813.0 | 153.0 | 42.00 | | | | Average | |
| | | 13 - 4+40 | 78 | -818.0 | 134.0 | 42.00 | | | | Average | |
| | | 14 - 4+59 | 79 | -815.0 | 112.0 | 42.00 | | | | Average | |
| | | 15 - 4+80 | 80 | -807.0 | 93.0 | 42.00 | | | | Average | |
| | | 16 - 5+00 | 81 | -796.0 | 76.0 | 41.00 | | | | Average | |
| | | 17 - 5+20 | 82 | -782.0 | 61.0 | 40.00 | | | | Average | |
| | | 18 - 5+80 | 83 | -735.0 | 24.0 | 40.00 | | | | Average | |
| | | 19 - 6+06 | 84 | -719.0 | 5.0 | 40.00 | | | | Average | |
| | | 20 - 6+31 | 85 | -706.0 | -15.0 | 40.00 | | | | Average | |
| | | 21 - 6+60 | 86 | -696.0 | -42.0 | 40.00 | | | | Average | |
| | | 22 - 6+88 | 87 | -694.0 | -68.0 | 40.00 | | | | Average | |
| | | 23 - 8+23 | 169 | -699.0 | -203.0 | 40.00 | | | | Average | |
| | | 24 - 5+88. | 88 | -698.0 | -337.0 | 40.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 10.2 | 1 - 0+00 | 89 | -690.0 | -337.0 | 40.00 | | | | Average | |
| | | 2A | 170 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 3+72.3 | 90 | -667.0 | 32.0 | 37.00 | | | | Average | |
| | | 3 - 4+00 | 91 | -667.0 | 61.0 | 38.00 | | | | Average | |
| | | 4 - 4+40 | 92 | -677.0 | 101.0 | 40.00 | | | | Average | |
| | | 5 - 4+60 | 93 | -698.0 | 137.0 | 48.00 | | | | Average | |
| | | 6 - 5+00 | 94 | -715.0 | 150.0 | 48.00 | | | | Average | |
| | | 7 - 5+20 | 95 | -734.0 | 160.0 | 49.00 | | | | Average | |
| | | 8 - 5+40 | 96 | -753.0 | 165.0 | 49.00 | | | | Average | |
| | | 9 - 5+53 | 97 | -760.0 | 168.0 | 50.00 | | | | Average | |
| | | 10 - 5+53 | 98 | -761.0 | 168.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+80 | 99 | -792.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 12 - 5+98 | 100 | -807.0 | 183.0 | 52.00 | | | | Average | Y |
| | | 13 - 5+98 | 101 | -808.0 | 183.0 | 52.00 | | | | Average | |
| | | 14 - 6+58. | 102 | -857.0 | 212.0 | 53.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15 - 8+04. | 103 | -975.0 | 300.0 | 56.00 | | | | | |
| NB Park Presidio to EB Doyle Drive | 7.0 | 1 - 0+00 | 104 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 1+35.9 | 105 | -657.0 | 20.0 | 36.00 | | | | Average | |
| | | 3 - 1+60 | 106 | -654.0 | 44.0 | 40.00 | | | | Average | |
| | | 4 - 1+80 | 107 | -657.0 | 65.0 | 40.00 | | | | Average | |
| | | 5 - 2+00 | 108 | -661.0 | 85.0 | 40.00 | | | | Average | |
| | | 6 - 2+20 | 109 | -667.0 | 104.0 | 42.00 | | | | Average | |
| | | 7 - 2+40 | 110 | -675.0 | 123.0 | 42.00 | | | | Average | |
| | | 8 - 2+60 | 111 | -686.0 | 140.0 | 42.00 | | | | Average | |
| | | 9 - 2+81.9 | 112 | -700.0 | 157.0 | 42.00 | | | | Average | |
| | | 10 - 3+09. | 113 | -723.0 | 175.0 | 42.00 | | | | Average | |
| | | 11 - 3+40 | 114 | -754.0 | 180.0 | 42.00 | | | | Average | |
| | | 12 - 3+60 | 115 | -775.0 | 173.0 | 42.00 | | | | Average | |
| | | 13 - 3+80 | 116 | -790.0 | 158.0 | 42.00 | | | | Average | |
| | | 14 - 4+00 | 117 | -796.0 | 138.0 | 42.00 | | | | Average | |
| | | 15 - 4+20 | 118 | -795.0 | 116.0 | 42.00 | | | | Average | |
| | | 16 - 4+40 | 119 | -788.0 | 97.0 | 42.00 | | | | Average | |
| | | 17 - 4+53. | 120 | -778.0 | 88.0 | 42.00 | | | | Average | |
| | | 18 - 5+20 | 121 | -722.0 | 51.0 | 42.00 | | | | Average | |
| | | 19 - 5+20 | 122 | -721.0 | 51.0 | 42.00 | | | | Average | Y |
| | | 20 - 6+00 | 123 | -652.0 | 11.0 | 42.00 | | | | Average | Y |
| | | 21 - 6+40 | 124 | -614.0 | -3.0 | 42.00 | | | | Average | |
| | | 22 - 8+19. | 125 | -450.0 | -50.0 | 33.00 | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 10.0 | 1 - 0+00 | 128 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 2 - 0+65 | 129 | -823.0 | 116.0 | 52.00 | | | | Average | |
| | | 3 - 0+65 | 130 | -822.0 | 116.0 | 52.00 | | | | Average | Y |
| | | 4 - 2+00 | 131 | -723.0 | 35.0 | 44.00 | | | | Average | Y |
| | | 5 - 2+00 | 132 | -722.0 | 35.0 | 44.00 | | | | Average | |
| | | 6 - 2+40 | 133 | -700.0 | 5.0 | 42.00 | | | | Average | |
| | | 7 - 2+80 | 134 | -687.0 | -30.0 | 40.00 | | | | Average | |
| | | 8 - 3+14.5 | 135 | -685.0 | -63.0 | 37.00 | | | | Average | |
| | | 9 - 5+88.1 | 136 | -698.0 | -337.0 | 40.00 | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 6.0 | 1 - 0+00 | 137 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 0+42 | 138 | 685.0 | 0.0 | 2.00 | | | | Average | |
| | | 3 - 0+42 | 139 | 686.0 | 0.0 | 2.00 | | | | Average | Y |
| | | 4 - 1+00 | 140 | 740.0 | -2.0 | 2.00 | | | | Average | Y |
| | | 5 - 1+50 | 141 | 786.0 | -11.0 | 2.00 | | | | Average | Y |
| | | 6 - 1+50 | 142 | 787.0 | -11.0 | 2.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 - 2+12.1 | 143 | 843.0 | -30.0 | 1.00 | | | | Average | Y |
| | | 8 - EC 0+7 | 144 | 898.0 | -75.0 | 1.50 | | | | Average | |
| | | 9 | 145 | 998.0 | -167.0 | 3.00 | | | | Average | |
| | | 10 | 146 | 1,024.0 | -186.0 | 3.00 | | | | Average | |
| | | 11 | 147 | 1,128.0 | -265.0 | 4.00 | | | | Average | |
| | | 12 | 148 | 1,148.0 | -281.0 | 4.00 | | | | Average | |
| | | 13 - Inters | 149 | 1,178.0 | -259.0 | 4.00 | | | | | |
| NB Girard Rd. from Marina to Lincoln | 3.7 | 1 - 0+00 | 150 | 1,201.0 | 188.0 | 4.00 | | | | Average | |
| | | 2 - 0+65 | 151 | 1,153.0 | 136.0 | 3.60 | | | | Average | |
| | | 3 - 2+80 | 152 | 965.0 | 40.0 | 0.50 | | | | Average | |
| | | 4 - 4+09.9 | 153 | 843.0 | -23.0 | 0.00 | | | | Average | |
| | | 5 - 4+40 | 154 | 828.0 | -40.0 | 1.00 | | | | Average | |
| | | 6 - 4+80 | 155 | 796.0 | -65.0 | 4.70 | | | | Average | |
| | | 7 - 5+20 | 156 | 772.0 | -98.0 | 5.50 | | | | Average | |
| | | 8 - 7+20 | 157 | 673.0 | -273.0 | 11.50 | | | | | |
| SB Girard Rd. from Lincoln to Marina | 3.7 | 1 - 7+20 | 158 | 678.0 | -273.0 | 11.50 | | | | Average | |
| | | 2 - 5+20 | 159 | 779.0 | -102.0 | 5.50 | | | | Average | |
| | | 3 - 4+80 | 160 | 803.0 | -70.0 | 4.70 | | | | Average | |
| | | 4 - 4+40 | 161 | 831.0 | -44.0 | 1.00 | | | | Average | |
| | | 5 - 4+09.9 | 162 | 852.0 | -31.0 | 0.00 | | | | Average | |
| | | 6 - 2+80 | 163 | 965.0 | 27.0 | 0.50 | | | | Average | |
| | | 7 - 0+65 | 164 | 1,156.0 | 127.0 | 3.60 | | | | Average | |
| | | 8 - Palace | 239 | 1,178.0 | 146.0 | 4.00 | | | | Average | |
| | | 9 - Mason | 165 | 1,218.0 | 191.0 | 4.00 | | | | | |
| Halleck St. from Lincon to Mason | 7.2 | 1 - 3+65 | 166 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 2 - 2+77.9 | 167 | 612.0 | -139.0 | 10.00 | | | | Average | |
| | | 3 - 0+00 | 168 | 673.0 | 130.0 | 4.00 | | | | | |
| Lincoln from McDowell to Letterman | 7.3 | 1 | 180 | -316.0 | -214.0 | 33.00 | | | | Average | |
| | | 2 | 181 | -279.0 | -132.0 | 33.00 | | | | Average | |
| | | 3 | 182 | -251.0 | -115.0 | 33.00 | | | | Average | |
| | | 4 | 183 | -216.0 | -104.0 | 32.00 | | | | Average | |
| | | 5 | 184 | -118.0 | -147.0 | 31.00 | | | | Average | |
| | | 6 | 185 | -93.0 | -152.0 | 29.00 | | | | Average | |
| | | 7 | 186 | -59.0 | -148.0 | 29.00 | | | | Average | |
| | | 8 | 187 | -38.0 | -151.0 | 29.00 | | | | Average | |
| | | 9 | 188 | -14.0 | -158.0 | 29.00 | | | | Average | |
| | | 10 | 189 | 13.0 | -167.0 | 27.00 | | | | Average | |
| | | 11 | 190 | 50.0 | -170.0 | 26.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12 | 191 | 182.0 | -134.0 | 19.00 | | | | Average | |
| | | 13 | 192 | 245.0 | -108.0 | 15.00 | | | | Average | |
| | | 14 | 193 | 324.0 | -68.0 | 12.00 | | | | Average | |
| | | 15 | 194 | 376.0 | -100.0 | 13.00 | | | | Average | |
| | | 16 | 195 | 396.0 | -124.0 | 13.00 | | | | Average | |
| | | 17 | 196 | 478.0 | -160.0 | 12.00 | | | | Average | |
| | | 18 | 197 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 19 | 198 | 673.0 | -273.0 | 11.50 | | | | Average | |
| | | 20 | 199 | 735.0 | -310.0 | 12.00 | | | | | |
| Mason St. from Crissy Ave. to Marina | 7.3 | 1 | 200 | -500.0 | 96.0 | 3.00 | | | | Average | |
| | | 2 | 201 | 40.0 | 0.0 | 4.00 | | | | Average | |
| | | 3 | 202 | 72.0 | 4.0 | 4.00 | | | | Average | |
| | | 4 | 203 | 96.0 | 15.0 | 4.00 | | | | Average | |
| | | 5 | 204 | 144.0 | 60.0 | 4.00 | | | | Average | |
| | | 6 | 205 | 174.0 | 68.0 | 4.00 | | | | Average | |
| | | 7 | 206 | 673.0 | 130.0 | 4.00 | | | | Average | |
| | | 8 | 207 | 768.0 | 138.0 | 4.00 | | | | Average | |
| | | 9 | 208 | 952.0 | 159.0 | 4.00 | | | | Average | |
| | | 10 | 209 | 1,185.0 | 187.0 | 4.00 | | | | Average | |
| | | 11 | 210 | 1,218.0 | 191.0 | 4.00 | | | | Average | |
| | | 12 | 211 | 1,270.0 | 196.0 | 4.00 | | | | | |
| Baker St. from Marina to Richardson | 7.3 | 1 | 212 | 1,270.0 | 196.0 | 4.00 | | | | Average | |
| | | 2 | 213 | 1,280.0 | 93.0 | 4.00 | | | | Average | |
| | | 3 | 214 | 1,290.0 | -7.0 | 4.00 | | | | Average | |
| | | 4 | 215 | 1,310.0 | -276.0 | 4.00 | | | | Average | |
| | | 5 | 216 | 1,327.0 | -400.0 | 4.00 | | | | | |
| Palace Drive from Richardson to Marina | 7.3 | 1 | 217 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 2 | 218 | 1,186.0 | -245.0 | 4.00 | | | | Average | |
| | | 3 | 219 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 4 | 220 | 1,180.0 | -195.0 | 3.50 | | | | Average | |
| | | 5 | 221 | 1,151.0 | -188.0 | 3.00 | | | | Average | |
| | | 6 | 222 | 1,125.0 | -175.0 | 3.00 | | | | Average | |
| | | 7 | 223 | 1,100.0 | -153.0 | 3.00 | | | | Average | |
| | | 8 | 224 | 1,081.0 | -130.0 | 3.00 | | | | Average | |
| | | 9 | 225 | 1,069.0 | -108.0 | 3.00 | | | | Average | |
| | | 10 | 226 | 1,060.0 | -83.0 | 3.00 | | | | Average | |
| | | 11 | 227 | 1,055.0 | -63.5 | 4.00 | | | | Average | |
| | | 12 | 228 | 1,053.0 | -39.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 13 | 229 | 1,055.0 | -14.0 | 4.00 | | | | Average | |
| | | 14 | 230 | 1,061.0 | 10.0 | 4.00 | | | | Average | |
| | | 15 | 231 | 1,073.0 | 40.0 | 4.00 | | | | Average | |
| | | 16 | 232 | 1,088.0 | 68.0 | 4.00 | | | | Average | |
| | | 17 | 233 | 1,116.0 | 91.0 | 4.00 | | | | Average | |
| | | 18 | 234 | 1,185.0 | 139.0 | 4.00 | | | | Average | |
| | | 19 | 235 | 1,178.0 | 146.0 | 4.00 | | | | | |
| Montgomery St. from Sherlan to Lincoln | 9.2 | 1 | 236 | 237.0 | -280.0 | 16.00 | | | | Average | |
| | | 2 | 237 | 350.0 | -117.0 | 13.00 | | | | Average | |
| | | 3 | 238 | 396.0 | -124.0 | 13.00 | | | | | |

Environmental Science Associates, Inc. 31 August 2004
Win Lindeman TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2010 PM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle to North Tunnel | 1 - North End | 11 | 4303 | 88 | 13 | 88 | 58 | 88 | 47 | 88 | 13 | 88 |
| | 2 - 1+97.539 | 10 | 4303 | 88 | 13 | 88 | 58 | 88 | 47 | 88 | 13 | 88 |
| | 3 - 4+74 | 9 | 2321 | 88 | 7 | 88 | 31 | 88 | 26 | 88 | 7 | 88 |
| | 4 - 5+27 | 8 | 2321 | 88 | 7 | 88 | 31 | 88 | 26 | 88 | 7 | 88 |
| | 5 - 5+27 | 7 | 2321 | 88 | 7 | 88 | 31 | 88 | 26 | 88 | 7 | 88 |
| | 6 - 6+00 | 6 | 2321 | 88 | 7 | 88 | 31 | 88 | 26 | 88 | 7 | 88 |
| | 7 - 8+00 | 5 | 2321 | 88 | 7 | 88 | 31 | 88 | 26 | 88 | 7 | 88 |
| | 8 - 9+57 | 4 | 2813 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 9 - 11+10 | 3 | 2813 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 10 - 11+10 | 2 | 2813 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 11 - 11+53 | 1 | | | | | | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 1 - 13+93 | 18 | 2813 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 2 - 14+10 | 17 | 2813 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 3 - 14+60 | 16 | 2813 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 4 - 15+00 | 15 | 2813 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 5 - 15+85.44 | 14 | 2813 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 6 - 17+33.198 | 13 | 2813 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 7 - 17+80 | 12 | | | | | | | | | | |
| EB Doyle from South Tunnel to Francisco | 1 - 20+95 | 19 | 2048 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 2 - 21+20 | 20 | 2048 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 3 - 21+20 | 21 | 2048 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 22+42.630 | 22 | 2048 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 5 - 23+00 | 23 | 2048 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 6 - 23+25 | 24 | 2048 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 7 - 23+25 | 25 | 2048 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 8 - 24+20 | 26 | 2048 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 9 - 24+85.060 | 27 | 2048 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 10 - 25+17.10 | 28 | 2048 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 11 - 25+64.74 | 29 | 2048 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 12 - Gorgas I | 30 | 2048 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 13 - Francisc | 31 | | | | | | | | | | |
| WB Doyle from Fancisco to South Tunnel | 1 - Francisco | 32 | 2556 | 56 | 0 | 0 | 5 | 56 | 72 | 56 | 27 | 56 |
| | 2 - 27+20.608 | 33 | 2556 | 56 | 0 | 0 | 5 | 56 | 72 | 56 | 27 | 56 |
| | 3 - 26+00 | 34 | 2556 | 56 | 0 | 0 | 5 | 56 | 72 | 56 | 27 | 56 |
| | 4 - 25+40 | 35 | 2556 | 56 | 0 | 0 | 5 | 56 | 72 | 56 | 27 | 56 |
| | 5 - 24+73 | 36 | 2556 | 56 | 0 | 0 | 5 | 56 | 72 | 56 | 27 | 56 |
| | 6 - 24+20 | 37 | 2556 | 56 | 0 | 0 | 5 | 56 | 72 | 56 | 27 | 56 |
| | 7 - 23+75 | 38 | 2556 | 56 | 0 | 0 | 5 | 56 | 72 | 56 | 27 | 56 |
| | 8 - 23+75 | 39 | 2556 | 56 | 0 | 0 | 5 | 56 | 72 | 56 | 27 | 56 |
| | 9 - 23+22 | 40 | 2556 | 56 | 0 | 0 | 5 | 56 | 72 | 56 | 27 | 56 |
| | 10 - 23+22 | 41 | 2556 | 56 | 0 | 0 | 5 | 56 | 72 | 56 | 27 | 56 |
| | 11 - 22+68 | 42 | 2556 | 56 | 0 | 0 | 5 | 56 | 72 | 56 | 27 | 56 |
| | 12 - 22+00 | 43 | 2556 | 56 | 0 | 0 | 5 | 56 | 72 | 56 | 27 | 56 |
| | 13 - 20+85 | 44 | | | | | | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 1 - 18+05 | 45 | 1087 | 88 | 0 | 0 | 2 | 88 | 31 | 88 | 11 | 88 |
| | 2 - 15+00 | 46 | 1087 | 88 | 0 | 0 | 2 | 88 | 31 | 88 | 11 | 88 |
| | 3 - 14+10 | 47 | | | | | | | | | | |
| WB Doyle from North Tunnel to North End | 1 - 11+80 | 51 | 1087 | 88 | 0 | 0 | 2 | 88 | 31 | 88 | 11 | 88 |
| | 2 - 11+00 | 52 | 1087 | 88 | 0 | 0 | 2 | 88 | 31 | 88 | 11 | 88 |
| | 3 - 11+00 | 53 | 1087 | 88 | 0 | 0 | 2 | 88 | 31 | 88 | 11 | 88 |
| | 4 - 9+80 | 54 | 1087 | 88 | 0 | 0 | 2 | 88 | 31 | 88 | 11 | 88 |
| | 5 - 8+73 | 55 | 3527 | 88 | 0 | 0 | 7 | 88 | 99 | 88 | 37 | 88 |
| | 6 - 7+00 | 56 | 3527 | 88 | 0 | 0 | 7 | 88 | 99 | 88 | 37 | 88 |
| | 7 - 6+60 | 57 | 3527 | 88 | 0 | 0 | 7 | 88 | 99 | 88 | 37 | 88 |
| | 8 - 6+60 | 58 | 3527 | 88 | 0 | 0 | 7 | 88 | 99 | 88 | 37 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9 - 5+54 | 59 | 3527 | 88 | 0 | 0 | 7 | 88 | 99 | 88 | 37 | 88 |
| | 10 - 5+54 | 60 | 3527 | 88 | 0 | 0 | 7 | 88 | 99 | 88 | 37 | 88 |
| | 11 - 5+14 | 61 | 3527 | 88 | 0 | 0 | 7 | 88 | 99 | 88 | 37 | 88 |
| | 12 - 5+14 | 62 | 3527 | 88 | 0 | 0 | 7 | 88 | 99 | 88 | 37 | 88 |
| | 13 - 4+00 | 63 | 3527 | 88 | 0 | 0 | 7 | 88 | 99 | 88 | 37 | 88 |
| | 14 - 3+10 | 64 | 5624 | 88 | 0 | 0 | 12 | 88 | 158 | 88 | 59 | 88 |
| | 15 - 0+00 | 65 | | | | | | | | | | |
| WB Doyle off ramp to SB Park Presidio | 1 - 0+00 | 66 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 1+30 | 67 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 1+80 | 68 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 2+20 | 69 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 2+20 | 70 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 2+48 | 71 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 3+09 | 72 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - 3+40 | 73 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 - 3+60 | 74 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 - 3+80 | 75 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 - 4+00 | 76 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 - 4+20 | 77 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 - 4+40 | 78 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 14 - 4+59 | 79 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 15 - 4+80 | 80 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 16 - 5+00 | 81 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 17 - 5+20 | 82 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 18 - 5+80 | 83 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 19 - 6+06 | 84 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 20 - 6+31 | 85 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 21 - 6+60 | 86 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 22 - 6+88 | 87 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 23 - 8+23 | 169 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 24 - 5+88.184 | 88 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 - 0+00 | 89 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2A | 170 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 3+72.391 | 90 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 - 4+00 | 91 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 4+40 | 92 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+60 | 93 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 5+00 | 94 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 5+20 | 95 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - 5+40 | 96 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 - 5+53 | 97 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 - 5+53 | 98 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 - 5+80 | 99 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 - 5+98 | 100 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 - 5+98 | 101 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 14 - 6+58.037 | 102 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 15 - 8+04.414 | 103 | | | | | | | | | | |
| NB Park Presidio to EB Doyle Drive | 1 - 0+00 | 104 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 2 - 1+35.965 | 105 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 3 - 1+60 | 106 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 4 - 1+80 | 107 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 5 - 2+00 | 108 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 6 - 2+20 | 109 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 7 - 2+40 | 110 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 8 - 2+60 | 111 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 9 - 2+81.908 | 112 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 10 - 3+09.875 | 113 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 11 - 3+40 | 114 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 12 - 3+60 | 115 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 13 - 3+80 | 116 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 14 - 4+00 | 117 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 15 - 4+20 | 118 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 16 - 4+40 | 119 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 17 - 4+53.16 | 120 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 18 - 5+20 | 121 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 19 - 5+20 | 122 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 20 - 6+00 | 123 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 21 - 6+40 | 124 | 2127 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 22 - 8+19.142 | 125 | | | | | | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 1 - 0+00 | 128 | 1984 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 2 - 0+65 | 129 | 1984 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 3 - 0+65 | 130 | 1984 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 4 - 2+00 | 131 | 1984 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 5 - 2+00 | 132 | 1984 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 6 - 2+40 | 133 | 1984 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 7 - 2+80 | 134 | 1984 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 8 - 3+14.595 | 135 | 1984 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 9 - 5+88.184 | 136 | | | | | | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 1 - 0+00 | 137 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+42 | 138 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+42 | 139 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 1+00 | 140 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 1+50 | 141 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 1+50 | 142 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 2+12.133 | 143 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - EC 0+74.1 | 144 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 145 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 146 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 147 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 148 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 - Intersect | 149 | | | | | | | | | | |
| NB Girard Rd. from Marina to Lincoln | 1 - 0+00 | 150 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+65 | 151 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 2+80 | 152 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 4+09.995 | 153 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+40 | 154 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 4+80 | 155 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 5+20 | 156 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - 7+20 | 157 | | | | | | | | | | |
| SB Girard Rd. from Lincoln to Marina | 1 - 7+20 | 158 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 5+20 | 159 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 4+80 | 160 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 4+40 | 161 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+09.995 | 162 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 2+80 | 163 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 0+65 | 164 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - Palace Dr | 239 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 - Mason/Mc | 165 | | | | | | | | | | |
| Halleck St. from Lincon to Mason | 1 - 3+65 | 166 | 423 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 2+77.948 | 167 | 423 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+00 | 168 | | | | | | | | | | |
| Lincoln from McDowell to Letterman | 1 | 180 | 192 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 2 | 181 | 192 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 3 | 182 | 192 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 4 | 183 | 598 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 5 | 184 | 598 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 6 | 185 | 598 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 7 | 186 | 598 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 8 | 187 | 598 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 9 | 188 | 598 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 10 | 189 | 619 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 11 | 190 | 500 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 0 | 0 |
| | 12 | 191 | 500 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 0 | 0 |
| | 13 | 192 | 500 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 0 | 0 |
| | 14 | 193 | 500 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 0 | 0 |
| | 15 | 194 | 500 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 0 | 0 |
| | 16 | 195 | 613 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 17 | 196 | 654 | 32 | 7 | 32 | 0 | 0 | 7 | 32 | 0 | 0 |
| | 18 | 197 | 912 | 32 | 9 | 32 | 0 | 0 | 9 | 32 | 0 | 0 |
| | 19 | 198 | 972 | 32 | 10 | 32 | 0 | 0 | 10 | 32 | 0 | 0 |
| | 20 | 199 | | | | | | | | | | |
| Mason St. from Crissy Ave. to Marina | 1 | 200 | 22 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 201 | 22 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 202 | 22 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 203 | 22 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 204 | 22 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 205 | 22 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 206 | 44 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 207 | 42 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 208 | 42 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 209 | 42 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 210 | 732 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 211 | | | | | | | | | | |
| Baker St. from Marina to Richardson | 1 | 212 | 18 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 213 | 6 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 214 | 6 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 215 | 6 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 216 | | | | | | | | | | |
| Palace Drive from Richardson to Marina | 1 | 217 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 218 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 219 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 220 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 221 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 222 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 223 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 224 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 225 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 226 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 227 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 228 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 | 229 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 14 | 230 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 15 | 231 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 16 | 232 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 17 | 233 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 18 | 234 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 19 | 235 | | | | | | | | | | |
| Montgomery St. from Sherian to Lincoln | 1 | 236 | 122 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 237 | 122 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 238 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

31 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2010 PM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 1,098.0 | -130.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 1,133.0 | -91.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3 Buildings 1187/1188 | 3 | 0 | 1,148.0 | 150.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4 Building 1182 | 4 | 0 | 1,087.0 | 125.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5 Buildings 1183/1186 | 5 | 0 | 1,020.0 | 116.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6 Buildings 1184/1185 | 6 | 0 | 893.0 | 103.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7 Building 603/Crissy Center | 7 | 0 | 571.0 | 88.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8 PX Building | 8 | 0 | 500.0 | 33.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9 Post Commissary/Sports Basement | 9 | 0 | 240.0 | -54.0 | 4.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 10 Battery Blaney | 10 | 0 | -30.0 | -96.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11 Battery Slaughter | 11 | 0 | -104.0 | -98.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12 Battery Sherwood | 12 | 0 | -223.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13 Battery Baldwin | 13 | 0 | -297.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14 Building 644 | 14 | 0 | -260.0 | 16.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15 Building 649 | 15 | 0 | -364.0 | 4.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16 Building 650/Stilwell Hall | 16 | 0 | -437.0 | 11.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17 1253 Armistead Road | 17 | 1 | -785.0 | 235.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18 Home on Armistead Road | 18 | 1 | -939.0 | 296.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19 Building 969 | 19 | 0 | -887.0 | 410.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20 Building 968 | 20 | 0 | -978.0 | 427.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21 Building 967 | 21 | 0 | -1,040.0 | 427.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22 Building 966 | 22 | 0 | -1,044.0 | 433.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 Building 964 | 23 | 0 | -1,016.0 | 446.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24 Building 963 | 24 | 0 | -1,002.0 | 452.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25 Building 962 | 25 | 0 | -987.0 | 455.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26 Unknown Building | 26 | 0 | -1,153.0 | 421.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27 Building 1299/Log Cabin | 27 | 0 | -1,003.0 | 177.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28 Building 1387 | 28 | 0 | -1,105.0 | 268.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29 Building 1298 Storey Ave. | 29 | 2 | -977.0 | 123.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30 Building 1297 Storey Ave. | 30 | 2 | -950.0 | 123.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31 Building 1295 Storey Ave. | 31 | 2 | -919.0 | 119.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32 Building 1294 Storey Ave. | 32 | 2 | -900.0 | 116.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33 Building 1293 Storey Ave. | 33 | 2 | -865.0 | 102.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34 Building 1291 Storey Ave. | 34 | 2 | -841.0 | 92.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35 Building 1290 Storey Ave. | 35 | 2 | -811.0 | 78.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36 Building 1289 Storey Ave. | 36 | 2 | -804.0 | 63.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37 Building 1263 Storey Ave. | 37 | 2 | -722.0 | -152.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38 Building 682/Cross Cultural Center | 38 | 0 | -650.0 | -254.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | -556.0 | -70.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40 Building 662/Cavalry Stable | 40 | 0 | -508.0 | -97.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41 Building 663/Cavalry Stable | 41 | 0 | -488.0 | -140.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42 Building 667/Cavalry Stable | 42 | 0 | -384.0 | -122.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43 National Cemetery Grave Site | 43 | 0 | -23.0 | -163.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44 Building 129 | 44 | 1 | 104.0 | -168.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45 Building 122 | 45 | 0 | 148.0 | -157.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46 Building 108 | 46 | 0 | 225.0 | -136.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47 Building 107 | 47 | 0 | 230.0 | -120.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48 Building 104 | 48 | 0 | 252.0 | -143.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49 Building 105 | 49 | 0 | 285.0 | -93.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50 Building 106 | 50 | 0 | 328.0 | -78.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51 Building 211 | 51 | 0 | 433.0 | -52.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52 Building 204 | 52 | 0 | 522.0 | -17.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53 Building 210 | 53 | 0 | 320.0 | -97.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54 Building 201 | 54 | 0 | 623.0 | 8.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55 Building 220 | 55 | 0 | 590.0 | -104.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56 Building 231 | 56 | 0 | 650.0 | -5.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57 Building 228 | 57 | 0 | 643.0 | -31.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 Building 229 | 58 | 0 | 637.0 | -60.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59 Building 223 | 59 | 0 | 636.0 | -108.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60 Building 230 | 60 | 0 | 740.0 | 6.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 706.0 | -77.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 698.0 | -113.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63 Building 1063 | 63 | 0 | 842.0 | -60.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64 Building 1062 | 64 | 0 | 852.0 | -100.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65 Building 1060 | 65 | 0 | 898.0 | -127.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66 Building 1167 | 66 | 0 | 900.0 | -18.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67 Building 1163 | 67 | 0 | 892.0 | -26.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68 Building 1169 | 68 | 0 | 955.0 | -58.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69 Building 1162 | 69 | 0 | 943.0 | -73.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70 Building 1170 | 70 | 0 | 1,035.0 | -132.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71 Building 1161 | 71 | 0 | 1,035.0 | -161.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72 Building 1160 | 72 | 0 | 1,066.0 | -166.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73 Building 1152/YMCA | 73 | 0 | 1,100.0 | -200.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74 Building 1151/YMCA Pool | 74 | 0 | 1,140.0 | -235.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75 Building 1004 | 75 | 0 | 965.0 | -246.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 1,216.0 | -270.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

31 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2010 PM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

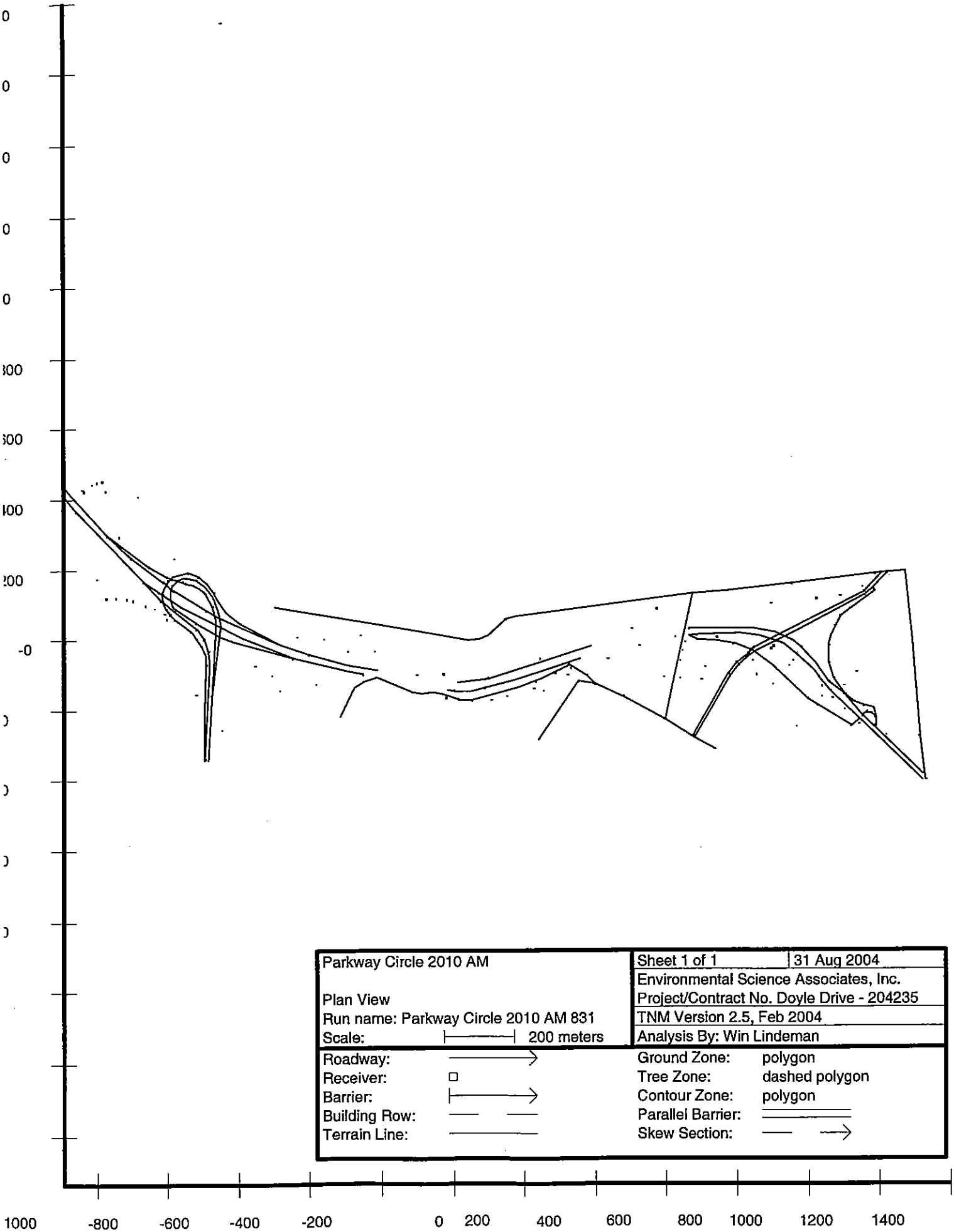
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 68.9 | 66 | 68.9 | 12 | Snd Lvl | 68.9 | 0.0 | 10 | -10.0 |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 61.0 | 66 | 61.0 | 12 | — | 61.0 | 0.0 | 10 | -10.0 |
| 3 Buildings 1187/1188 | 3 | 0 | 81.0 | 52.1 | 71 | -28.9 | 12 | — | 52.1 | 0.0 | 10 | -10.0 |
| 4 Building 1182 | 4 | 0 | 81.0 | 53.2 | 71 | -27.8 | 12 | — | 53.2 | 0.0 | 10 | -10.0 |
| 5 Buildings 1183/1186 | 5 | 0 | 81.0 | 55.8 | 71 | -25.2 | 12 | — | 55.8 | 0.0 | 10 | -10.0 |
| 6 Buildings 1184/1185 | 6 | 0 | 81.0 | 58.6 | 71 | -22.4 | 12 | — | 58.6 | 0.0 | 10 | -10.0 |
| 7 Building 603/Crissy Center | 7 | 0 | 72.0 | 53.9 | 71 | -18.1 | 12 | — | 53.9 | 0.0 | 10 | -10.0 |
| 8 PX Building | 8 | 0 | 0.0 | 56.1 | 71 | 56.1 | 12 | — | 56.1 | 0.0 | 10 | -10.0 |
| 9 Post Commissary/Sports Basement | 9 | 0 | 69.0 | 65.2 | 66 | -3.8 | 12 | — | 65.2 | 0.0 | 10 | -10.0 |
| 10 Battery Blaney | 10 | 0 | 68.0 | 66.6 | 66 | -1.4 | 12 | Snd Lvl | 66.6 | 0.0 | 10 | -10.0 |
| 11 Battery Slaughter | 11 | 0 | 68.0 | 62.6 | 66 | -5.4 | 12 | — | 62.6 | 0.0 | 10 | -10.0 |
| 12 Battery Sherwood | 12 | 0 | 68.0 | 61.8 | 66 | -6.2 | 12 | — | 61.8 | 0.0 | 10 | -10.0 |
| 13 Battery Baldwin | 13 | 0 | 68.0 | 64.3 | 66 | -3.7 | 12 | — | 64.3 | 0.0 | 10 | -10.0 |
| 14 Building 644 | 14 | 0 | 0.0 | 57.2 | 71 | 57.2 | 12 | — | 57.2 | 0.0 | 10 | -10.0 |
| 15 Building 649 | 15 | 0 | 0.0 | 58.1 | 66 | 58.1 | 12 | — | 58.1 | 0.0 | 10 | -10.0 |
| 16 Building 650/Stilwell Hall | 16 | 0 | 70.0 | 57.3 | 66 | -12.7 | 12 | — | 57.3 | 0.0 | 10 | -10.0 |
| 17 1253 Armistead Road | 17 | 1 | 66.0 | 63.7 | 66 | -2.3 | 12 | — | 63.7 | 0.0 | 10 | -10.0 |
| 18 Home on Armistead Road | 18 | 1 | 66.0 | 76.1 | 66 | 10.1 | 12 | Snd Lvl | 76.1 | 0.0 | 10 | -10.0 |
| 19 Building 969 | 19 | 0 | 0.0 | 57.6 | 71 | 57.6 | 12 | — | 57.6 | 0.0 | 10 | -10.0 |
| 20 Building 968 | 20 | 0 | 0.0 | 59.4 | 71 | 59.4 | 12 | — | 59.4 | 0.0 | 10 | -10.0 |
| 21 Building 967 | 21 | 0 | 0.0 | 64.9 | 71 | 64.9 | 12 | — | 64.9 | 0.0 | 10 | -10.0 |
| 22 Building 966 | 22 | 0 | 0.0 | 65.0 | 71 | 65.0 | 12 | — | 65.0 | 0.0 | 10 | -10.0 |
| 23 Building 964 | 23 | 0 | 0.0 | 63.2 | 66 | 63.2 | 12 | — | 63.2 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 Building 963 | 24 | 0 | 0.0 | 62.5 | 66 | 62.5 | 12 | — | 62.5 | 0.0 | 10 | -10.0 |
| 25 Building 962 | 25 | 0 | 0.0 | 61.7 | 66 | 61.7 | 12 | — | 61.7 | 0.0 | 10 | -10.0 |
| 26 Unknown Building | 26 | 0 | 0.0 | 74.2 | 71 | 74.2 | 12 | Snd Lvl | 74.2 | 0.0 | 10 | -10.0 |
| 27 Building 1299/Log Cabin | 27 | 0 | 63.0 | 67.9 | 66 | 4.9 | 12 | Snd Lvl | 67.9 | 0.0 | 10 | -10.0 |
| 28 Building 1387 | 28 | 0 | 0.0 | 66.6 | 71 | 66.6 | 12 | — | 66.6 | 0.0 | 10 | -10.0 |
| 29 Building 1298 Storey Ave. | 29 | 2 | 66.5 | 65.7 | 66 | -0.8 | 12 | — | 65.7 | 0.0 | 10 | -10.0 |
| 30 Building 1297 Storey Ave. | 30 | 2 | 66.5 | 67.6 | 66 | 1.1 | 12 | Snd Lvl | 67.6 | 0.0 | 10 | -10.0 |
| 31 Building 1295 Storey Ave. | 31 | 2 | 66.5 | 69.6 | 66 | 3.1 | 12 | Snd Lvl | 69.6 | 0.0 | 10 | -10.0 |
| 32 Building 1294 Storey Ave. | 32 | 2 | 66.5 | 70.2 | 66 | 3.7 | 12 | Snd Lvl | 70.2 | 0.0 | 10 | -10.0 |
| 33 Building 1293 Storey Ave. | 33 | 2 | 66.5 | 71.3 | 66 | 4.8 | 12 | Snd Lvl | 71.3 | 0.0 | 10 | -10.0 |
| 34 Building 1291 Storey Ave. | 34 | 2 | 66.5 | 71.9 | 66 | 5.4 | 12 | Snd Lvl | 71.9 | 0.0 | 10 | -10.0 |
| 35 Building 1290 Storey Ave. | 35 | 2 | 66.5 | 72.6 | 66 | 6.1 | 12 | Snd Lvl | 72.6 | 0.0 | 10 | -10.0 |
| 36 Building 1289 Storey Ave. | 36 | 2 | 66.5 | 71.7 | 66 | 5.2 | 12 | Snd Lvl | 71.7 | 0.0 | 10 | -10.0 |
| 37 Building 1263 Storey Ave. | 37 | 2 | 0.0 | 67.3 | 66 | 67.3 | 12 | Snd Lvl | 67.3 | 0.0 | 10 | -10.0 |
| 38 Building 682/Cross Cultural Center | 38 | 0 | 65.5 | 59.7 | 66 | -5.8 | 12 | — | 59.7 | 0.0 | 10 | -10.0 |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | 64.0 | 59.1 | 71 | -4.9 | 12 | — | 59.1 | 0.0 | 10 | -10.0 |
| 40 Building 662/Cavalry Stable | 40 | 0 | 64.0 | 60.4 | 71 | -3.6 | 12 | — | 60.4 | 0.0 | 10 | -10.0 |
| 41 Building 663/Cavalry Stable | 41 | 0 | 64.0 | 60.9 | 71 | -3.1 | 12 | — | 60.9 | 0.0 | 10 | -10.0 |
| 42 Building 667/Cavalry Stable | 42 | 0 | 64.0 | 64.3 | 71 | 0.3 | 12 | — | 64.3 | 0.0 | 10 | -10.0 |
| 43 National Cemetery Grave Site | 43 | 0 | 69.0 | 62.7 | 66 | -6.3 | 12 | — | 62.7 | 0.0 | 10 | -10.0 |
| 44 Building 129 | 44 | 1 | 0.0 | 57.0 | 66 | 57.0 | 12 | — | 57.0 | 0.0 | 10 | -10.0 |
| 45 Building 122 | 45 | 0 | 0.0 | 60.4 | 71 | 60.4 | 12 | — | 60.4 | 0.0 | 10 | -10.0 |
| 46 Building 108 | 46 | 0 | 0.0 | 59.8 | 71 | 59.8 | 12 | — | 59.8 | 0.0 | 10 | -10.0 |
| 47 Building 107 | 47 | 0 | 0.0 | 65.2 | 71 | 65.2 | 12 | — | 65.2 | 0.0 | 10 | -10.0 |
| 48 Building 104 | 48 | 0 | 74.0 | 56.4 | 71 | -17.6 | 12 | — | 56.4 | 0.0 | 10 | -10.0 |
| 49 Building 105 | 49 | 0 | 74.0 | 70.4 | 71 | -3.6 | 12 | — | 70.4 | 0.0 | 10 | -10.0 |
| 50 Building 106 | 50 | 0 | 76.0 | 69.0 | 71 | -7.0 | 12 | — | 69.0 | 0.0 | 10 | -10.0 |
| 51 Building 211 | 51 | 0 | 0.0 | 62.1 | 71 | 62.1 | 12 | — | 62.1 | 0.0 | 10 | -10.0 |
| 52 Building 204 | 52 | 0 | 0.0 | 56.1 | 71 | 56.1 | 12 | — | 56.1 | 0.0 | 10 | -10.0 |
| 53 Building 210 | 53 | 0 | 0.0 | 59.9 | 71 | 59.9 | 12 | — | 59.9 | 0.0 | 10 | -10.0 |
| 54 Building 201 | 54 | 0 | 0.0 | 54.3 | 71 | 54.3 | 12 | — | 54.3 | 0.0 | 10 | -10.0 |
| 55 Building 220 | 55 | 0 | 0.0 | 53.6 | 71 | 53.6 | 12 | — | 53.6 | 0.0 | 10 | -10.0 |
| 56 Building 231 | 56 | 0 | 0.0 | 65.4 | 71 | 65.4 | 12 | — | 65.4 | 0.0 | 10 | -10.0 |
| 57 Building 228 | 57 | 0 | 0.0 | 62.4 | 71 | 62.4 | 12 | — | 62.4 | 0.0 | 10 | -10.0 |
| 58 Building 229 | 58 | 0 | 0.0 | 60.2 | 71 | 60.2 | 12 | — | 60.2 | 0.0 | 10 | -10.0 |
| 59 Building 223 | 59 | 0 | 0.0 | 57.2 | 71 | 57.2 | 12 | — | 57.2 | 0.0 | 10 | -10.0 |
| 60 Building 230 | 60 | 0 | 0.0 | 71.0 | 71 | 71.0 | 12 | Snd Lvl | 71.0 | 0.0 | 10 | -10.0 |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 57.0 | 58.9 | 66 | 1.9 | 12 | — | 58.9 | 0.0 | 10 | -10.0 |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 57.0 | 56.3 | 66 | -0.7 | 12 | — | 56.3 | 0.0 | 10 | -10.0 |
| 63 Building 1063 | 63 | 0 | 68.5 | 60.1 | 71 | -8.4 | 12 | — | 60.1 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 Building 1062 | 64 | 0 | 68.5 | 57.9 | 71 | -10.6 | 12 | --- | 57.9 | 0.0 | 10 | -10.0 |
| 65 Building 1060 | 65 | 0 | 68.5 | 58.1 | 71 | -10.4 | 12 | --- | 58.1 | 0.0 | 10 | -10.0 |
| 66 Building 1167 | 66 | 0 | 68.0 | 63.8 | 71 | -4.2 | 12 | --- | 63.8 | 0.0 | 10 | -10.0 |
| 67 Building 1163 | 67 | 0 | 0.0 | 63.4 | 71 | 63.4 | 12 | --- | 63.4 | 0.0 | 10 | -10.0 |
| 68 Building 1169 | 68 | 0 | 68.0 | 63.5 | 71 | -4.5 | 12 | --- | 63.5 | 0.0 | 10 | -10.0 |
| 69 Building 1162 | 69 | 0 | 0.0 | 61.8 | 71 | 61.8 | 12 | --- | 61.8 | 0.0 | 10 | -10.0 |
| 70 Building 1170 | 70 | 0 | 68.0 | 70.7 | 71 | 2.7 | 12 | --- | 70.7 | 0.0 | 10 | -10.0 |
| 71 Building 1161 | 71 | 0 | 0.0 | 66.1 | 71 | 66.1 | 12 | --- | 66.1 | 0.0 | 10 | -10.0 |
| 72 Building 1160 | 72 | 0 | 0.0 | 70.7 | 71 | 70.7 | 12 | --- | 70.7 | 0.0 | 10 | -10.0 |
| 73 Building 1152/YMCA | 73 | 0 | 0.0 | 70.3 | 66 | 70.3 | 12 | Snd Lvl | 70.3 | 0.0 | 10 | -10.0 |
| 74 Building 1151/YMCA Pool | 74 | 0 | 0.0 | 71.8 | 66 | 71.8 | 12 | Snd Lvl | 71.8 | 0.0 | 10 | -10.0 |
| 75 Building 1004 | 75 | 0 | 0.0 | 56.0 | 71 | 56.0 | 12 | --- | 56.0 | 0.0 | 10 | -10.0 |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 76.5 | 73.6 | 66 | -2.9 | 12 | Snd Lvl | 73.6 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 229 | 0.0 | 0.0 | 0.0 |
| All Impacted | 25 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |




| | | | |
|---|---|---|---|
| Parkway Circle 2010 AM | | Sheet 1 of 1 | 31 Aug 2004 |
| | | Environmental Science Associates, Inc. | |
| Plan View | | Project/Contract No. Doyle Drive - 204235 | |
| Run name: Parkway Circle 2010 AM 831 | | TNM Version 2.5, Feb 2004 | |
| Scale: | 200 meters | Analysis By: Win Lindeman | |
| Roadway: | | Ground Zone: | polygon |
| Receiver: | | Tree Zone: | dashed polygon |
| Barrier: | | Contour Zone: | polygon |
| Building Row: | | Parallel Barrier: | |
| Terrain Line: | | Skew Section: | |

Environmental Science Associates, Inc.
Win Lindeman

31 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2010 AM

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

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle to North Tunnel | 18.0 | 1 - North E | 11 | -1,185.0 | 519.0 | 53.00 | | | | Average | |
| | | 2 - 1+97.5 | 10 | -1,060.0 | 368.0 | 56.00 | | | | Average | |
| | | 3 - 4+74 | 9 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 4 - 5+27 | 8 | -827.0 | 138.0 | 51.50 | | | | Average | |
| | | 5 - 5+27 | 7 | -826.0 | 138.0 | 51.50 | | | | Average | Y |
| | | 6 - 6+00 | 6 | -764.0 | 95.0 | 49.00 | | | | Average | Y |
| | | 7 - 8+00 | 5 | -588.0 | 7.0 | 40.00 | | | | Average | Y |
| | | 8 - 9+57 | 4 | -450.0 | -50.0 | 33.00 | | | | Average | Y |
| | | 9 - 11+10 | 3 | -294.0 | -88.0 | 27.00 | | | | Average | Y |
| | | 10 - 11+10 | 2 | -293.0 | -88.0 | 27.00 | | | | Average | |
| | | 11 - 11+53 | 1 | -253.0 | -96.0 | 26.00 | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 18.0 | 1 - 13+93 | 18 | -17.0 | -142.0 | 16.00 | | | | Average | |
| | | 2 - 14+10 | 17 | 0.0 | -143.0 | 16.00 | | | | Average | |
| | | 3 - 14+60 | 16 | 49.0 | -143.0 | 14.00 | | | | Average | |
| | | 4 - 15+00 | 15 | 88.0 | -135.0 | 12.00 | | | | Average | |
| | | 5 - 15+85. | 14 | 170.0 | -112.0 | 9.00 | | | | Average | |
| | | 6 - 17+33. | 13 | 310.0 | -65.0 | 5.00 | | | | Average | |
| | | 7 - 17+80 | 12 | 354.0 | -52.0 | 4.00 | | | | | |
| EB Doyle from South Tunnel to Francisco | 18.0 | 1 - 20+95 | 19 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 21+20 | 20 | 684.0 | 14.0 | 3.00 | | | | Average | |
| | | 3 - 21+20 | 21 | 685.0 | 14.0 | 3.00 | | | | Average | Y |
| | | 4 - 22+42. | 22 | 807.0 | 18.0 | 5.00 | | | | Average | Y |
| | | 5 - 23+00 | 23 | 859.0 | 12.0 | 6.00 | | | | Average | Y |
| | | 6 - 23+25 | 24 | 925.0 | -10.0 | 6.00 | | | | Average | Y |
| | | 7 - 23+25 | 25 | 926.0 | -10.0 | 6.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 - 24+20 | 26 | 966.0 | -41.0 | 5.00 | | | | Average | |
| | | 9 - 24+85. | 27 | 1,016.0 | -88.0 | 4.00 | | | | Average | |
| | | 10 - 25+17 | 28 | 1,030.0 | -108.0 | 3.50 | | | | Average | |
| | | 11 - 25+64 | 29 | 1,062.0 | -146.0 | 3.00 | | | | Average | |
| | | 12 - Gorg | 30 | 1,140.0 | -224.0 | 4.00 | | | | Average | |
| | | 13 - Franc | 31 | 1,320.0 | -400.0 | 4.00 | | | | | |
| WB/NB Richardson-Francisco to Tunnel | 10.8 | 1 - Francis | 32 | 1,320.0 | -380.0 | 4.00 | | | | Average | |
| | | 2 - 27+20. | 33 | 1,148.0 | -216.0 | 4.00 | | | | Average | |
| | | 3 - 26+00 | 34 | 1,095.0 | -152.0 | 3.50 | | | | Average | |
| | | 4 - 25+40 | 35 | 1,055.0 | -120.0 | 3.50 | | | | Average | |
| | | 5 - 24+73 | 36 | 1,018.0 | -65.0 | 4.00 | | | | Average | |
| | | 6 - 24+20 | 37 | 977.0 | -21.0 | 5.00 | | | | Average | |
| | | 7 - 23+75 | 38 | 950.0 | 0.0 | 6.00 | | | | Average | |
| | | 8 - 23+75 | 39 | 949.0 | 0.0 | 6.00 | | | | Average | Y |
| | | 9 - 23+22 | 40 | 900.0 | 22.0 | 6.00 | | | | Average | Y |
| | | 10 - 23+22 | 41 | 899.0 | 22.0 | 6.00 | | | | Average | |
| | | 11 - 22+68 | 42 | 843.0 | 34.0 | 6.00 | | | | Average | |
| | | 12 - 22+00 | 43 | 775.0 | 33.0 | 4.00 | | | | Average | |
| | | 13 - 20+85 | 44 | 661.0 | 31.0 | 2.00 | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 10.8 | 1 - 18+05 | 45 | 386.0 | -15.0 | 3.50 | | | | Average | |
| | | 2 - 15+00 | 46 | 96.0 | -107.0 | 10.00 | | | | Average | |
| | | 3 - 14+10 | 47 | 10.0 | -119.0 | 14.00 | | | | | |
| WB Doyle from North Tunnel to North End | 13.2 | 1 - 11+80 | 51 | -216.0 | -85.0 | 24.00 | | | | Average | |
| | | 2 - 11+00 | 52 | -295.0 | -69.0 | 27.00 | | | | Average | |
| | | 3 - 11+00 | 53 | -296.0 | -69.0 | 27.00 | | | | Average | Y |
| | | 4 - 9+80 | 54 | -407.0 | -39.0 | 32.00 | | | | Average | Y |
| | | 5 - 8+73 | 55 | -488.0 | -9.0 | 36.00 | | | | Average | Y |
| | | 6 - 7+00 | 56 | -661.0 | 69.0 | 44.00 | | | | Average | Y |
| | | 7 - 6+60 | 57 | -696.0 | 88.0 | 46.00 | | | | Average | Y |
| | | 8 - 6+60 | 58 | -697.0 | 88.0 | 46.00 | | | | Average | |
| | | 9 - 5+54 | 59 | -789.0 | 145.0 | 50.00 | | | | Average | |
| | | 10 - 5+54 | 60 | -790.0 | 145.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+14 | 61 | -817.0 | 169.0 | 52.00 | | | | Average | Y |
| | | 12 - 5+14 | 62 | -818.0 | 169.0 | 52.00 | | | | Average | |
| | | 13 - 4+00 | 63 | -907.0 | 237.0 | 56.00 | | | | Average | |
| | | 14 - 3+10 | 64 | -975.0 | 300.0 | 56.00 | | | | Average | |
| | | 15 - 0+00 | 65 | -1,170.0 | 522.0 | 53.00 | | | | | |
| WB Doyle off ramp to SB Park Presidio | 7.0 | 1 - 0+00 | 66 | -488.0 | -9.0 | 42.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 - 1+30 | 67 | -600.0 | 52.0 | 42.00 | | | | Average | Y |
| | | 3 - 1+80 | 68 | -639.0 | 82.0 | 42.00 | | | | Average | Y |
| | | 4 - 2+20 | 69 | -661.0 | 114.0 | 42.00 | | | | Average | Y |
| | | 5 - 2+20 | 70 | -662.0 | 114.0 | 42.00 | | | | Average | |
| | | 6 - 2+48 | 71 | -673.0 | 139.0 | 42.00 | | | | Average | |
| | | 7 - 3+09 | 72 | -693.0 | 165.0 | 42.00 | | | | Average | |
| | | 8 - 3+40 | 73 | -718.0 | 184.0 | 42.00 | | | | Average | |
| | | 9 - 3+60 | 74 | -746.0 | 194.0 | 42.00 | | | | Average | |
| | | 10 - 3+80 | 75 | -787.0 | 185.0 | 42.00 | | | | Average | |
| | | 11 - 4+00 | 76 | -803.0 | 171.0 | 42.00 | | | | Average | |
| | | 12 - 4+20 | 77 | -813.0 | 153.0 | 42.00 | | | | Average | |
| | | 13 - 4+40 | 78 | -818.0 | 134.0 | 42.00 | | | | Average | |
| | | 14 - 4+59 | 79 | -815.0 | 112.0 | 42.00 | | | | Average | |
| | | 15 - 4+80 | 80 | -807.0 | 93.0 | 42.00 | | | | Average | |
| | | 16 - 5+00 | 81 | -796.0 | 76.0 | 41.00 | | | | Average | |
| | | 17 - 5+20 | 82 | -782.0 | 61.0 | 40.00 | | | | Average | |
| | | 18 - 5+80 | 83 | -735.0 | 24.0 | 40.00 | | | | Average | |
| | | 19 - 6+06 | 84 | -719.0 | 5.0 | 40.00 | | | | Average | |
| | | 20 - 6+31 | 85 | -706.0 | -15.0 | 40.00 | | | | Average | |
| | | 21 - 6+60 | 86 | -696.0 | -42.0 | 40.00 | | | | Average | |
| | | 22 - 6+88 | 87 | -694.0 | -68.0 | 40.00 | | | | Average | |
| | | 23 - 8+23 | 169 | -699.0 | -203.0 | 40.00 | | | | Average | |
| | | 24 - 5+88. | 88 | -698.0 | -337.0 | 40.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 10.2 | 1 - 0+00 | 89 | -690.0 | -337.0 | 40.00 | | | | Average | |
| | | 2A | 170 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 3+72.3 | 90 | -667.0 | 32.0 | 37.00 | | | | Average | |
| | | 3 - 4+00 | 91 | -667.0 | 61.0 | 38.00 | | | | Average | |
| | | 4 - 4+40 | 92 | -677.0 | 101.0 | 40.00 | | | | Average | |
| | | 5 - 4+60 | 93 | -698.0 | 137.0 | 48.00 | | | | Average | |
| | | 6 - 5+00 | 94 | -715.0 | 150.0 | 48.00 | | | | Average | |
| | | 7 - 5+20 | 95 | -734.0 | 160.0 | 49.00 | | | | Average | |
| | | 8 - 5+40 | 96 | -753.0 | 165.0 | 49.00 | | | | Average | |
| | | 9 - 5+53 | 97 | -760.0 | 168.0 | 50.00 | | | | Average | |
| | | 10 - 5+53 | 98 | -761.0 | 168.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+80 | 99 | -792.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 12 - 5+98 | 100 | -807.0 | 183.0 | 52.00 | | | | Average | Y |
| | | 13 - 5+98 | 101 | -808.0 | 183.0 | 52.00 | | | | Average | |
| | | 14 - 6+58. | 102 | -857.0 | 212.0 | 53.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15 - 8+04. | 103 | -975.0 | 300.0 | 56.00 | | | | | |
| NB Park Presidio to EB Doyle Drive | 7.0 | 1 - 0+00 | 104 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 1+35.9 | 105 | -657.0 | 20.0 | 36.00 | | | | Average | |
| | | 3 - 1+60 | 106 | -654.0 | 44.0 | 40.00 | | | | Average | |
| | | 4 - 1+80 | 107 | -657.0 | 65.0 | 40.00 | | | | Average | |
| | | 5 - 2+00 | 108 | -661.0 | 85.0 | 40.00 | | | | Average | |
| | | 6 - 2+20 | 109 | -667.0 | 104.0 | 42.00 | | | | Average | |
| | | 7 - 2+40 | 110 | -675.0 | 123.0 | 42.00 | | | | Average | |
| | | 8 - 2+60 | 111 | -686.0 | 140.0 | 42.00 | | | | Average | |
| | | 9 - 2+81.9 | 112 | -700.0 | 157.0 | 42.00 | | | | Average | |
| | | 10 - 3+09. | 113 | -723.0 | 175.0 | 42.00 | | | | Average | |
| | | 11 - 3+40 | 114 | -754.0 | 180.0 | 42.00 | | | | Average | |
| | | 12 - 3+60 | 115 | -775.0 | 173.0 | 42.00 | | | | Average | |
| | | 13 - 3+80 | 116 | -790.0 | 158.0 | 42.00 | | | | Average | |
| | | 14 - 4+00 | 117 | -796.0 | 138.0 | 42.00 | | | | Average | |
| | | 15 - 4+20 | 118 | -795.0 | 116.0 | 42.00 | | | | Average | |
| | | 16 - 4+40 | 119 | -788.0 | 97.0 | 42.00 | | | | Average | |
| | | 17 - 4+53. | 120 | -778.0 | 88.0 | 42.00 | | | | Average | |
| | | 18 - 5+20 | 121 | -722.0 | 51.0 | 42.00 | | | | Average | |
| | | 19 - 5+20 | 122 | -721.0 | 51.0 | 42.00 | | | | Average | Y |
| | | 20 - 6+00 | 123 | -652.0 | 11.0 | 42.00 | | | | Average | Y |
| | | 21 - 6+40 | 124 | -614.0 | -3.0 | 42.00 | | | | Average | |
| | | 22 - 8+19. | 125 | -450.0 | -50.0 | 33.00 | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 10.0 | 1 - 0+00 | 128 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 2 - 0+65 | 129 | -823.0 | 116.0 | 52.00 | | | | Average | |
| | | 3 - 0+65 | 130 | -822.0 | 116.0 | 52.00 | | | | Average | Y |
| | | 4 - 2+00 | 131 | -723.0 | 35.0 | 44.00 | | | | Average | Y |
| | | 5 - 2+00 | 132 | -722.0 | 35.0 | 44.00 | | | | Average | |
| | | 6 - 2+40 | 133 | -700.0 | 5.0 | 42.00 | | | | Average | |
| | | 7 - 2+80 | 134 | -687.0 | -30.0 | 40.00 | | | | Average | |
| | | 8 - 3+14.5 | 135 | -685.0 | -63.0 | 37.00 | | | | Average | |
| | | 9 - 5+88.1 | 136 | -698.0 | -337.0 | 40.00 | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 6.0 | 1 - 0+00 | 137 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 0+42 | 138 | 685.0 | 0.0 | 2.00 | | | | Average | |
| | | 3 - 0+42 | 139 | 686.0 | 0.0 | 2.00 | | | | Average | Y |
| | | 4 - 1+00 | 140 | 740.0 | -2.0 | 2.00 | | | | Average | Y |
| | | 5 - 1+50 | 141 | 786.0 | -11.0 | 2.00 | | | | Average | Y |
| | | 6 - 1+50 | 142 | 787.0 | -11.0 | 2.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 - 2+12.1 | 143 | 843.0 | -30.0 | 1.00 | | | | Average | Y |
| | | 8 - EC 0+7 | 144 | 898.0 | -75.0 | 1.50 | | | | Average | |
| | | 9 | 145 | 998.0 | -167.0 | 3.00 | | | | Average | |
| | | 10 | 146 | 1,024.0 | -186.0 | 3.00 | | | | Average | |
| | | 11 | 147 | 1,118.0 | -243.0 | 4.00 | | | | Average | |
| | | 12 | 148 | 1,118.0 | -245.0 | 4.00 | | | | Average | |
| | | 13 - Inters | 149 | 1,140.0 | -224.0 | 4.00 | | | | | |
| NB Girard Rd. from Marina to Lincoln | 3.7 | 1 - 0+00 | 150 | 1,201.0 | 188.0 | 4.00 | | | | Average | |
| | | 2 - 0+65 | 151 | 1,153.0 | 136.0 | 3.60 | | | | Average | |
| | | 3 - 2+80 | 152 | 965.0 | 40.0 | 0.50 | | | | Average | |
| | | 4 - 4+09.9 | 153 | 843.0 | -23.0 | 0.00 | | | | Average | |
| | | 5 - 4+40 | 154 | 828.0 | -40.0 | 1.00 | | | | Average | |
| | | 6 - 4+80 | 155 | 796.0 | -65.0 | 4.70 | | | | Average | |
| | | 7 - 5+20 | 156 | 772.0 | -98.0 | 5.50 | | | | Average | |
| | | 8 - 7+20 | 157 | 673.0 | -273.0 | 11.50 | | | | | |
| SB Girard Rd. from Lincoln to Marina | 3.7 | 1 - 7+20 | 158 | 678.0 | -273.0 | 11.50 | | | | Average | |
| | | 2 - 5+20 | 159 | 779.0 | -102.0 | 5.50 | | | | Average | |
| | | 3 - 4+80 | 160 | 803.0 | -70.0 | 4.70 | | | | Average | |
| | | 4 - 4+40 | 161 | 831.0 | -44.0 | 1.00 | | | | Average | |
| | | 5 - 4+09.9 | 162 | 852.0 | -31.0 | 0.00 | | | | Average | |
| | | 6 - 2+80 | 163 | 965.0 | 27.0 | 0.50 | | | | Average | |
| | | 7 - 0+65 | 164 | 1,156.0 | 127.0 | 3.60 | | | | Average | |
| | | 8 - Palace | 239 | 1,178.0 | 146.0 | 4.00 | | | | Average | |
| | | 9 - Mason | 165 | 1,218.0 | 191.0 | 4.00 | | | | | |
| Halleck St. from Lincon to Mason | 7.2 | 1 - 3+65 | 166 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 2 - 2+77.9 | 167 | 612.0 | -139.0 | 10.00 | | | | Average | |
| | | 3 - 0+00 | 168 | 673.0 | 130.0 | 4.00 | | | | | |
| Lincoln from McDowell to Letterman | 7.3 | 1 | 180 | -316.0 | -214.0 | 33.00 | | | | Average | |
| | | 2 | 181 | -279.0 | -132.0 | 33.00 | | | | Average | |
| | | 3 | 182 | -251.0 | -115.0 | 33.00 | | | | Average | |
| | | 4 | 183 | -216.0 | -104.0 | 32.00 | | | | Average | |
| | | 5 | 184 | -118.0 | -147.0 | 31.00 | | | | Average | |
| | | 6 | 185 | -93.0 | -152.0 | 29.00 | | | | Average | |
| | | 7 | 186 | -59.0 | -148.0 | 29.00 | | | | Average | |
| | | 8 | 187 | -38.0 | -151.0 | 29.00 | | | | Average | |
| | | 9 | 188 | -14.0 | -158.0 | 29.00 | | | | Average | |
| | | 10 | 189 | 13.0 | -167.0 | 27.00 | | | | Average | |
| | | 11 | 190 | 50.0 | -170.0 | 26.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12 | 191 | 182.0 | -134.0 | 19.00 | | | | Average | |
| | | 13 | 192 | 245.0 | -108.0 | 15.00 | | | | Average | |
| | | 14 | 193 | 324.0 | -68.0 | 12.00 | | | | Average | |
| | | 15 | 194 | 376.0 | -100.0 | 13.00 | | | | Average | |
| | | 16 | 195 | 396.0 | -124.0 | 13.00 | | | | Average | |
| | | 17 | 196 | 478.0 | -160.0 | 12.00 | | | | Average | |
| | | 18 | 197 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 19 | 198 | 673.0 | -273.0 | 11.50 | | | | Average | |
| | | 20 | 199 | 735.0 | -310.0 | 12.00 | | | | | |
| Mason St. from Crissy Ave. to Marina | 7.3 | 1 | 200 | -500.0 | 96.0 | 3.00 | | | | Average | |
| | | 2 | 201 | 40.0 | 0.0 | 4.00 | | | | Average | |
| | | 3 | 202 | 72.0 | 4.0 | 4.00 | | | | Average | |
| | | 4 | 203 | 96.0 | 15.0 | 4.00 | | | | Average | |
| | | 5 | 204 | 144.0 | 60.0 | 4.00 | | | | Average | |
| | | 6 | 205 | 174.0 | 68.0 | 4.00 | | | | Average | |
| | | 7 | 206 | 673.0 | 130.0 | 4.00 | | | | Average | |
| | | 8 | 207 | 768.0 | 138.0 | 4.00 | | | | Average | |
| | | 9 | 208 | 952.0 | 159.0 | 4.00 | | | | Average | |
| | | 10 | 209 | 1,185.0 | 187.0 | 4.00 | | | | Average | |
| | | 11 | 210 | 1,218.0 | 191.0 | 4.00 | | | | Average | |
| | | 12 | 211 | 1,270.0 | 196.0 | 4.00 | | | | | |
| Baker St. from Marina to Richardson | 7.3 | 1 | 212 | 1,270.0 | 196.0 | 4.00 | | | | Average | |
| | | 2 | 213 | 1,280.0 | 93.0 | 4.00 | | | | Average | |
| | | 3 | 214 | 1,290.0 | -7.0 | 4.00 | | | | Average | |
| | | 4 | 215 | 1,310.0 | -276.0 | 4.00 | | | | Average | |
| | | 5 | 216 | 1,327.0 | -400.0 | 4.00 | | | | | |
| Palace Drive from Richardson to Marina | 7.3 | 1 | 217 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 2 | 218 | 1,186.0 | -245.0 | 4.00 | | | | Average | |
| | | 3 | 219 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 4 | 220 | 1,180.0 | -195.0 | 3.50 | | | | Average | |
| | | 5 | 221 | 1,151.0 | -188.0 | 3.00 | | | | Average | |
| | | 6 | 222 | 1,125.0 | -175.0 | 3.00 | | | | Average | |
| | | 7 | 223 | 1,100.0 | -153.0 | 3.00 | | | | Average | |
| | | 8 | 224 | 1,081.0 | -130.0 | 3.00 | | | | Average | |
| | | 9 | 225 | 1,069.0 | -108.0 | 3.00 | | | | Average | |
| | | 10 | 226 | 1,060.0 | -83.0 | 3.00 | | | | Average | |
| | | 11 | 227 | 1,055.0 | -63.5 | 4.00 | | | | Average | |
| | | 12 | 228 | 1,053.0 | -39.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 13 | 229 | 1,055.0 | -14.0 | 4.00 | | | | Average | |
| | | 14 | 230 | 1,061.0 | 10.0 | 4.00 | | | | Average | |
| | | 15 | 231 | 1,073.0 | 40.0 | 4.00 | | | | Average | |
| | | 16 | 232 | 1,088.0 | 68.0 | 4.00 | | | | Average | |
| | | 17 | 233 | 1,116.0 | 91.0 | 4.00 | | | | Average | |
| | | 18 | 234 | 1,185.0 | 139.0 | 4.00 | | | | Average | |
| | | 19 | 235 | 1,178.0 | 146.0 | 4.00 | | | | | |
| Montgomery St. from Sherian to Lincoln | 9.2 | 1 | 236 | 237.0 | -280.0 | 16.00 | | | | Average | |
| | | 2 | 237 | 350.0 | -117.0 | 13.00 | | | | Average | |
| | | 3 | 238 | 396.0 | -124.0 | 13.00 | | | | | |
| Palace Drive Connector to Gorgas | 7.3 | 1 | 240 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 2 | 241 | 1,180.0 | -214.0 | 4.00 | | | | Average | |
| | | 3 | 242 | 1,172.0 | -208.0 | 4.00 | | | | Average | |
| | | 4 | 243 | 1,160.0 | -206.0 | 4.00 | | | | Average | |
| | | 5 | 244 | 1,148.0 | -216.0 | 4.00 | | | | | |

Environmental Science Associates, Inc.
Win Lindeman

31 August 2004
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2010 AM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle to North Tunnel | 1 - North End | 11 | 5813 | 88 | 60 | 88 | 12 | 88 | 60 | 88 | 60 | 88 |
| | 2 - 1+97.539 | 10 | 5813 | 88 | 60 | 88 | 12 | 88 | 60 | 88 | 60 | 88 |
| | 3 - 4+74 | 9 | 3904 | 88 | 40 | 88 | 8 | 88 | 40 | 88 | 40 | 88 |
| | 4 - 5+27 | 8 | 3904 | 88 | 40 | 88 | 8 | 88 | 40 | 88 | 40 | 88 |
| | 5 - 5+27 | 7 | 3904 | 88 | 40 | 88 | 8 | 88 | 40 | 88 | 40 | 88 |
| | 6 - 6+00 | 6 | 3904 | 88 | 40 | 88 | 8 | 88 | 40 | 88 | 40 | 88 |
| | 7 - 8+00 | 5 | 3904 | 88 | 40 | 88 | 8 | 88 | 40 | 88 | 40 | 88 |
| | 8 - 9+57 | 4 | 4693 | 88 | 48 | 88 | 10 | 88 | 48 | 88 | 48 | 88 |
| | 9 - 11+10 | 3 | 4693 | 88 | 48 | 88 | 10 | 88 | 48 | 88 | 48 | 88 |
| | 10 - 11+10 | 2 | 4693 | 88 | 48 | 88 | 10 | 88 | 48 | 88 | 48 | 88 |
| | 11 - 11+53 | 1 | | | | | | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 1 - 13+93 | 18 | 4693 | 88 | 48 | 88 | 10 | 88 | 48 | 88 | 48 | 88 |
| | 2 - 14+10 | 17 | 4693 | 88 | 48 | 88 | 10 | 88 | 48 | 88 | 48 | 88 |
| | 3 - 14+60 | 16 | 4693 | 88 | 48 | 88 | 10 | 88 | 48 | 88 | 48 | 88 |
| | 4 - 15+00 | 15 | 4693 | 88 | 48 | 88 | 10 | 88 | 48 | 88 | 48 | 88 |
| | 5 - 15+85.44 | 14 | 4693 | 88 | 48 | 88 | 10 | 88 | 48 | 88 | 48 | 88 |
| | 6 - 17+33.198 | 13 | 4693 | 88 | 48 | 88 | 10 | 88 | 48 | 88 | 48 | 88 |
| | 7 - 17+80 | 12 | | | | | | | | | | |
| EB Doyle from South Tunnel to Francisco | 1 - 20+95 | 19 | 2999 | 56 | 31 | 56 | 7 | 56 | 31 | 56 | 31 | 56 |
| | 2 - 21+20 | 20 | 2999 | 56 | 31 | 56 | 7 | 56 | 31 | 56 | 31 | 56 |
| | 3 - 21+20 | 21 | 2999 | 56 | 31 | 56 | 7 | 56 | 31 | 56 | 31 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 22+42.630 | 22 | 2999 | 56 | 31 | 56 | 7 | 56 | 31 | 56 | 31 | 56 |
| | 5 - 23+00 | 23 | 2999 | 56 | 31 | 56 | 7 | 56 | 31 | 56 | 31 | 56 |
| | 6 - 23+25 | 24 | 2999 | 56 | 31 | 56 | 7 | 56 | 31 | 56 | 31 | 56 |
| | 7 - 23+25 | 25 | 2999 | 56 | 31 | 56 | 7 | 56 | 31 | 56 | 31 | 56 |
| | 8 - 24+20 | 26 | 2999 | 56 | 31 | 56 | 7 | 56 | 31 | 56 | 31 | 56 |
| | 9 - 24+85.060 | 27 | 2999 | 56 | 31 | 56 | 7 | 56 | 31 | 56 | 31 | 56 |
| | 10 - 25+17.10 | 28 | 2999 | 56 | 31 | 56 | 7 | 56 | 31 | 56 | 31 | 56 |
| | 11 - 25+64.74 | 29 | 2999 | 56 | 31 | 56 | 7 | 56 | 31 | 56 | 31 | 56 |
| | 12 - Gorgas I | 30 | 2999 | 56 | 31 | 56 | 7 | 56 | 31 | 56 | 31 | 56 |
| | 13 - Francisc | 31 | | | | | | | | | | |
| WB/NB Richardson-Francisco to Tunnel | 1 - Francisco | 32 | 1650 | 56 | 17 | 56 | 22 | 56 | 10 | 56 | 17 | 56 |
| | 2 - 27+20.608 | 33 | 1650 | 56 | 17 | 56 | 22 | 56 | 10 | 56 | 17 | 56 |
| | 3 - 26+00 | 34 | 1650 | 56 | 17 | 56 | 22 | 56 | 10 | 56 | 17 | 56 |
| | 4 - 25+40 | 35 | 1650 | 56 | 17 | 56 | 22 | 56 | 10 | 56 | 17 | 56 |
| | 5 - 24+73 | 36 | 1650 | 56 | 17 | 56 | 22 | 56 | 10 | 56 | 17 | 56 |
| | 6 - 24+20 | 37 | 1650 | 56 | 17 | 56 | 22 | 56 | 10 | 56 | 17 | 56 |
| | 7 - 23+75 | 38 | 1650 | 56 | 17 | 56 | 22 | 56 | 10 | 56 | 17 | 56 |
| | 8 - 23+75 | 39 | 1650 | 56 | 17 | 56 | 22 | 56 | 10 | 56 | 17 | 56 |
| | 9 - 23+22 | 40 | 1650 | 56 | 17 | 56 | 22 | 56 | 10 | 56 | 17 | 56 |
| | 10 - 23+22 | 41 | 1650 | 56 | 17 | 56 | 22 | 56 | 10 | 56 | 17 | 56 |
| | 11 - 22+68 | 42 | 1650 | 56 | 17 | 56 | 22 | 56 | 10 | 56 | 17 | 56 |
| | 12 - 22+00 | 43 | 1650 | 56 | 17 | 56 | 22 | 56 | 10 | 56 | 17 | 56 |
| | 13 - 20+85 | 44 | | | | | | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 1 - 18+05 | 45 | 2024 | 88 | 21 | 88 | 27 | 88 | 13 | 88 | 21 | 88 |
| | 2 - 15+00 | 46 | 2024 | 88 | 21 | 88 | 27 | 88 | 13 | 88 | 21 | 88 |
| | 3 - 14+10 | 47 | | | | | | | | | | |
| WB Doyle from North Tunnel to North End | 1 - 11+80 | 51 | 2024 | 88 | 21 | 88 | 27 | 88 | 13 | 88 | 21 | 88 |
| | 2 - 11+00 | 52 | 2024 | 88 | 21 | 88 | 27 | 88 | 13 | 88 | 21 | 88 |
| | 3 - 11+00 | 53 | 2024 | 88 | 21 | 88 | 27 | 88 | 13 | 88 | 21 | 88 |
| | 4 - 9+80 | 54 | 2024 | 88 | 21 | 88 | 27 | 88 | 13 | 88 | 21 | 88 |
| | 5 - 8+73 | 55 | 1678 | 88 | 18 | 88 | 23 | 88 | 10 | 88 | 18 | 88 |
| | 6 - 7+00 | 56 | 1678 | 88 | 18 | 88 | 23 | 88 | 10 | 88 | 18 | 88 |
| | 7 - 6+60 | 57 | 1678 | 88 | 18 | 88 | 23 | 88 | 10 | 88 | 18 | 88 |
| | 8 - 6+60 | 58 | 1678 | 88 | 18 | 88 | 23 | 88 | 10 | 88 | 18 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9 - 5+54 | 59 | 1678 | 88 | 18 | 88 | 23 | 88 | 10 | 88 | 18 | 88 |
| | 10 - 5+54 | 60 | 1678 | 88 | 18 | 88 | 23 | 88 | 10 | 88 | 18 | 88 |
| | 11 - 5+14 | 61 | 1678 | 88 | 18 | 88 | 23 | 88 | 10 | 88 | 18 | 88 |
| | 12 - 5+14 | 62 | 1678 | 88 | 18 | 88 | 23 | 88 | 10 | 88 | 18 | 88 |
| | 13 - 4+00 | 63 | 1678 | 88 | 18 | 88 | 23 | 88 | 10 | 88 | 18 | 88 |
| | 14 - 3+10 | 64 | 3347 | 88 | 35 | 88 | 45 | 88 | 21 | 88 | 35 | 88 |
| | 15 - 0+00 | 65 | | | | | | | | | | |
| WB Doyle off ramp to SB Park Presidio | 1 - 0+00 | 66 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 2 - 1+30 | 67 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 3 - 1+80 | 68 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 4 - 2+20 | 69 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 5 - 2+20 | 70 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 6 - 2+48 | 71 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 7 - 3+09 | 72 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 8 - 3+40 | 73 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 9 - 3+60 | 74 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 10 - 3+80 | 75 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 11 - 4+00 | 76 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 12 - 4+20 | 77 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 13 - 4+40 | 78 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 14 - 4+59 | 79 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 15 - 4+80 | 80 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 16 - 5+00 | 81 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 17 - 5+20 | 82 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 18 - 5+80 | 83 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 19 - 6+06 | 84 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 20 - 6+31 | 85 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 21 - 6+60 | 86 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 22 - 6+88 | 87 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 23 - 8+23 | 169 | 1894 | 56 | 20 | 56 | 26 | 56 | 12 | 56 | 20 | 56 |
| | 24 - 5+88.184 | 88 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 - 0+00 | 89 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 2A | 170 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 2 - 3+72.391 | 90 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 - 4+00 | 91 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 4 - 4+40 | 92 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 5 - 4+60 | 93 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 6 - 5+00 | 94 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 7 - 5+20 | 95 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 8 - 5+40 | 96 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 9 - 5+53 | 97 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 10 - 5+53 | 98 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 11 - 5+80 | 99 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 12 - 5+98 | 100 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 13 - 5+98 | 101 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 14 - 6+58.037 | 102 | 1690 | 56 | 17 | 56 | 17 | 56 | 0 | 0 | 12 | 56 |
| | 15 - 8+04.414 | 103 | | | | | | | | | | |
| NB Park Presidio to EB Doyle Drive | 1 - 0+00 | 104 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 2 - 1+35.965 | 105 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 3 - 1+60 | 106 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 4 - 1+80 | 107 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 5 - 2+00 | 108 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 6 - 2+20 | 109 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 7 - 2+40 | 110 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 8 - 2+60 | 111 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 9 - 2+81.908 | 112 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 10 - 3+09.875 | 113 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 11 - 3+40 | 114 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 12 - 3+60 | 115 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 13 - 3+80 | 116 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 14 - 4+00 | 117 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 15 - 4+20 | 118 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 16 - 4+40 | 119 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 17 - 4+53.16 | 120 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 18 - 5+20 | 121 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 19 - 5+20 | 122 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 20 - 6+00 | 123 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |
| | 21 - 6+40 | 124 | 787 | 56 | 6 | 56 | 8 | 56 | 8 | 56 | 6 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 22 - 8+19.142 | 125 | | | | | | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 1 - 0+00 | 128 | 348 | 56 | 4 | 56 | 1 | 56 | 4 | 56 | 4 | 56 |
| | 2 - 0+65 | 129 | 348 | 56 | 4 | 56 | 1 | 56 | 4 | 56 | 4 | 56 |
| | 3 - 0+65 | 130 | 348 | 56 | 4 | 56 | 1 | 56 | 4 | 56 | 4 | 56 |
| | 4 - 2+00 | 131 | 348 | 56 | 4 | 56 | 1 | 56 | 4 | 56 | 4 | 56 |
| | 5 - 2+00 | 132 | 348 | 56 | 4 | 56 | 1 | 56 | 4 | 56 | 4 | 56 |
| | 6 - 2+40 | 133 | 348 | 56 | 4 | 56 | 1 | 56 | 4 | 56 | 4 | 56 |
| | 7 - 2+80 | 134 | 348 | 56 | 4 | 56 | 1 | 56 | 4 | 56 | 4 | 56 |
| | 8 - 3+14.595 | 135 | 348 | 56 | 4 | 56 | 1 | 56 | 4 | 56 | 4 | 56 |
| | 9 - 5+88.184 | 136 | | | | | | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 1 - 0+00 | 137 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+42 | 138 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+42 | 139 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 1+00 | 140 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 1+50 | 141 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 1+50 | 142 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 2+12.133 | 143 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - EC 0+74.1 | 144 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 145 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 146 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 147 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 148 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 - Intersect | 149 | | | | | | | | | | |
| NB Girard Rd. from Marina to Lincoln | 1 - 0+00 | 150 | 52 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+65 | 151 | 52 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 2+80 | 152 | 52 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 4+09.995 | 153 | 52 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+40 | 154 | 52 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 4+80 | 155 | 52 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 5+20 | 156 | 52 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - 7+20 | 157 | | | | | | | | | | |
| SB Girard Rd. from Lincoln to Marina | 1 - 7+20 | 158 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 5+20 | 159 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 4+80 | 160 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 4+40 | 161 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+09.995 | 162 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 2+80 | 163 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 0+65 | 164 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - Palace Dr | 239 | 29 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 - Mason/M | 165 | | | | | | | | | | |
| Halleck St. from Lincon to Mason | 1 - 3+65 | 166 | 483 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 2+77.948 | 167 | 483 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+00 | 168 | | | | | | | | | | |
| Lincoln from McDowell to Letterman | 1 | 180 | 80 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 2 | 181 | 80 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 3 | 182 | 80 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 4 | 183 | 108 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 5 | 184 | 108 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 6 | 185 | 108 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 7 | 186 | 108 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 8 | 187 | 108 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 9 | 188 | 108 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 10 | 189 | 124 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 11 | 190 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 12 | 191 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 13 | 192 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 14 | 193 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 15 | 194 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 16 | 195 | 148 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 17 | 196 | 160 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 18 | 197 | 573 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 19 | 198 | 625 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 20 | 199 | | | | | | | | | | |
| Mason St. from Crissy Ave. to Marina | 1 | 200 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 201 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 202 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 203 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 204 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 205 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 206 | 25 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 207 | 25 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 208 | 27 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 209 | 27 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 210 | 27 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 211 | | | | | | | | | | |
| Baker St. from Marina to Richardson | 1 | 212 | 39 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 213 | 8 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 214 | 8 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 215 | 8 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 216 | | | | | | | | | | |
| Palace Drive from Richardson to Marina | 1 | 217 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 218 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 219 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 220 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 221 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 222 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 223 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 224 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 225 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 226 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 227 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 228 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 | 229 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 14 | 230 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 15 | 231 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 16 | 232 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 17 | 233 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 18 | 234 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 19 | 235 | | | | | | | | | | |
| Montgomery St. from Sherlan to Lincoln | 1 | 236 | 94 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 237 | 94 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 238 | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Palace Drive Connector to Gorgas | 1 | 240 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 241 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 242 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 243 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 244 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

31 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2010 AM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 1,098.0 | -130.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 1,133.0 | -91.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3 Buildings 1187/1188 | 3 | 0 | 1,148.0 | 150.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4 Building 1182 | 4 | 0 | 1,087.0 | 125.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5 Buildings 1183/1186 | 5 | 0 | 1,020.0 | 116.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6 Buildings 1184/1185 | 6 | 0 | 893.0 | 103.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7 Building 603/Crissy Center | 7 | 0 | 571.0 | 88.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8 PX Building | 8 | 0 | 500.0 | 33.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9 Post Commissary/Sports Basement | 9 | 0 | 240.0 | -54.0 | 4.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 10 Battery Blaney | 10 | 0 | -30.0 | -96.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11 Battery Slaughter | 11 | 0 | -104.0 | -98.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12 Battery Sherwood | 12 | 0 | -223.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13 Battery Baldwin | 13 | 0 | -297.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14 Building 644 | 14 | 0 | -260.0 | 16.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15 Building 649 | 15 | 0 | -364.0 | 4.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16 Building 650/Stilwell Hall | 16 | 0 | -437.0 | 11.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17 1253 Armistead Road | 17 | 1 | -785.0 | 235.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18 Home on Armistead Road | 18 | 1 | -939.0 | 296.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19 Building 969 | 19 | 0 | -887.0 | 410.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20 Building 968 | 20 | 0 | -978.0 | 427.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21 Building 967 | 21 | 0 | -1,040.0 | 427.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22 Building 966 | 22 | 0 | -1,044.0 | 433.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 Building 964 | 23 | 0 | -1,016.0 | 446.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24 Building 963 | 24 | 0 | -1,002.0 | 452.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25 Building 962 | 25 | 0 | -987.0 | 455.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26 Unknown Building | 26 | 0 | -1,153.0 | 421.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27 Building 1299/Log Cabin | 27 | 0 | -1,003.0 | 177.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28 Building 1387 | 28 | 0 | -1,105.0 | 268.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29 Building 1298 Storey Ave. | 29 | 2 | -977.0 | 123.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30 Building 1297 Storey Ave. | 30 | 2 | -950.0 | 123.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31 Building 1295 Storey Ave. | 31 | 2 | -919.0 | 119.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32 Building 1294 Storey Ave. | 32 | 2 | -900.0 | 116.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33 Building 1293 Storey Ave. | 33 | 2 | -865.0 | 102.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34 Building 1291 Storey Ave. | 34 | 2 | -841.0 | 92.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35 Building 1290 Storey Ave. | 35 | 2 | -811.0 | 78.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36 Building 1289 Storey Ave. | 36 | 2 | -804.0 | 63.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37 Building 1263 Storey Ave. | 37 | 2 | -722.0 | -152.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38 Building 682/Cross Cultural Center | 38 | 0 | -650.0 | -254.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | -556.0 | -70.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40 Building 662/Cavalry Stable | 40 | 0 | -508.0 | -97.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41 Building 663/Cavalry Stable | 41 | 0 | -488.0 | -140.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42 Building 667/Cavalry Stable | 42 | 0 | -384.0 | -122.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43 National Cemetery Grave Site | 43 | 0 | -23.0 | -163.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44 Building 129 | 44 | 1 | 104.0 | -168.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45 Building 122 | 45 | 0 | 148.0 | -157.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46 Building 108 | 46 | 0 | 225.0 | -136.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47 Building 107 | 47 | 0 | 230.0 | -120.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48 Building 104 | 48 | 0 | 252.0 | -143.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49 Building 105 | 49 | 0 | 285.0 | -93.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50 Building 106 | 50 | 0 | 328.0 | -78.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51 Building 211 | 51 | 0 | 433.0 | -52.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52 Building 204 | 52 | 0 | 522.0 | -17.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53 Building 210 | 53 | 0 | 320.0 | -97.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54 Building 201 | 54 | 0 | 623.0 | 8.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55 Building 220 | 55 | 0 | 590.0 | -104.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56 Building 231 | 56 | 0 | 650.0 | -5.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57 Building 228 | 57 | 0 | 643.0 | -31.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 Building 229 | 58 | 0 | 637.0 | -60.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59 Building 223 | 59 | 0 | 636.0 | -108.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60 Building 230 | 60 | 0 | 740.0 | 6.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 706.0 | -77.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 698.0 | -113.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63 Building 1063 | 63 | 0 | 842.0 | -60.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64 Building 1062 | 64 | 0 | 852.0 | -100.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65 Building 1060 | 65 | 0 | 898.0 | -127.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66 Building 1167 | 66 | 0 | 900.0 | -18.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67 Building 1163 | 67 | 0 | 892.0 | -26.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68 Building 1169 | 68 | 0 | 955.0 | -58.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69 Building 1162 | 69 | 0 | 943.0 | -73.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70 Building 1170 | 70 | 0 | 1,035.0 | -132.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71 Building 1161 | 71 | 0 | 1,035.0 | -161.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72 Building 1160 | 72 | 0 | 1,066.0 | -166.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73 Building 1152/YMCA | 73 | 0 | 1,100.0 | -198.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74 Building 1151/YMCA Pool | 74 | 0 | 1,140.0 | -240.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75 Building 1004 | 75 | 0 | 965.0 | -246.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 1,216.0 | -270.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

31 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2010 AM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

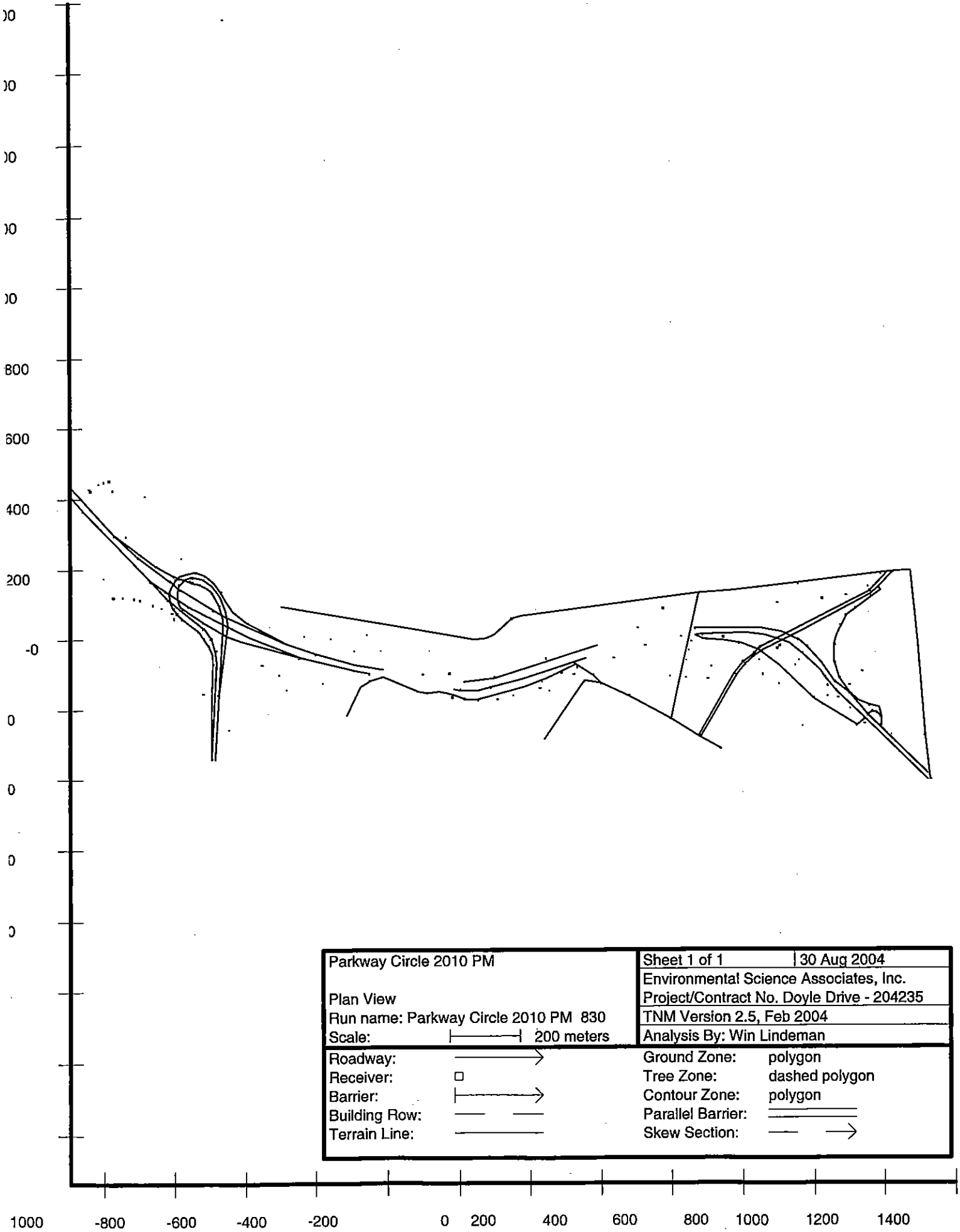
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 68.4 | 66 | 68.4 | 12 | Snd Lvl | 68.4 | 0.0 | 10 | -10.0 |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 61.0 | 66 | 61.0 | 12 | — | 61.0 | 0.0 | 10 | -10.0 |
| 3 Buildings 1187/1188 | 3 | 0 | 81.0 | 54.9 | 71 | -26.1 | 12 | — | 54.9 | 0.0 | 10 | -10.0 |
| 4 Building 1182 | 4 | 0 | 81.0 | 54.5 | 71 | -26.5 | 12 | — | 54.5 | 0.0 | 10 | -10.0 |
| 5 Buildings 1183/1186 | 5 | 0 | 81.0 | 55.7 | 71 | -25.3 | 12 | — | 55.7 | 0.0 | 10 | -10.0 |
| 6 Buildings 1184/1185 | 6 | 0 | 81.0 | 58.4 | 71 | -22.6 | 12 | — | 58.4 | 0.0 | 10 | -10.0 |
| 7 Building 603/Crissy Center | 7 | 0 | 72.0 | 55.5 | 71 | -16.5 | 12 | — | 55.5 | 0.0 | 10 | -10.0 |
| 8 PX Building | 8 | 0 | 0.0 | 58.4 | 71 | 58.4 | 12 | — | 58.4 | 0.0 | 10 | -10.0 |
| 9 Post Commissary/Sports Basement | 9 | 0 | 69.0 | 68.4 | 66 | -0.6 | 12 | Snd Lvl | 68.4 | 0.0 | 10 | -10.0 |
| 10 Battery Blaney | 10 | 0 | 68.0 | 68.9 | 66 | 0.9 | 12 | Snd Lvl | 68.9 | 0.0 | 10 | -10.0 |
| 11 Battery Slaughter | 11 | 0 | 68.0 | 64.8 | 66 | -3.2 | 12 | — | 64.8 | 0.0 | 10 | -10.0 |
| 12 Battery Sherwood | 12 | 0 | 68.0 | 64.1 | 66 | -3.9 | 12 | — | 64.1 | 0.0 | 10 | -10.0 |
| 13 Battery Baldwin | 13 | 0 | 68.0 | 66.7 | 66 | -1.3 | 12 | Snd Lvl | 66.7 | 0.0 | 10 | -10.0 |
| 14 Building 644 | 14 | 0 | 0.0 | 59.3 | 71 | 59.3 | 12 | — | 59.3 | 0.0 | 10 | -10.0 |
| 15 Building 649 | 15 | 0 | 0.0 | 60.0 | 66 | 60.0 | 12 | — | 60.0 | 0.0 | 10 | -10.0 |
| 16 Building 650/Stilwell Hall | 16 | 0 | 70.0 | 58.9 | 66 | -11.1 | 12 | — | 58.9 | 0.0 | 10 | -10.0 |
| 17 1253 Armistead Road | 17 | 1 | 66.0 | 64.9 | 66 | -1.1 | 12 | — | 64.9 | 0.0 | 10 | -10.0 |
| 18 Home on Armistead Road | 18 | 1 | 66.0 | 75.6 | 66 | 9.6 | 12 | Snd Lvl | 75.6 | 0.0 | 10 | -10.0 |
| 19 Building 969 | 19 | 0 | 0.0 | 57.2 | 71 | 57.2 | 12 | — | 57.2 | 0.0 | 10 | -10.0 |
| 20 Building 968 | 20 | 0 | 0.0 | 58.7 | 71 | 58.7 | 12 | — | 58.7 | 0.0 | 10 | -10.0 |
| 21 Building 967 | 21 | 0 | 0.0 | 63.9 | 71 | 63.9 | 12 | — | 63.9 | 0.0 | 10 | -10.0 |
| 22 Building 966 | 22 | 0 | 0.0 | 63.9 | 71 | 63.9 | 12 | — | 63.9 | 0.0 | 10 | -10.0 |
| 23 Building 964 | 23 | 0 | 0.0 | 62.1 | 66 | 62.1 | 12 | — | 62.1 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 Building 963 | 24 | 0 | 0.0 | 61.5 | 66 | 61.5 | 12 | — | 61.5 | 0.0 | 10 | -10.0 |
| 25 Building 962 | 25 | 0 | 0.0 | 60.9 | 66 | 60.9 | 12 | — | 60.9 | 0.0 | 10 | -10.0 |
| 26 Unknown Building | 26 | 0 | 0.0 | 74.3 | 71 | 74.3 | 12 | Snd Lvl | 74.3 | 0.0 | 10 | -10.0 |
| 27 Building 1299/Log Cabin | 27 | 0 | 63.0 | 68.0 | 66 | 5.0 | 12 | Snd Lvl | 68.0 | 0.0 | 10 | -10.0 |
| 28 Building 1387 | 28 | 0 | 0.0 | 66.5 | 71 | 66.5 | 12 | — | 66.5 | 0.0 | 10 | -10.0 |
| 29 Building 1298 Storey Ave. | 29 | 2 | 66.5 | 65.8 | 66 | -0.7 | 12 | — | 65.8 | 0.0 | 10 | -10.0 |
| 30 Building 1297 Storey Ave. | 30 | 2 | 66.5 | 67.8 | 66 | 1.3 | 12 | Snd Lvl | 67.8 | 0.0 | 10 | -10.0 |
| 31 Building 1295 Storey Ave. | 31 | 2 | 66.5 | 69.8 | 66 | 3.3 | 12 | Snd Lvl | 69.8 | 0.0 | 10 | -10.0 |
| 32 Building 1294 Storey Ave. | 32 | 2 | 66.5 | 70.4 | 66 | 3.9 | 12 | Snd Lvl | 70.4 | 0.0 | 10 | -10.0 |
| 33 Building 1293 Storey Ave. | 33 | 2 | 66.5 | 71.4 | 66 | 4.9 | 12 | Snd Lvl | 71.4 | 0.0 | 10 | -10.0 |
| 34 Building 1291 Storey Ave. | 34 | 2 | 66.5 | 72.2 | 66 | 5.7 | 12 | Snd Lvl | 72.2 | 0.0 | 10 | -10.0 |
| 35 Building 1290 Storey Ave. | 35 | 2 | 66.5 | 73.8 | 66 | 7.3 | 12 | Snd Lvl | 73.8 | 0.0 | 10 | -10.0 |
| 36 Building 1289 Storey Ave. | 36 | 2 | 66.5 | 72.8 | 66 | 6.3 | 12 | Snd Lvl | 72.8 | 0.0 | 10 | -10.0 |
| 37 Building 1263 Storey Ave. | 37 | 2 | 0.0 | 68.7 | 66 | 68.7 | 12 | Snd Lvl | 68.7 | 0.0 | 10 | -10.0 |
| 38 Building 682/Cross Cultural Center | 38 | 0 | 65.5 | 64.9 | 66 | -0.6 | 12 | — | 64.9 | 0.0 | 10 | -10.0 |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | 64.0 | 59.8 | 71 | -4.2 | 12 | — | 59.8 | 0.0 | 10 | -10.0 |
| 40 Building 662/Cavalry Stable | 40 | 0 | 64.0 | 61.8 | 71 | -2.2 | 12 | — | 61.8 | 0.0 | 10 | -10.0 |
| 41 Building 663/Cavalry Stable | 41 | 0 | 64.0 | 62.9 | 71 | -1.1 | 12 | — | 62.9 | 0.0 | 10 | -10.0 |
| 42 Building 667/Cavalry Stable | 42 | 0 | 64.0 | 66.5 | 71 | 2.5 | 12 | — | 66.5 | 0.0 | 10 | -10.0 |
| 43 National Cemetery Grave Site | 43 | 0 | 69.0 | 62.2 | 66 | -6.8 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 44 Building 129 | 44 | 1 | 0.0 | 56.3 | 66 | 56.3 | 12 | — | 56.3 | 0.0 | 10 | -10.0 |
| 45 Building 122 | 45 | 0 | 0.0 | 61.2 | 71 | 61.2 | 12 | — | 61.2 | 0.0 | 10 | -10.0 |
| 46 Building 108 | 46 | 0 | 0.0 | 61.1 | 71 | 61.1 | 12 | — | 61.1 | 0.0 | 10 | -10.0 |
| 47 Building 107 | 47 | 0 | 0.0 | 66.4 | 71 | 66.4 | 12 | — | 66.4 | 0.0 | 10 | -10.0 |
| 48 Building 104 | 48 | 0 | 74.0 | 57.7 | 71 | -16.3 | 12 | — | 57.7 | 0.0 | 10 | -10.0 |
| 49 Building 105 | 49 | 0 | 74.0 | 72.4 | 71 | -1.6 | 12 | Snd Lvl | 72.4 | 0.0 | 10 | -10.0 |
| 50 Building 106 | 50 | 0 | 76.0 | 70.9 | 71 | -5.1 | 12 | — | 70.9 | 0.0 | 10 | -10.0 |
| 51 Building 211 | 51 | 0 | 0.0 | 64.5 | 71 | 64.5 | 12 | — | 64.5 | 0.0 | 10 | -10.0 |
| 52 Building 204 | 52 | 0 | 0.0 | 58.4 | 71 | 58.4 | 12 | — | 58.4 | 0.0 | 10 | -10.0 |
| 53 Building 210 | 53 | 0 | 0.0 | 61.4 | 71 | 61.4 | 12 | — | 61.4 | 0.0 | 10 | -10.0 |
| 54 Building 201 | 54 | 0 | 0.0 | 55.8 | 71 | 55.8 | 12 | — | 55.8 | 0.0 | 10 | -10.0 |
| 55 Building 220 | 55 | 0 | 0.0 | 54.1 | 71 | 54.1 | 12 | — | 54.1 | 0.0 | 10 | -10.0 |
| 56 Building 231 | 56 | 0 | 0.0 | 65.6 | 71 | 65.6 | 12 | — | 65.6 | 0.0 | 10 | -10.0 |
| 57 Building 228 | 57 | 0 | 0.0 | 62.7 | 71 | 62.7 | 12 | — | 62.7 | 0.0 | 10 | -10.0 |
| 58 Building 229 | 58 | 0 | 0.0 | 60.8 | 71 | 60.8 | 12 | — | 60.8 | 0.0 | 10 | -10.0 |
| 59 Building 223 | 59 | 0 | 0.0 | 58.0 | 71 | 58.0 | 12 | — | 58.0 | 0.0 | 10 | -10.0 |
| 60 Building 230 | 60 | 0 | 0.0 | 71.2 | 71 | 71.2 | 12 | Snd Lvl | 71.2 | 0.0 | 10 | -10.0 |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 57.0 | 59.6 | 66 | 2.6 | 12 | — | 59.6 | 0.0 | 10 | -10.0 |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 57.0 | 57.0 | 66 | 0.0 | 12 | — | 57.0 | 0.0 | 10 | -10.0 |
| 63 Building 1063 | 63 | 0 | 68.5 | 60.5 | 71 | -8.0 | 12 | — | 60.5 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 Building 1062 | 64 | 0 | 68.5 | 58.2 | 71 | -10.3 | 12 | — | 58.2 | 0.0 | 10 | -10.0 |
| 65 Building 1060 | 65 | 0 | 68.5 | 58.4 | 71 | -10.1 | 12 | — | 58.4 | 0.0 | 10 | -10.0 |
| 66 Building 1167 | 66 | 0 | 68.0 | 63.6 | 71 | -4.4 | 12 | — | 63.6 | 0.0 | 10 | -10.0 |
| 67 Building 1163 | 67 | 0 | 0.0 | 63.8 | 71 | 63.8 | 12 | — | 63.8 | 0.0 | 10 | -10.0 |
| 68 Building 1169 | 68 | 0 | 68.0 | 64.2 | 71 | -3.8 | 12 | — | 64.2 | 0.0 | 10 | -10.0 |
| 69 Building 1162 | 69 | 0 | 0.0 | 62.2 | 71 | 62.2 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 70 Building 1170 | 70 | 0 | 68.0 | 71.2 | 71 | 3.2 | 12 | Snd Lvl | 71.2 | 0.0 | 10 | -10.0 |
| 71 Building 1161 | 71 | 0 | 0.0 | 66.4 | 71 | 66.4 | 12 | — | 66.4 | 0.0 | 10 | -10.0 |
| 72 Building 1160 | 72 | 0 | 0.0 | 71.4 | 71 | 71.4 | 12 | Snd Lvl | 71.4 | 0.0 | 10 | -10.0 |
| 73 Building 1152/YMCA | 73 | 0 | 0.0 | 69.7 | 66 | 69.7 | 12 | Snd Lvl | 69.7 | 0.0 | 10 | -10.0 |
| 74 Building 1151/YMCA Pool | 74 | 0 | 0.0 | 71.6 | 66 | 71.6 | 12 | Snd Lvl | 71.6 | 0.0 | 10 | -10.0 |
| 75 Building 1004 | 75 | 0 | 0.0 | 55.9 | 71 | 55.9 | 12 | — | 55.9 | 0.0 | 10 | -10.0 |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 76.5 | 72.0 | 66 | -4.5 | 12 | Snd Lvl | 72.0 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 229 | 0.0 | 0.0 | 0.0 |
| All Impacted | 25 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |


Parkway Circle 2010 PM
Plan View
Run name: Parkway Circle 2010 PM 830
Scale: 200 meters
Sheet 1 of 1
30 Aug 2004
Environmental Science Associates, Inc.
Project/Contract No. Doyle Drive - 204235
TNM Version 2.5, Feb 2004
Analysis By: Win Lindeman
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
1000
-800
-600
-400
-200
0
200
400
600
800
1000
1200
1400

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2010 PM

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

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle to North Tunnel | 18.0 | 1 - North t | 11 | -1,185.0 | 519.0 | 53.00 | | | | Average | |
| | | 2 - 1+97.5 | 10 | -1,060.0 | 368.0 | 56.00 | | | | Average | |
| | | 3 - 4+74 | 9 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 4 - 5+27 | 8 | -827.0 | 138.0 | 51.50 | | | | Average | |
| | | 5 - 5+27 | 7 | -826.0 | 138.0 | 51.50 | | | | Average | Y |
| | | 6 - 6+00 | 6 | -764.0 | 95.0 | 49.00 | | | | Average | Y |
| | | 7 - 8+00 | 5 | -588.0 | 7.0 | 40.00 | | | | Average | Y |
| | | 8 - 9+57 | 4 | -450.0 | -50.0 | 33.00 | | | | Average | Y |
| | | 9 - 11+10 | 3 | -294.0 | -88.0 | 27.00 | | | | Average | Y |
| | | 10 - 11+10 | 2 | -293.0 | -88.0 | 27.00 | | | | Average | |
| | | 11 - 11+53 | 1 | -253.0 | -96.0 | 26.00 | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 18.0 | 1 - 13+93 | 18 | -17.0 | -142.0 | 16.00 | | | | Average | |
| | | 2 - 14+10 | 17 | 0.0 | -143.0 | 16.00 | | | | Average | |
| | | 3 - 14+60 | 16 | 49.0 | -143.0 | 14.00 | | | | Average | |
| | | 4 - 15+00 | 15 | 88.0 | -135.0 | 12.00 | | | | Average | |
| | | 5 - 15+85. | 14 | 170.0 | -112.0 | 9.00 | | | | Average | |
| | | 6 - 17+33. | 13 | 310.0 | -65.0 | 5.00 | | | | Average | |
| | | 7 - 17+80 | 12 | 354.0 | -52.0 | 4.00 | | | | | |
| EB Doyle from South Tunnel to Francisco | 18.0 | 1 - 20+95 | 19 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 21+20 | 20 | 684.0 | 14.0 | 3.00 | | | | Average | |
| | | 3 - 21+20 | 21 | 685.0 | 14.0 | 3.00 | | | | Average | Y |
| | | 4 - 22+42. | 22 | 807.0 | 18.0 | 5.00 | | | | Average | Y |
| | | 5 - 23+00 | 23 | 859.0 | 12.0 | 6.00 | | | | Average | Y |
| | | 6 - 23+25 | 24 | 925.0 | -10.0 | 6.00 | | | | Average | Y |
| | | 7 - 23+25 | 25 | 926.0 | -10.0 | 6.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 - 24+20 | 26 | 966.0 | -41.0 | 5.00 | | | | Average | |
| | | 9 - 24+85. | 27 | 1,016.0 | -88.0 | 4.00 | | | | Average | |
| | | 10 - 25+17 | 28 | 1,030.0 | -108.0 | 3.50 | | | | Average | |
| | | 11 - 25+64 | 29 | 1,062.0 | -146.0 | 3.00 | | | | Average | |
| | | 12 - Gorg | 30 | 1,140.0 | -224.0 | 4.00 | | | | Average | |
| | | 13 - Franc | 31 | 1,320.0 | -400.0 | 4.00 | | | | | |
| WB/NB Richardson-Francisco to Tunnel | 10.8 | 1 - Francis | 32 | 1,320.0 | -380.0 | 4.00 | | | | Average | |
| | | 2 - 27+20. | 33 | 1,148.0 | -216.0 | 4.00 | | | | Average | |
| | | 3 - 26+00 | 34 | 1,095.0 | -152.0 | 3.50 | | | | Average | |
| | | 4 - 25+40 | 35 | 1,055.0 | -120.0 | 3.50 | | | | Average | |
| | | 5 - 24+73 | 36 | 1,018.0 | -65.0 | 4.00 | | | | Average | |
| | | 6 - 24+20 | 37 | 977.0 | -21.0 | 5.00 | | | | Average | |
| | | 7 - 23+75 | 38 | 950.0 | 0.0 | 6.00 | | | | Average | |
| | | 8 - 23+75 | 39 | 949.0 | 0.0 | 6.00 | | | | Average | Y |
| | | 9 - 23+22 | 40 | 900.0 | 22.0 | 6.00 | | | | Average | Y |
| | | 10 - 23+22 | 41 | 899.0 | 22.0 | 6.00 | | | | Average | |
| | | 11 - 22+68 | 42 | 843.0 | 34.0 | 6.00 | | | | Average | |
| | | 12 - 22+00 | 43 | 775.0 | 33.0 | 4.00 | | | | Average | |
| | | 13 - 20+85 | 44 | 661.0 | 31.0 | 2.00 | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 10.8 | 1 - 18+05 | 45 | 386.0 | -15.0 | 3.50 | | | | Average | |
| | | 2 - 15+00 | 46 | 96.0 | -107.0 | 10.00 | | | | Average | |
| | | 3 - 14+10 | 47 | 10.0 | -119.0 | 14.00 | | | | | |
| WB Doyle from North Tunnel to North End | 13.2 | 1 - 11+80 | 51 | -216.0 | -85.0 | 24.00 | | | | Average | |
| | | 2 - 11+00 | 52 | -295.0 | -69.0 | 27.00 | | | | Average | |
| | | 3 - 11+00 | 53 | -296.0 | -69.0 | 27.00 | | | | Average | Y |
| | | 4 - 9+80 | 54 | -407.0 | -39.0 | 32.00 | | | | Average | Y |
| | | 5 - 8+73 | 55 | -488.0 | -9.0 | 36.00 | | | | Average | Y |
| | | 6 - 7+00 | 56 | -661.0 | 69.0 | 44.00 | | | | Average | Y |
| | | 7 - 6+60 | 57 | -696.0 | 88.0 | 46.00 | | | | Average | Y |
| | | 8 - 6+60 | 58 | -697.0 | 88.0 | 46.00 | | | | Average | |
| | | 9 - 5+54 | 59 | -789.0 | 145.0 | 50.00 | | | | Average | |
| | | 10 - 5+54 | 60 | -790.0 | 145.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+14 | 61 | -817.0 | 169.0 | 52.00 | | | | Average | Y |
| | | 12 - 5+14 | 62 | -818.0 | 169.0 | 52.00 | | | | Average | |
| | | 13 - 4+00 | 63 | -907.0 | 237.0 | 56:00 | | | | Average | |
| | | 14 - 3+10 | 64 | -975.0 | 300.0 | 56.00 | | | | Average | |
| | | 15 - 0+00 | 65 | -1,170.0 | 522.0 | 53.00 | | | | | |
| WB Doyle off ramp to SB Park Presidio | 7.0 | 1 - 0+00 | 66 | -488.0 | -9.0 | 42.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 - 1+30 | 67 | -600.0 | 52.0 | 42.00 | | | | Average | Y |
| | | 3 - 1+80 | 68 | -639.0 | 82.0 | 42.00 | | | | Average | Y |
| | | 4 - 2+20 | 69 | -661.0 | 114.0 | 42.00 | | | | Average | Y |
| | | 5 - 2+20 | 70 | -662.0 | 114.0 | 42.00 | | | | Average | |
| | | 6 - 2+48 | 71 | -673.0 | 139.0 | 42.00 | | | | Average | |
| | | 7 - 3+09 | 72 | -693.0 | 165.0 | 42.00 | | | | Average | |
| | | 8 - 3+40 | 73 | -718.0 | 184.0 | 42.00 | | | | Average | |
| | | 9 - 3+60 | 74 | -746.0 | 194.0 | 42.00 | | | | Average | |
| | | 10 - 3+80 | 75 | -787.0 | 185.0 | 42.00 | | | | Average | |
| | | 11 - 4+00 | 76 | -803.0 | 171.0 | 42.00 | | | | Average | |
| | | 12 - 4+20 | 77 | -813.0 | 153.0 | 42.00 | | | | Average | |
| | | 13 - 4+40 | 78 | -818.0 | 134.0 | 42.00 | | | | Average | |
| | | 14 - 4+59 | 79 | -815.0 | 112.0 | 42.00 | | | | Average | |
| | | 15 - 4+80 | 80 | -807.0 | 93.0 | 42.00 | | | | Average | |
| | | 16 - 5+00 | 81 | -796.0 | 76.0 | 41.00 | | | | Average | |
| | | 17 - 5+20 | 82 | -782.0 | 61.0 | 40.00 | | | | Average | |
| | | 18 - 5+80 | 83 | -735.0 | 24.0 | 40.00 | | | | Average | |
| | | 19 - 6+06 | 84 | -719.0 | 5.0 | 40.00 | | | | Average | |
| | | 20 - 6+31 | 85 | -706.0 | -15.0 | 40.00 | | | | Average | |
| | | 21 - 6+60 | 86 | -696.0 | -42.0 | 40.00 | | | | Average | |
| | | 22 - 6+88 | 87 | -694.0 | -68.0 | 40.00 | | | | Average | |
| | | 23 - 8+23 | 169 | -699.0 | -203.0 | 40.00 | | | | Average | |
| | | 24 - 5+88. | 88 | -698.0 | -337.0 | 40.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 10.2 | 1 - 0+00 | 89 | -690.0 | -337.0 | 40.00 | | | | Average | |
| | | 2A | 170 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 3+72.3 | 90 | -667.0 | 32.0 | 37.00 | | | | Average | |
| | | 3 - 4+00 | 91 | -667.0 | 61.0 | 38.00 | | | | Average | |
| | | 4 - 4+40 | 92 | -677.0 | 101.0 | 40.00 | | | | Average | |
| | | 5 - 4+60 | 93 | -698.0 | 137.0 | 48.00 | | | | Average | |
| | | 6 - 5+00 | 94 | -715.0 | 150.0 | 48.00 | | | | Average | |
| | | 7 - 5+20 | 95 | -734.0 | 160.0 | 49.00 | | | | Average | |
| | | 8 - 5+40 | 96 | -753.0 | 165.0 | 49.00 | | | | Average | |
| | | 9 - 5+53 | 97 | -760.0 | 168.0 | 50.00 | | | | Average | |
| | | 10 - 5+53 | 98 | -761.0 | 168.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+80 | 99 | -792.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 12 - 5+98 | 100 | -807.0 | 183.0 | 52.00 | | | | Average | Y |
| | | 13 - 5+98 | 101 | -808.0 | 183.0 | 52.00 | | | | Average | |
| | | 14 - 6+58. | 102 | -857.0 | 212.0 | 53.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15 - 8+04. | 103 | -975.0 | 300.0 | 56.00 | | | | | |
| NB Park Presidio to EB Doyle Drive | 7.0 | 1 - 0+00 | 104 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 1+35.9 | 105 | -657.0 | 20.0 | 36.00 | | | | Average | |
| | | 3 - 1+60 | 106 | -654.0 | 44.0 | 40.00 | | | | Average | |
| | | 4 - 1+80 | 107 | -657.0 | 65.0 | 40.00 | | | | Average | |
| | | 5 - 2+00 | 108 | -661.0 | 85.0 | 40.00 | | | | Average | |
| | | 6 - 2+20 | 109 | -667.0 | 104.0 | 42.00 | | | | Average | |
| | | 7 - 2+40 | 110 | -675.0 | 123.0 | 42.00 | | | | Average | |
| | | 8 - 2+60 | 111 | -686.0 | 140.0 | 42.00 | | | | Average | |
| | | 9 - 2+81.9 | 112 | -700.0 | 157.0 | 42.00 | | | | Average | |
| | | 10 - 3+09. | 113 | -723.0 | 175.0 | 42.00 | | | | Average | |
| | | 11 - 3+40 | 114 | -754.0 | 180.0 | 42.00 | | | | Average | |
| | | 12 - 3+60 | 115 | -775.0 | 173.0 | 42.00 | | | | Average | |
| | | 13 - 3+80 | 116 | -790.0 | 158.0 | 42.00 | | | | Average | |
| | | 14 - 4+00 | 117 | -796.0 | 138.0 | 42.00 | | | | Average | |
| | | 15 - 4+20 | 118 | -795.0 | 116.0 | 42.00 | | | | Average | |
| | | 16 - 4+40 | 119 | -788.0 | 97.0 | 42.00 | | | | Average | |
| | | 17 - 4+53. | 120 | -778.0 | 88.0 | 42.00 | | | | Average | |
| | | 18 - 5+20 | 121 | -722.0 | 51.0 | 42.00 | | | | Average | |
| | | 19 - 5+20 | 122 | -721.0 | 51.0 | 42.00 | | | | Average | Y |
| | | 20 - 6+00 | 123 | -652.0 | 11.0 | 42.00 | | | | Average | Y |
| | | 21 - 6+40 | 124 | -614.0 | -3.0 | 42.00 | | | | Average | |
| | | 22 - 8+19. | 125 | -450.0 | -50.0 | 33.00 | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 10.0 | 1 - 0+00 | 128 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 2 - 0+65 | 129 | -823.0 | 116.0 | 52.00 | | | | Average | |
| | | 3 - 0+65 | 130 | -822.0 | 116.0 | 52.00 | | | | Average | Y |
| | | 4 - 2+00 | 131 | -723.0 | 35.0 | 44.00 | | | | Average | Y |
| | | 5 - 2+00 | 132 | -722.0 | 35.0 | 44.00 | | | | Average | |
| | | 6 - 2+40 | 133 | -700.0 | 5.0 | 42.00 | | | | Average | |
| | | 7 - 2+80 | 134 | -687.0 | -30.0 | 40.00 | | | | Average | |
| | | 8 - 3+14.5 | 135 | -685.0 | -63.0 | 37.00 | | | | Average | |
| | | 9 - 5+88.1 | 136 | -698.0 | -337.0 | 40.00 | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 6.0 | 1 - 0+00 | 137 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 0+42 | 138 | 685.0 | 0.0 | 2.00 | | | | Average | |
| | | 3 - 0+42 | 139 | 686.0 | 0.0 | 2.00 | | | | Average | Y |
| | | 4 - 1+00 | 140 | 740.0 | -2.0 | 2.00 | | | | Average | Y |
| | | 5 - 1+50 | 141 | 786.0 | -11.0 | 2.00 | | | | Average | Y |
| | | 6 - 1+50 | 142 | 787.0 | -11.0 | 2.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 - 2+12.1 | 143 | 843.0 | -30.0 | 1.00 | | | | Average | Y |
| | | 8 - EC 0+7 | 144 | 898.0 | -75.0 | 1.50 | | | | Average | |
| | | 9 | 145 | 998.0 | -167.0 | 3.00 | | | | Average | |
| | | 10 | 146 | 1,024.0 | -186.0 | 3.00 | | | | Average | |
| | | 11 | 147 | 1,118.0 | -243.0 | 4.00 | | | | Average | |
| | | 12 | 148 | 1,118.0 | -245.0 | 4.00 | | | | Average | |
| | | 13 - Inters | 149 | 1,140.0 | -224.0 | 4.00 | | | | | |
| NB Girard Rd. from Marina to Lincoln | 3.7 | 1 - 0+00 | 150 | 1,201.0 | 188.0 | 4.00 | | | | Average | |
| | | 2 - 0+65 | 151 | 1,153.0 | 136.0 | 3.60 | | | | Average | |
| | | 3 - 2+80 | 152 | 965.0 | 40.0 | 0.50 | | | | Average | |
| | | 4 - 4+09.9 | 153 | 843.0 | -23.0 | 0.00 | | | | Average | |
| | | 5 - 4+40 | 154 | 828.0 | -40.0 | 1.00 | | | | Average | |
| | | 6 - 4+80 | 155 | 796.0 | -65.0 | 4.70 | | | | Average | |
| | | 7 - 5+20 | 156 | 772.0 | -98.0 | 5.50 | | | | Average | |
| | | 8 - 7+20 | 157 | 673.0 | -273.0 | 11.50 | | | | | |
| SB Girard Rd. from Lincoln to Marina | 3.7 | 1 - 7+20 | 158 | 678.0 | -273.0 | 11.50 | | | | Average | |
| | | 2 - 5+20 | 159 | 779.0 | -102.0 | 5.50 | | | | Average | |
| | | 3 - 4+80 | 160 | 803.0 | -70.0 | 4.70 | | | | Average | |
| | | 4 - 4+40 | 161 | 831.0 | -44.0 | 1.00 | | | | Average | |
| | | 5 - 4+09.9 | 162 | 852.0 | -31.0 | 0.00 | | | | Average | |
| | | 6 - 2+80 | 163 | 965.0 | 27.0 | 0.50 | | | | Average | |
| | | 7 - 0+65 | 164 | 1,156.0 | 127.0 | 3.60 | | | | Average | |
| | | 8 - Palace | 239 | 1,178.0 | 146.0 | 4.00 | | | | Average | |
| | | 9 - Mason | 165 | 1,218.0 | 191.0 | 4.00 | | | | | |
| Halleck St. from Lincon to Mason | 7.2 | 1 - 3+65 | 166 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 2 - 2+77.9 | 167 | 612.0 | -139.0 | 10.00 | | | | Average | |
| | | 3 - 0+00 | 168 | 673.0 | 130.0 | 4.00 | | | | | |
| Lincoln from McDowell to Letterman | 7.3 | 1 | 180 | -316.0 | -214.0 | 33.00 | | | | Average | |
| | | 2 | 181 | -279.0 | -132.0 | 33.00 | | | | Average | |
| | | 3 | 182 | -251.0 | -115.0 | 33.00 | | | | Average | |
| | | 4 | 183 | -216.0 | -104.0 | 32.00 | | | | Average | |
| | | 5 | 184 | -118.0 | -147.0 | 31.00 | | | | Average | |
| | | 6 | 185 | -93.0 | -152.0 | 29.00 | | | | Average | |
| | | 7 | 186 | -59.0 | -148.0 | 29.00 | | | | Average | |
| | | 8 | 187 | -38.0 | -151.0 | 29.00 | | | | Average | |
| | | 9 | 188 | -14.0 | -158.0 | 29.00 | | | | Average | |
| | | 10 | 189 | 13.0 | -167.0 | 27.00 | | | | Average | |
| | | 11 | 190 | 50.0 | -170.0 | 26.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12 | 191 | 182.0 | -134.0 | 19.00 | | | | Average | |
| | | 13 | 192 | 245.0 | -108.0 | 15.00 | | | | Average | |
| | | 14 | 193 | 324.0 | -68.0 | 12.00 | | | | Average | |
| | | 15 | 194 | 376.0 | -100.0 | 13.00 | | | | Average | |
| | | 16 | 195 | 396.0 | -124.0 | 13.00 | | | | Average | |
| | | 17 | 196 | 478.0 | -160.0 | 12.00 | | | | Average | |
| | | 18 | 197 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 19 | 198 | 673.0 | -273.0 | 11.50 | | | | Average | |
| | | 20 | 199 | 735.0 | -310.0 | 12.00 | | | | | |
| Mason St. from Crissy Ave. to Marina | 7.3 | 1 | 200 | -500.0 | 96.0 | 3.00 | | | | Average | |
| | | 2 | 201 | 40.0 | 0.0 | 4.00 | | | | Average | |
| | | 3 | 202 | 72.0 | 4.0 | 4.00 | | | | Average | |
| | | 4 | 203 | 96.0 | 15.0 | 4.00 | | | | Average | |
| | | 5 | 204 | 144.0 | 60.0 | 4.00 | | | | Average | |
| | | 6 | 205 | 174.0 | 68.0 | 4.00 | | | | Average | |
| | | 7 | 206 | 673.0 | 130.0 | 4.00 | | | | Average | |
| | | 8 | 207 | 768.0 | 138.0 | 4.00 | | | | Average | |
| | | 9 | 208 | 952.0 | 159.0 | 4.00 | | | | Average | |
| | | 10 | 209 | 1,185.0 | 187.0 | 4.00 | | | | Average | |
| | | 11 | 210 | 1,218.0 | 191.0 | 4.00 | | | | Average | |
| | | 12 | 211 | 1,270.0 | 196.0 | 4.00 | | | | | |
| Baker St. from Marina to Richardson | 7.3 | 1 | 212 | 1,270.0 | 196.0 | 4.00 | | | | Average | |
| | | 2 | 213 | 1,280.0 | 93.0 | 4.00 | | | | Average | |
| | | 3 | 214 | 1,290.0 | -7.0 | 4.00 | | | | Average | |
| | | 4 | 215 | 1,310.0 | -276.0 | 4.00 | | | | Average | |
| | | 5 | 216 | 1,327.0 | -400.0 | 4.00 | | | | | |
| Palace Drive from Richardson to Marina | 7.3 | 1 | 217 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 2 | 218 | 1,186.0 | -245.0 | 4.00 | | | | Average | |
| | | 3 | 219 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 4 | 220 | 1,180.0 | -195.0 | 3.50 | | | | Average | |
| | | 5 | 221 | 1,151.0 | -188.0 | 3.00 | | | | Average | |
| | | 6 | 222 | 1,125.0 | -175.0 | 3.00 | | | | Average | |
| | | 7 | 223 | 1,100.0 | -153.0 | 3.00 | | | | Average | |
| | | 8 | 224 | 1,081.0 | -130.0 | 3.00 | | | | Average | |
| | | 9 | 225 | 1,069.0 | -108.0 | 3.00 | | | | Average | |
| | | 10 | 226 | 1,060.0 | -83.0 | 3.00 | | | | Average | |
| | | 11 | 227 | 1,055.0 | -63.5 | 4.00 | | | | Average | |
| | | 12 | 228 | 1,053.0 | -39.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 13 | 229 | 1,055.0 | -14.0 | 4.00 | | | | Average | |
| | | 14 | 230 | 1,061.0 | 10.0 | 4.00 | | | | Average | |
| | | 15 | 231 | 1,073.0 | 40.0 | 4.00 | | | | Average | |
| | | 16 | 232 | 1,088.0 | 68.0 | 4.00 | | | | Average | |
| | | 17 | 233 | 1,116.0 | 91.0 | 4.00 | | | | Average | |
| | | 18 | 234 | 1,185.0 | 139.0 | 4.00 | | | | Average | |
| | | 19 | 235 | 1,178.0 | 146.0 | 4.00 | | | | | |
| Montgomery St. from Sherian to Lincoln | 9.2 | 1 | 236 | 237.0 | -280.0 | 16.00 | | | | Average | |
| | | 2 | 237 | 350.0 | -117.0 | 13.00 | | | | Average | |
| | | 3 | 238 | 396.0 | -124.0 | 13.00 | | | | | |
| Palace Drive Connector to Gorgas | 7.3 | 1 | 240 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 2 | 241 | 1,180.0 | -214.0 | 4.00 | | | | Average | |
| | | 3 | 242 | 1,172.0 | -208.0 | 4.00 | | | | Average | |
| | | 4 | 243 | 1,160.0 | -206.0 | 4.00 | | | | Average | |
| | | 5 | 244 | 1,148.0 | -216.0 | 4.00 | | | | | |

Environmental Science Associates, Inc. 30 August 2004
Win Lindeman TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2010 PM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle to North Tunnel | 1 - North End | 11 | 3578 | 88 | 12 | 88 | 53 | 88 | 45 | 88 | 12 | 88 |
| | 2 - 1+97.539 | 10 | 3578 | 88 | 12 | 88 | 53 | 88 | 45 | 88 | 12 | 88 |
| | 3 - 4+74 | 9 | 2345 | 88 | 7 | 88 | 31 | 88 | 27 | 88 | 7 | 88 |
| | 4 - 5+27 | 8 | 2345 | 88 | 7 | 88 | 31 | 88 | 27 | 88 | 7 | 88 |
| | 5 - 5+27 | 7 | 2345 | 88 | 7 | 88 | 31 | 88 | 27 | 88 | 7 | 88 |
| | 6 - 6+00 | 6 | 2345 | 88 | 7 | 88 | 31 | 88 | 27 | 88 | 7 | 88 |
| | 7 - 8+00 | 5 | 2345 | 88 | 7 | 88 | 31 | 88 | 27 | 88 | 7 | 88 |
| | 8 - 9+57 | 4 | 2801 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 9 - 11+10 | 3 | 2801 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 10 - 11+10 | 2 | 2801 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 11 - 11+53 | 1 | | | | | | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 1 - 13+93 | 18 | 2801 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 2 - 14+10 | 17 | 2801 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 3 - 14+60 | 16 | 2801 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 4 - 15+00 | 15 | 2801 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 5 - 15+85.44 | 14 | 2801 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 6 - 17+33.198 | 13 | 2801 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 7 - 17+80 | 12 | | | | | | | | | | |
| EB Doyle from South Tunnel to Francisco | 1 - 20+95 | 19 | 2047 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 2 - 21+20 | 20 | 2047 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 3 - 21+20 | 21 | 2047 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 22+42.630 | 22 | 2047 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 5 - 23+00 | 23 | 2047 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 6 - 23+25 | 24 | 2047 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 7 - 23+25 | 25 | 2047 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 8 - 24+20 | 26 | 2047 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 9 - 24+85.060 | 27 | 2047 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 10 - 25+17.10 | 28 | 2047 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 11 - 25+64.74 | 29 | 2047 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 12 - Gorgas I | 30 | 2047 | 56 | 6 | 56 | 27 | 56 | 23 | 56 | 6 | 56 |
| | 13 - Francisc | 31 | | | | | | | | | | |
| WB/NB Richardson-Francisco to Tunnel | 1 - Francisco | 32 | 2030 | 56 | 0 | 0 | 4 | 56 | 57 | 56 | 21 | 56 |
| | 2 - 27+20.608 | 33 | 2030 | 56 | 0 | 0 | 4 | 56 | 57 | 56 | 21 | 56 |
| | 3 - 26+00 | 34 | 2030 | 56 | 0 | 0 | 4 | 56 | 57 | 56 | 21 | 56 |
| | 4 - 25+40 | 35 | 2030 | 56 | 0 | 0 | 4 | 56 | 57 | 56 | 21 | 56 |
| | 5 - 24+73 | 36 | 2030 | 56 | 0 | 0 | 4 | 56 | 57 | 56 | 21 | 56 |
| | 6 - 24+20 | 37 | 2030 | 56 | 0 | 0 | 4 | 56 | 57 | 56 | 21 | 56 |
| | 7 - 23+75 | 38 | 2030 | 56 | 0 | 0 | 4 | 56 | 57 | 56 | 21 | 56 |
| | 8 - 23+75 | 39 | 2030 | 56 | 0 | 0 | 4 | 56 | 57 | 56 | 21 | 56 |
| | 9 - 23+22 | 40 | 2030 | 56 | 0 | 0 | 4 | 56 | 57 | 56 | 21 | 56 |
| | 10 - 23+22 | 41 | 2030 | 56 | 0 | 0 | 4 | 56 | 57 | 56 | 21 | 56 |
| | 11 - 22+68 | 42 | 2030 | 56 | 0 | 0 | 4 | 56 | 57 | 56 | 21 | 56 |
| | 12 - 22+00 | 43 | 2030 | 56 | 0 | 0 | 4 | 56 | 57 | 56 | 21 | 56 |
| | 13 - 20+85 | 44 | | | | | | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 1 - 18+05 | 45 | 3608 | 88 | 0 | 0 | 8 | 88 | 101 | 88 | 38 | 88 |
| | 2 - 15+00 | 46 | 3608 | 88 | 0 | 0 | 8 | 88 | 101 | 88 | 38 | 88 |
| | 3 - 14+10 | 47 | | | | | | | | | | |
| WB Doyle from North Tunnel to North End | 1 - 11+80 | 51 | 3608 | 88 | 0 | 0 | 8 | 88 | 101 | 88 | 38 | 88 |
| | 2 - 11+00 | 52 | 3608 | 88 | 0 | 0 | 8 | 88 | 101 | 88 | 38 | 88 |
| | 3 - 11+00 | 53 | 3608 | 88 | 0 | 0 | 8 | 88 | 101 | 88 | 38 | 88 |
| | 4 - 9+80 | 54 | 3608 | 88 | 0 | 0 | 8 | 88 | 101 | 88 | 38 | 88 |
| | 5 - 8+73 | 55 | 3057 | 88 | 0 | 0 | 6 | 88 | 86 | 88 | 32 | 88 |
| | 6 - 7+00 | 56 | 3057 | 88 | 0 | 0 | 6 | 88 | 86 | 88 | 32 | 88 |
| | 7 - 6+60 | 57 | 3057 | 88 | 0 | 0 | 6 | 88 | 86 | 88 | 32 | 88 |
| | 8 - 6+60 | 58 | 3057 | 88 | 0 | 0 | 6 | 88 | 86 | 88 | 32 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9 - 5+54 | 59 | 3057 | 88 | 0 | 0 | 6 | 88 | 86 | 88 | 32 | 88 |
| | 10 - 5+54 | 60 | 3057 | 88 | 0 | 0 | 6 | 88 | 86 | 88 | 32 | 88 |
| | 11 - 5+14 | 61 | 3057 | 88 | 0 | 0 | 6 | 88 | 86 | 88 | 32 | 88 |
| | 12 - 5+14 | 62 | 3057 | 88 | 0 | 0 | 6 | 88 | 86 | 88 | 32 | 88 |
| | 13 - 4+00 | 63 | 3057 | 88 | 0 | 0 | 6 | 88 | 86 | 88 | 32 | 88 |
| | 14 - 3+10 | 64 | 5252 | 88 | 0 | 0 | 11 | 88 | 148 | 88 | 55 | 88 |
| | 15 - 0+00 | 65 | | | | | | | | | | |
| WB Doyle off ramp to SB Park Presidio | 1 - 0+00 | 66 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 2 - 1+30 | 67 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 3 - 1+80 | 68 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 4 - 2+20 | 69 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 5 - 2+20 | 70 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 6 - 2+48 | 71 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 7 - 3+09 | 72 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 8 - 3+40 | 73 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 9 - 3+60 | 74 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 10 - 3+80 | 75 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 11 - 4+00 | 76 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 12 - 4+20 | 77 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 13 - 4+40 | 78 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 14 - 4+59 | 79 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 15 - 4+80 | 80 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 16 - 5+00 | 81 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 17 - 5+20 | 82 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 18 - 5+80 | 83 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 19 - 6+06 | 84 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 20 - 6+31 | 85 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 21 - 6+60 | 86 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 22 - 6+88 | 87 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 23 - 8+23 | 169 | 551 | 56 | 0 | 0 | 1 | 56 | 15 | 56 | 6 | 56 |
| | 24 - 5+88.184 | 88 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 - 0+00 | 89 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 2A | 170 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 2 - 3+72.391 | 90 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 - 4+00 | 91 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 4 - 4+40 | 92 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 5 - 4+60 | 93 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 6 - 5+00 | 94 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 7 - 5+20 | 95 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 8 - 5+40 | 96 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 9 - 5+53 | 97 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 10 - 5+53 | 98 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 11 - 5+80 | 99 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 12 - 5+98 | 100 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 13 - 5+98 | 101 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 14 - 6+58.037 | 102 | 2227 | 56 | 0 | 0 | 9 | 56 | 23 | 56 | 25 | 56 |
| | 15 - 8+04.414 | 103 | | | | | | | | | | |
| NB Park Presidio to EB Doyle Drive | 1 - 0+00 | 104 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 2 - 1+35.965 | 105 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 3 - 1+60 | 106 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 4 - 1+80 | 107 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 5 - 2+00 | 108 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 6 - 2+20 | 109 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 7 - 2+40 | 110 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 8 - 2+60 | 111 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 9 - 2+81.908 | 112 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 10 - 3+09.875 | 113 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 11 - 3+40 | 114 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 12 - 3+60 | 115 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 13 - 3+80 | 116 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 14 - 4+00 | 117 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 15 - 4+20 | 118 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 16 - 4+40 | 119 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 17 - 4+53.16 | 120 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 18 - 5+20 | 121 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 19 - 5+20 | 122 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 20 - 6+00 | 123 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |
| | 21 - 6+40 | 124 | 459 | 56 | 2 | 56 | 2 | 56 | 3 | 56 | 5 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 22 - 8+19.142 | 125 | | | | | | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 1 - 0+00 | 128 | 1051 | 56 | 3 | 56 | 14 | 56 | 12 | 56 | 3 | 56 |
| | 2 - 0+65 | 129 | 1051 | 56 | 3 | 56 | 14 | 56 | 12 | 56 | 3 | 56 |
| | 3 - 0+65 | 130 | 1051 | 56 | 3 | 56 | 14 | 56 | 12 | 56 | 3 | 56 |
| | 4 - 2+00 | 131 | 1051 | 56 | 3 | 56 | 14 | 56 | 12 | 56 | 3 | 56 |
| | 5 - 2+00 | 132 | 1051 | 56 | 3 | 56 | 14 | 56 | 12 | 56 | 3 | 56 |
| | 6 - 2+40 | 133 | 1051 | 56 | 3 | 56 | 14 | 56 | 12 | 56 | 3 | 56 |
| | 7 - 2+80 | 134 | 1051 | 56 | 3 | 56 | 14 | 56 | 12 | 56 | 3 | 56 |
| | 8 - 3+14.595 | 135 | 1051 | 56 | 3 | 56 | 14 | 56 | 12 | 56 | 3 | 56 |
| | 9 - 5+88.184 | 136 | | | | | | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 1 - 0+00 | 137 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+42 | 138 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+42 | 139 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 1+00 | 140 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 1+50 | 141 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 1+50 | 142 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 2+12.133 | 143 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - EC 0+74.1 | 144 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 145 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 146 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 147 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 148 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 - Intersect | 149 | | | | | | | | | | |
| NB Girard Rd. from Marina to Lincoln | 1 - 0+00 | 150 | 80 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+65 | 151 | 80 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 2+80 | 152 | 80 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 4+09.995 | 153 | 80 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+40 | 154 | 80 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 4+80 | 155 | 80 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 5+20 | 156 | 80 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - 7+20 | 157 | | | | | | | | | | |
| SB Girard Rd. from Lincoln to Marina | 1 - 7+20 | 158 | 85 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 5+20 | 159 | 85 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 4+80 | 160 | 85 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 4+40 | 161 | 85 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+09.995 | 162 | 85 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 2+80 | 163 | 85 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 0+65 | 164 | 85 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - Palace Dr | 239 | 85 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 - Mason/M | 165 | | | | | | | | | | |
| Halleck St. from Lincon to Mason | 1 - 3+65 | 166 | 100 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 2+77.948 | 167 | 100 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+00 | 168 | | | | | | | | | | |
| Lincoln from McDowell to Letterman | 1 | 180 | 254 | 32 | 7 | 32 | 0 | 0 | 7 | 32 | 0 | 0 |
| | 2 | 181 | 254 | 32 | 7 | 32 | 0 | 0 | 7 | 32 | 0 | 0 |
| | 3 | 182 | 254 | 32 | 7 | 32 | 0 | 0 | 7 | 32 | 0 | 0 |
| | 4 | 183 | 582 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 5 | 184 | 582 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 6 | 185 | 582 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 7 | 186 | 254 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 8 | 187 | 582 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 9 | 188 | 582 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 10 | 189 | 605 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 11 | 190 | 483 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 0 | 0 |
| | 12 | 191 | 483 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 0 | 0 |
| | 13 | 192 | 483 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 0 | 0 |
| | 14 | 193 | 483 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 0 | 0 |
| | 15 | 194 | 483 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 0 | 0 |
| | 16 | 195 | 601 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 0 | 0 |
| | 17 | 196 | 641 | 32 | 7 | 32 | 0 | 0 | 7 | 32 | 0 | 0 |
| | 18 | 197 | 433 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 0 | 0 |
| | 19 | 198 | 934 | 32 | 10 | 32 | 0 | 0 | 10 | 32 | 0 | 0 |
| | 20 | 199 | | | | | | | | | | |
| Mason St. from Crissy Ave. to Marina | 1 | 200 | 20 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 201 | 20 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 202 | 20 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 203 | 20 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 204 | 20 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 205 | 20 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 206 | 44 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 207 | 44 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 208 | 49 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 209 | 49 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 210 | 49 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 211 | | | | | | | | | | |
| Baker St. from Marina to Richardson | 1 | 212 | 22 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 213 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 214 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 215 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 216 | | | | | | | | | | |
| Palace Drive from Richardson to Marina | 1 | 217 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 218 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 219 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 220 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 221 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 222 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 223 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 224 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 225 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 226 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 227 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 228 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 | 229 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 14 | 230 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 15 | 231 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 16 | 232 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 17 | 233 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 18 | 234 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 19 | 235 | | | | | | | | | | |
| Montgomery St. from Sherian to Lincoln | 1 | 236 | 120 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 237 | 120 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 238 | | | | | | | | | | |

**INPUT: TRAFFIC FOR LAeq1h Volumes** **Doyle Drive - 204235**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Palace Drive Connector to Gorgas | 1 | 240 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 241 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 242 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 243 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 244 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

30 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2010 PM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 1,098.0 | -130.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 1,133.0 | -91.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3 Buildings 1187/1188 | 3 | 0 | 1,148.0 | 150.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4 Building 1182 | 4 | 0 | 1,087.0 | 125.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5 Buildings 1183/1186 | 5 | 0 | 1,020.0 | 116.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6 Buildings 1184/1185 | 6 | 0 | 893.0 | 103.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7 Building 603/Crissy Center | 7 | 0 | 571.0 | 88.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8 PX Building | 8 | 0 | 500.0 | 33.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9 Post Commissary/Sports Basement | 9 | 0 | 240.0 | -54.0 | 4.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 10 Battery Blaney | 10 | 0 | -30.0 | -96.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11 Battery Slaughter | 11 | 0 | -104.0 | -98.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12 Battery Sherwood | 12 | 0 | -223.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13 Battery Baldwin | 13 | 0 | -297.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14 Building 644 | 14 | 0 | -260.0 | 16.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15 Building 649 | 15 | 0 | -364.0 | 4.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16 Building 650/Stilwell Hall | 16 | 0 | -437.0 | 11.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17 1253 Armistead Road | 17 | 1 | -785.0 | 235.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18 Home on Armistead Road | 18 | 1 | -939.0 | 296.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19 Building 969 | 19 | 0 | -887.0 | 410.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20 Building 968 | 20 | 0 | -978.0 | 427.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21 Building 967 | 21 | 0 | -1,040.0 | 427.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22 Building 966 | 22 | 0 | -1,044.0 | 433.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 Building 964 | 23 | 0 | -1,016.0 | 446.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24 Building 963 | 24 | 0 | -1,002.0 | 452.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25 Building 962 | 25 | 0 | -987.0 | 455.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26 Unknown Building | 26 | 0 | -1,153.0 | 421.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27 Building 1299/Log Cabin | 27 | 0 | -1,003.0 | 177.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28 Building 1387 | 28 | 0 | -1,105.0 | 268.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29 Building 1298 Storey Ave. | 29 | 2 | -977.0 | 123.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30 Building 1297 Storey Ave. | 30 | 2 | -950.0 | 123.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31 Building 1295 Storey Ave. | 31 | 2 | -919.0 | 119.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32 Building 1294 Storey Ave. | 32 | 2 | -900.0 | 116.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33 Building 1293 Storey Ave. | 33 | 2 | -865.0 | 102.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34 Building 1291 Storey Ave. | 34 | 2 | -841.0 | 92.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35 Building 1290 Storey Ave. | 35 | 2 | -811.0 | 78.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36 Building 1289 Storey Ave. | 36 | 2 | -804.0 | 63.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37 Building 1263 Storey Ave. | 37 | 2 | -722.0 | -152.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38 Building 682/Cross Cultural Center | 38 | 0 | -650.0 | -254.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | -556.0 | -70.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40 Building 662/Cavalry Stable | 40 | 0 | -508.0 | -97.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41 Building 663/Cavalry Stable | 41 | 0 | -488.0 | -140.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42 Building 667/Cavalry Stable | 42 | 0 | -384.0 | -122.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43 National Cemetery Grave Site | 43 | 0 | -23.0 | -163.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44 Building 129 | 44 | 1 | 104.0 | -168.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45 Building 122 | 45 | 0 | 148.0 | -157.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46 Building 108 | 46 | 0 | 225.0 | -136.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47 Building 107 | 47 | 0 | 230.0 | -120.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48 Building 104 | 48 | 0 | 252.0 | -143.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49 Building 105 | 49 | 0 | 285.0 | -93.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50 Building 106 | 50 | 0 | 328.0 | -78.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51 Building 211 | 51 | 0 | 433.0 | -52.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52 Building 204 | 52 | 0 | 522.0 | -17.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53 Building 210 | 53 | 0 | 320.0 | -97.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54 Building 201 | 54 | 0 | 623.0 | 8.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55 Building 220 | 55 | 0 | 590.0 | -104.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56 Building 231 | 56 | 0 | 650.0 | -5.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57 Building 228 | 57 | 0 | 643.0 | -31.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 Building 229 | 58 | 0 | 637.0 | -60.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59 Building 223 | 59 | 0 | 636.0 | -108.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60 Building 230 | 60 | 0 | 740.0 | 6.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 706.0 | -77.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 698.0 | -113.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63 Building 1063 | 63 | 0 | 842.0 | -60.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64 Building 1062 | 64 | 0 | 852.0 | -100.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65 Building 1060 | 65 | 0 | 898.0 | -127.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66 Building 1167 | 66 | 0 | 900.0 | -18.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67 Building 1163 | 67 | 0 | 892.0 | -26.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68 Building 1169 | 68 | 0 | 955.0 | -58.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69 Building 1162 | 69 | 0 | 943.0 | -73.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70 Building 1170 | 70 | 0 | 1,035.0 | -132.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71 Building 1161 | 71 | 0 | 1,035.0 | -161.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72 Building 1160 | 72 | 0 | 1,066.0 | -166.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73 Building 1152/YMCA | 73 | 0 | 1,100.0 | -198.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74 Building 1151/YMCA Pool | 74 | 0 | 1,140.0 | -240.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75 Building 1004 | 75 | 0 | 965.0 | -246.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 1,216.0 | -270.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2010 PM
BARRIER DESIGN: INPUT HEIGHTS

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

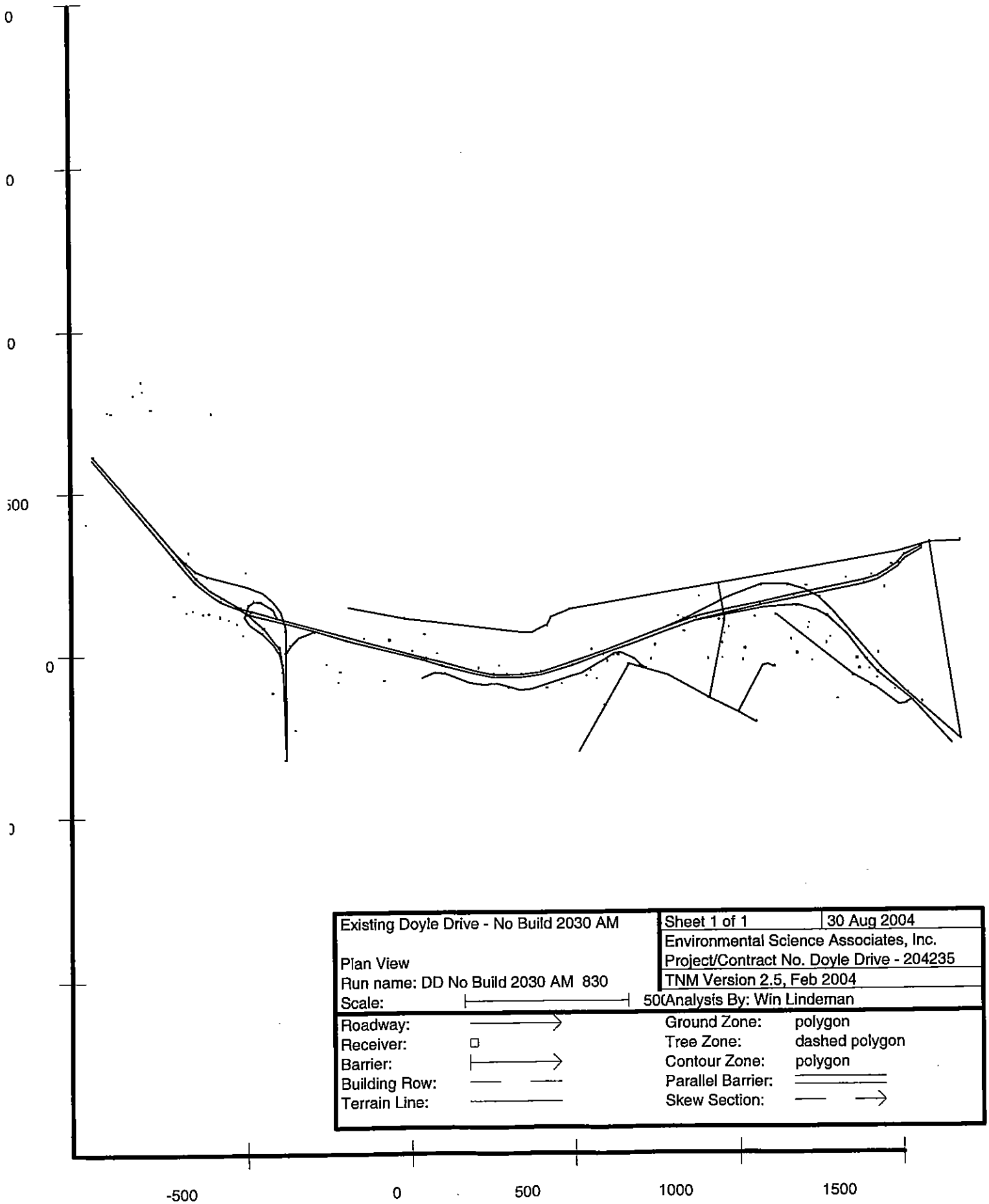
ATMOSPHERICS: 20 deg C, 50% RH

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 68.2 | 66 | 68.2 | 12 | Snd Lvl | 68.2 | 0.0 | 10 | -10.0 |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 60.5 | 66 | 60.5 | 12 | — | 60.5 | 0.0 | 10 | -10.0 |
| 3 Buildings 1187/1188 | 3 | 0 | 81.0 | 56.0 | 71 | -25.0 | 12 | — | 56.0 | 0.0 | 10 | -10.0 |
| 4 Building 1182 | 4 | 0 | 81.0 | 55.0 | 71 | -26.0 | 12 | — | 55.0 | 0.0 | 10 | -10.0 |
| 5 Buildings 1183/1186 | 5 | 0 | 81.0 | 55.7 | 71 | -25.3 | 12 | — | 55.7 | 0.0 | 10 | -10.0 |
| 6 Buildings 1184/1185 | 6 | 0 | 81.0 | 58.1 | 71 | -22.9 | 12 | — | 58.1 | 0.0 | 10 | -10.0 |
| 7 Building 603/Crissy Center | 7 | 0 | 72.0 | 55.7 | 71 | -16.3 | 12 | — | 55.7 | 0.0 | 10 | -10.0 |
| 8 PX Building | 8 | 0 | 0.0 | 58.8 | 71 | 58.8 | 12 | — | 58.8 | 0.0 | 10 | -10.0 |
| 9 Post Commissary/Sports Basement | 9 | 0 | 69.0 | 69.7 | 66 | 0.7 | 12 | Snd Lvl | 69.7 | 0.0 | 10 | -10.0 |
| 10 Battery Blaney | 10 | 0 | 68.0 | 68.4 | 66 | 0.4 | 12 | Snd Lvl | 68.4 | 0.0 | 10 | -10.0 |
| 11 Battery Slaughter | 11 | 0 | 68.0 | 64.5 | 66 | -3.5 | 12 | — | 64.5 | 0.0 | 10 | -10.0 |
| 12 Battery Sherwood | 12 | 0 | 68.0 | 64.6 | 66 | -3.4 | 12 | — | 64.6 | 0.0 | 10 | -10.0 |
| 13 Battery Baldwin | 13 | 0 | 68.0 | 67.0 | 66 | -1.0 | 12 | Snd Lvl | 67.0 | 0.0 | 10 | -10.0 |
| 14 Building 644 | 14 | 0 | 0.0 | 59.5 | 71 | 59.5 | 12 | — | 59.5 | 0.0 | 10 | -10.0 |
| 15 Building 649 | 15 | 0 | 0.0 | 59.7 | 66 | 59.7 | 12 | — | 59.7 | 0.0 | 10 | -10.0 |
| 16 Building 650/Stilwell Hall | 16 | 0 | 70.0 | 58.4 | 66 | -11.6 | 12 | — | 58.4 | 0.0 | 10 | -10.0 |
| 17 1253 Armistead Road | 17 | 1 | 66.0 | 63.9 | 66 | -2.1 | 12 | — | 63.9 | 0.0 | 10 | -10.0 |
| 18 Home on Armistead Road | 18 | 1 | 66.0 | 76.0 | 66 | 10.0 | 12 | Snd Lvl | 76.0 | 0.0 | 10 | -10.0 |
| 19 Building 969 | 19 | 0 | 0.0 | 57.6 | 71 | 57.6 | 12 | — | 57.6 | 0.0 | 10 | -10.0 |
| 20 Building 968 | 20 | 0 | 0.0 | 59.2 | 71 | 59.2 | 12 | — | 59.2 | 0.0 | 10 | -10.0 |
| 21 Building 967 | 21 | 0 | 0.0 | 64.6 | 71 | 64.6 | 12 | — | 64.6 | 0.0 | 10 | -10.0 |
| 22 Building 966 | 22 | 0 | 0.0 | 64.7 | 71 | 64.7 | 12 | — | 64.7 | 0.0 | 10 | -10.0 |
| 23 Building 964 | 23 | 0 | 0.0 | 62.9 | 66 | 62.9 | 12 | — | 62.9 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 Building 963 | 24 | 0 | 0.0 | 62.2 | 66 | 62.2 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 25 Building 962 | 25 | 0 | 0.0 | 61.4 | 66 | 61.4 | 12 | — | 61.4 | 0.0 | 10 | -10.0 |
| 26 Unknown Building | 26 | 0 | 0.0 | 73.7 | 71 | 73.7 | 12 | Snd Lvl | 73.7 | 0.0 | 10 | -10.0 |
| 27 Building 1299/Log Cabin | 27 | 0 | 63.0 | 67.5 | 66 | 4.5 | 12 | Snd Lvl | 67.5 | 0.0 | 10 | -10.0 |
| 28 Building 1387 | 28 | 0 | 0.0 | 66.1 | 71 | 66.1 | 12 | — | 66.1 | 0.0 | 10 | -10.0 |
| 29 Building 1298 Storey Ave. | 29 | 2 | 66.5 | 65.3 | 66 | -1.2 | 12 | — | 65.3 | 0.0 | 10 | -10.0 |
| 30 Building 1297 Storey Ave. | 30 | 2 | 66.5 | 67.2 | 66 | 0.7 | 12 | Snd Lvl | 67.2 | 0.0 | 10 | -10.0 |
| 31 Building 1295 Storey Ave. | 31 | 2 | 66.5 | 69.2 | 66 | 2.7 | 12 | Snd Lvl | 69.2 | 0.0 | 10 | -10.0 |
| 32 Building 1294 Storey Ave. | 32 | 2 | 66.5 | 69.8 | 66 | 3.3 | 12 | Snd Lvl | 69.8 | 0.0 | 10 | -10.0 |
| 33 Building 1293 Storey Ave. | 33 | 2 | 66.5 | 70.8 | 66 | 4.3 | 12 | Snd Lvl | 70.8 | 0.0 | 10 | -10.0 |
| 34 Building 1291 Storey Ave. | 34 | 2 | 66.5 | 71.4 | 66 | 4.9 | 12 | Snd Lvl | 71.4 | 0.0 | 10 | -10.0 |
| 35 Building 1290 Storey Ave. | 35 | 2 | 66.5 | 72.3 | 66 | 5.8 | 12 | Snd Lvl | 72.3 | 0.0 | 10 | -10.0 |
| 36 Building 1289 Storey Ave. | 36 | 2 | 66.5 | 71.4 | 66 | 4.9 | 12 | Snd Lvl | 71.4 | 0.0 | 10 | -10.0 |
| 37 Building 1263 Storey Ave. | 37 | 2 | 0.0 | 67.9 | 66 | 67.9 | 12 | Snd Lvl | 67.9 | 0.0 | 10 | -10.0 |
| 38 Building 682/Cross Cultural Center | 38 | 0 | 65.5 | 64.6 | 66 | -0.9 | 12 | — | 64.6 | 0.0 | 10 | -10.0 |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | 64.0 | 59.3 | 71 | -4.7 | 12 | — | 59.3 | 0.0 | 10 | -10.0 |
| 40 Building 662/Cavalry Stable | 40 | 0 | 64.0 | 61.7 | 71 | -2.3 | 12 | — | 61.7 | 0.0 | 10 | -10.0 |
| 41 Building 663/Cavalry Stable | 41 | 0 | 64.0 | 62.2 | 71 | -1.8 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 42 Building 667/Cavalry Stable | 42 | 0 | 64.0 | 66.2 | 71 | 2.2 | 12 | — | 66.2 | 0.0 | 10 | -10.0 |
| 43 National Cemetery Grave Site | 43 | 0 | 69.0 | 64.3 | 66 | -4.7 | 12 | — | 64.3 | 0.0 | 10 | -10.0 |
| 44 Building 129 | 44 | 1 | 0.0 | 57.9 | 66 | 57.9 | 12 | — | 57.9 | 0.0 | 10 | -10.0 |
| 45 Building 122 | 45 | 0 | 0.0 | 62.0 | 71 | 62.0 | 12 | — | 62.0 | 0.0 | 10 | -10.0 |
| 46 Building 108 | 46 | 0 | 0.0 | 62.0 | 71 | 62.0 | 12 | — | 62.0 | 0.0 | 10 | -10.0 |
| 47 Building 107 | 47 | 0 | 0.0 | 67.1 | 71 | 67.1 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 48 Building 104 | 48 | 0 | 74.0 | 58.1 | 71 | -15.9 | 12 | — | 58.1 | 0.0 | 10 | -10.0 |
| 49 Building 105 | 49 | 0 | 74.0 | 72.6 | 71 | -1.4 | 12 | Snd Lvl | 72.6 | 0.0 | 10 | -10.0 |
| 50 Building 106 | 50 | 0 | 76.0 | 71.6 | 71 | -4.4 | 12 | Snd Lvl | 71.6 | 0.0 | 10 | -10.0 |
| 51 Building 211 | 51 | 0 | 0.0 | 65.1 | 71 | 65.1 | 12 | — | 65.1 | 0.0 | 10 | -10.0 |
| 52 Building 204 | 52 | 0 | 0.0 | 58.5 | 71 | 58.5 | 12 | — | 58.5 | 0.0 | 10 | -10.0 |
| 53 Building 210 | 53 | 0 | 0.0 | 62.1 | 71 | 62.1 | 12 | — | 62.1 | 0.0 | 10 | -10.0 |
| 54 Building 201 | 54 | 0 | 0.0 | 54.9 | 71 | 54.9 | 12 | — | 54.9 | 0.0 | 10 | -10.0 |
| 55 Building 220 | 55 | 0 | 0.0 | 52.9 | 71 | 52.9 | 12 | — | 52.9 | 0.0 | 10 | -10.0 |
| 56 Building 231 | 56 | 0 | 0.0 | 64.8 | 71 | 64.8 | 12 | — | 64.8 | 0.0 | 10 | -10.0 |
| 57 Building 228 | 57 | 0 | 0.0 | 61.2 | 71 | 61.2 | 12 | — | 61.2 | 0.0 | 10 | -10.0 |
| 58 Building 229 | 58 | 0 | 0.0 | 58.6 | 71 | 58.6 | 12 | — | 58.6 | 0.0 | 10 | -10.0 |
| 59 Building 223 | 59 | 0 | 0.0 | 56.6 | 71 | 56.6 | 12 | — | 56.6 | 0.0 | 10 | -10.0 |
| 60 Building 230 | 60 | 0 | 0.0 | 70.7 | 71 | 70.7 | 12 | — | 70.7 | 0.0 | 10 | -10.0 |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 57.0 | 58.9 | 66 | 1.9 | 12 | — | 58.9 | 0.0 | 10 | -10.0 |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 57.0 | 56.3 | 66 | -0.7 | 12 | — | 56.3 | 0.0 | 10 | -10.0 |
| 63 Building 1063 | 63 | 0 | 68.5 | 60.4 | 71 | -8.1 | 12 | — | 60.4 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 Building 1062 | 64 | 0 | 68.5 | 57.7 | 71 | -10.8 | 12 | — | 57.7 | 0.0 | 10 | -10.0 |
| 65 Building 1060 | 65 | 0 | 68.5 | 57.9 | 71 | -10.6 | 12 | — | 57.9 | 0.0 | 10 | -10.0 |
| 66 Building 1167 | 66 | 0 | 68.0 | 63.9 | 71 | -4.1 | 12 | — | 63.9 | 0.0 | 10 | -10.0 |
| 67 Building 1163 | 67 | 0 | 0.0 | 63.6 | 71 | 63.6 | 12 | — | 63.6 | 0.0 | 10 | -10.0 |
| 68 Building 1169 | 68 | 0 | 68.0 | 63.3 | 71 | -4.7 | 12 | — | 63.3 | 0.0 | 10 | -10.0 |
| 69 Building 1162 | 69 | 0 | 0.0 | 61.5 | 71 | 61.5 | 12 | — | 61.5 | 0.0 | 10 | -10.0 |
| 70 Building 1170 | 70 | 0 | 68.0 | 70.4 | 71 | 2.4 | 12 | — | 70.4 | 0.0 | 10 | -10.0 |
| 71 Building 1161 | 71 | 0 | 0.0 | 65.7 | 71 | 65.7 | 12 | — | 65.7 | 0.0 | 10 | -10.0 |
| 72 Building 1160 | 72 | 0 | 0.0 | 70.4 | 71 | 70.4 | 12 | — | 70.4 | 0.0 | 10 | -10.0 |
| 73 Building 1152/YMCA | 73 | 0 | 0.0 | 68.8 | 66 | 68.8 | 12 | Snd Lvl | 68.8 | 0.0 | 10 | -10.0 |
| 74 Building 1151/YMCA Pool | 74 | 0 | 0.0 | 70.8 | 66 | 70.8 | 12 | Snd Lvl | 70.8 | 0.0 | 10 | -10.0 |
| 75 Building 1004 | 75 | 0 | 0.0 | 55.4 | 71 | 55.4 | 12 | — | 55.4 | 0.0 | 10 | -10.0 |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 76.5 | 72.1 | 66 | -4.4 | 12 | Snd Lvl | 72.1 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 229 | 0.0 | 0.0 | 0.0 |
| All Impacted | 25 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |


0
0
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Existing Doyle Drive - No Build 2030 AM
Plan View
Run name: DD No Build 2030 AM 830
Scale:
500
Sheet 1 of 1
30 Aug 2004
Environmental Science Associates, Inc.
Project/Contract No. Doyle Drive - 204235
TNM Version 2.5, Feb 2004
Analysis By: Win Lindeman
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Existing Doyle Drive - No Build 2030 AM

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

| Roadway | | Points | | | | | Flow Control | | | Segment | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle Drive to Marina | 9.1 | N End | 1 | -966.0 | 608.0 | 53.00 | | | | Average | |
| | | 1 | 2 | -720.0 | 302.0 | 56.00 | | | | Average | |
| | | 2 | 3 | -654.0 | 228.0 | 53.00 | | | | Average | |
| | | 3 | 4 | -610.0 | 192.0 | 50.00 | | | | Average | |
| | | 5 | 6 | -576.0 | 170.0 | 46.00 | | | | Average | |
| | | 6 | 7 | -516.0 | 144.0 | 46.00 | | | | Average | Y |
| | | 7 | 8 | -488.0 | 130.0 | 45.00 | | | | Average | Y |
| | | 8 | 9 | -380.0 | 100.0 | 41.00 | | | | Average | Y |
| | | 9 | 10 | -292.0 | 76.0 | 41.00 | | | | Average | Y |
| | | 10 | 11 | -194.0 | 47.0 | 37.00 | | | | Average | Y |
| | | 12 | 13 | 51.0 | -18.0 | 29.00 | | | | Average | Y |
| | | 13 | 14 | 50.0 | -18.0 | 29.00 | | | | Average | |
| | | 14 | 15 | 98.0 | -32.0 | 28.00 | | | | Average | |
| | | 15 | 16 | 196.0 | -58.0 | 27.00 | | | | Average | |
| | | 16 | 17 | 232.0 | -66.0 | 26.50 | | | | Average | |
| | | 17 | 18 | 252.0 | -70.0 | 26.00 | | | | Average | |
| | | 19 | 20 | 333.0 | -70.0 | 24.00 | | | | Average | |
| | | 20 | 21 | 334.0 | -70.0 | 24.00 | | | | Average | Y |
| | | 21 | 22 | 396.0 | -60.0 | 21.40 | | | | Average | Y |
| | | 22 | 23 | 492.0 | -32.0 | 17.80 | | | | Average | Y |
| | | 23 | 24 | 586.0 | 0.0 | 14.00 | | | | Average | Y |
| | | 24 | 25 | 680.0 | 35.0 | 12.00 | | | | Average | Y |
| | | 25 | 26 | 776.0 | 70.0 | 12.00 | | | | Average | Y |
| | | 26 | 27 | 868.0 | 102.0 | 11.80 | | | | Average | Y |
| | | 27 | 28 | 968.0 | 126.0 | 11.20 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 28 | 29 | 1,068.0 | 150.0 | 11.20 | | | | Average | Y |
| | | 30 | 31 | 1,381.0 | 213.0 | 5.00 | | | | Average | Y |
| | | 31 | 32 | 1,382.0 | 213.0 | 5.00 | | | | Average | |
| | | 32 | 33 | 1,422.0 | 224.0 | 5.00 | | | | Average | |
| | | 33 | 34 | 1,450.0 | 240.0 | 4.00 | | | | Average | |
| | | 34 | 35 | 1,486.0 | 264.0 | 4.00 | | | | Average | |
| | | 35 | 36 | 1,504.0 | 286.0 | 4.00 | | | | Average | |
| | | 36 | 37 | 1,560.0 | 318.0 | 4.00 | | | | | |
| WB Doyle Drive from Marina to 0+00 | 9.1 | 1 | 39 | 1,560.0 | 326.0 | 4.00 | | | | Average | |
| | | 2 | 40 | 1,504.0 | 300.0 | 4.00 | | | | Average | |
| | | 3 | 41 | 1,486.0 | 276.0 | 4.00 | | | | Average | |
| | | 4 | 42 | 1,450.0 | 251.0 | 4.00 | | | | Average | |
| | | 5 | 43 | 1,422.0 | 234.0 | 5.00 | | | | Average | |
| | | 6 | 44 | 1,382.0 | 224.0 | 5.00 | | | | Average | Y |
| | | 8 | 46 | 1,166.0 | 178.0 | 10.80 | | | | Average | Y |
| | | 9 | 47 | 1,068.0 | 157.0 | 11.20 | | | | Average | Y |
| | | 10 | 48 | 968.0 | 136.0 | 11.20 | | | | Average | Y |
| | | 11 | 49 | 868.0 | 111.0 | 11.80 | | | | Average | Y |
| | | 12 | 50 | 776.0 | 80.0 | 12.00 | | | | Average | Y |
| | | 13 | 51 | 680.0 | 44.0 | 12.00 | | | | Average | Y |
| | | 14 | 52 | 586.0 | 10.0 | 14.00 | | | | Average | Y |
| | | 15 | 53 | 492.0 | -22.0 | 17.80 | | | | Average | Y |
| | | 16 | 54 | 396.0 | -52.0 | 21.40 | | | | Average | Y |
| | | 17 | 55 | 335.0 | -60.0 | 24.00 | | | | Average | Y |
| | | 18 | 56 | 334.0 | -60.0 | 24.00 | | | | Average | |
| | | 19 | 57 | 294.0 | -60.0 | 25.00 | | | | Average | |
| | | 20 | 58 | 252.0 | -60.0 | 26.00 | | | | Average | |
| | | 21 | 59 | 232.0 | -56.0 | 26.50 | | | | Average | |
| | | 22 | 60 | 196.0 | -50.0 | 27.00 | | | | Average | |
| | | 23 | 61 | 98.0 | -22.0 | 28.00 | | | | Average | |
| | | 24 | 62 | 49.0 | -8.0 | 28.40 | | | | Average | |
| | | 25 | 63 | 50.0 | -8.0 | 28.40 | | | | Average | Y |
| | | 26 | 64 | -98.0 | 30.0 | 33.00 | | | | Average | Y |
| | | 27 | 65 | -194.0 | 58.0 | 37.00 | | | | Average | Y |
| | | 28 | 66 | -292.0 | 86.0 | 41.00 | | | | Average | Y |
| | | 29 | 67 | -380.0 | 110.0 | 45.00 | | | | Average | Y |
| | | 30 | 68 | -406.0 | 118.0 | 45.60 | | | | Average | Y |
| | | 31 | 69 | -407.0 | 118.0 | 45.60 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 32 | 70 | -487.0 | 138.5 | 49.20 | | | | Average | |
| | | 33 | 71 | -488.0 | 138.5 | 49.20 | | | | Average | Y |
| | | 34 | 72 | -516.0 | 150.0 | 51.00 | | | | Average | Y |
| | | 35 | 73 | -517.0 | 150.0 | 51.00 | | | | Average | |
| | | 36 | 74 | -576.0 | 182.0 | 49.00 | | | | Average | |
| | | 37 | 75 | -610.0 | 204.0 | 50.00 | | | | Average | |
| | | 38 | 192 | -654.0 | 242.0 | 53.00 | | | | Average | |
| | | 39 | 193 | -720.0 | 322.0 | 56.00 | | | | Average | |
| | | 40 | 76 | -966.0 | 620.0 | 53.00 | | | | | |
| SB/EB Richardson from Doyle to Francis | 11.0 | 1 | 77 | 868.0 | 102.0 | 11.80 | | | | Average | Y |
| | | 2 | 78 | 1,078.0 | 140.0 | 10.00 | | | | Average | Y |
| | | 3 | 79 | 1,178.0 | 147.0 | 7.00 | | | | Average | Y |
| | | 4 | 80 | 1,233.0 | 132.0 | 5.00 | | | | Average | Y |
| | | 5 | 81 | 1,234.0 | 132.0 | 5.00 | | | | Average | |
| | | 6 | 82 | 1,270.0 | 114.0 | 2.00 | | | | Average | |
| | | 7 | 83 | 1,330.0 | 57.0 | 2.00 | | | | Average | |
| | | 8 | 84 | 1,388.0 | -20.0 | 2.00 | | | | Average | |
| | | 9 | 85 | 1,424.0 | -60.0 | 2.00 | | | | Average | |
| | | 10 | 86 | 1,528.0 | -146.0 | 4.00 | | | | Average | |
| | | 11 | 87 | 1,650.0 | -280.0 | 4.00 | | | | | |
| NB/WB Richardson from Francisco to DD | 9.0 | 1 | 88 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 89 | 1,514.0 | -122.0 | 4.00 | | | | Average | |
| | | 3 | 90 | 1,436.0 | -50.0 | 2.00 | | | | Average | |
| | | 4 | 91 | 1,285.0 | 130.0 | 2.00 | | | | Average | |
| | | 5 | 92 | 1,244.0 | 172.0 | 3.00 | | | | Average | |
| | | 6 | 93 | 1,200.0 | 196.0 | 4.00 | | | | Average | |
| | | 7 | 94 | 1,149.0 | 210.0 | 7.00 | | | | Average | |
| | | 8 | 95 | 1,150.0 | 210.0 | 7.00 | | | | Average | Y |
| | | 9 | 96 | 1,068.0 | 210.0 | 10.00 | | | | Average | Y |
| | | 10 | 97 | 968.0 | 172.0 | 11.00 | | | | Average | Y |
| | | 11 | 98 | 830.0 | 106.0 | 12.00 | | | | Average | Y |
| | | 12 | 99 | 776.0 | 80.0 | 12.00 | | | | | |
| SB PP Ramp from WB Doyle Drive | 4.6 | 1 | 100 | -407.0 | 118.0 | 45.60 | | | | Average | |
| | | 2 | 101 | -420.0 | 144.0 | 46.00 | | | | Average | |
| | | 3 | 102 | -456.0 | 170.0 | 41.00 | | | | Average | |
| | | 4 | 103 | -478.0 | 170.0 | 40.00 | | | | Average | |
| | | 5 | 104 | -494.0 | 158.0 | 39.00 | | | | Average | |
| | | 6 | 105 | -505.0 | 120.0 | 39.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 106 | -488.0 | 96.0 | 39.00 | | | | Average | |
| | | 8 | 107 | -450.0 | 70.0 | 38.00 | | | | Average | |
| | | 9 | 108 | -418.0 | 36.0 | 38.00 | | | | Average | |
| | | 10 | 109 | -398.0 | 5.0 | 38.00 | | | | Average | |
| | | 11 | 110 | -390.0 | -26.0 | 37.00 | | | | Average | |
| | | 12 | 111 | -388.0 | -50.0 | 37.00 | | | | Average | |
| | | 13 | 112 | -380.0 | -320.0 | 37.00 | | | | | |
| SB PP Ramp from EB Doyle Drive | 4.8 | 1 | 113 | -515.0 | 143.9 | 51.00 | | | | Average | Y |
| | | 2 | 114 | -495.0 | 130.0 | 50.00 | | | | Average | Y |
| | | 3 | 115 | -494.0 | 130.0 | 50.00 | | | | Average | |
| | | 4 | 116 | -476.0 | 112.0 | 49.00 | | | | Average | |
| | | 5 | 117 | -447.0 | 86.0 | 46.00 | | | | Average | |
| | | 6 | 118 | -410.0 | 38.0 | 47.00 | | | | Average | |
| | | 7 | 119 | -400.0 | 27.0 | 37.00 | | | | Average | |
| | | 8 | 120 | -390.0 | -26.0 | 37.00 | | | | Average | |
| | | 9 | 121 | -388.0 | -27.0 | 37.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 4.6 | 1 | 122 | -380.0 | -320.0 | 37.00 | | | | Average | |
| | | 2 | 123 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 3 | 124 | -380.0 | 80.0 | 37.00 | | | | Average | |
| | | 4 | 125 | -384.0 | 98.0 | 38.00 | | | | Average | |
| | | 5 | 126 | -396.0 | 138.0 | 38.00 | | | | Average | |
| | | 6 | 127 | -418.0 | 170.0 | 41.00 | | | | Average | |
| | | 7 | 128 | -450.0 | 196.0 | 44.00 | | | | Average | |
| | | 8 | 129 | -500.0 | 216.0 | 47.50 | | | | Average | |
| | | 9 | 130 | -620.0 | 246.0 | 54.00 | | | | Average | |
| | | 10 | 131 | -656.0 | 262.0 | 57.00 | | | | Average | |
| | | 11 | 132 | -686.0 | 290.0 | 58.00 | | | | Average | |
| | | 12 | 191 | -703.0 | 306.0 | 58.00 | | | | Average | |
| | | 13 | 133 | -720.0 | 322.0 | 56.00 | | | | | |
| NB PP ramp to EB Doyle Drive | 4.6 | 1 | 134 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 2 | 135 | -364.0 | 34.0 | 38.00 | | | | Average | |
| | | 3 | 136 | -338.0 | 58.0 | 39.00 | | | | Average | |
| | | 4 | 137 | -306.0 | 70.0 | 40.00 | | | | Average | |
| | | 5 | 138 | -292.0 | 76.0 | 41.00 | | | | | |
| Mason Street | 7.3 | 1 | 139 | -188.0 | 150.0 | 3.00 | | | | Average | |
| | | 2 | 140 | -16.0 | 114.0 | 3.00 | | | | Average | |
| | | 3 | 141 | 340.0 | 70.0 | 4.00 | | | | Average | |
| | | 4 | 142 | 370.0 | 70.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 5 | 143 | 416.0 | 92.0 | 4.00 | | | | Average | |
| | | 6 | 144 | 428.0 | 118.0 | 4.00 | | | | Average | |
| | | 7 | 145 | 486.0 | 142.0 | 4.00 | | | | Average | |
| | | 8 | 194 | 938.0 | 214.0 | 4.00 | | | | Average | |
| | | 9 | 146 | 1,486.0 | 310.0 | 4.00 | | | | Average | |
| | | 10 | 147 | 1,584.0 | 340.0 | 4.00 | | | | Average | |
| | | 11 | 148 | 1,680.0 | 344.0 | 4.00 | | | | | |
| Lincoln Blvd. | 7.3 | 1 | 149 | 36.0 | -70.0 | 33.00 | | | | Average | |
| | | 2 | 150 | 74.0 | -53.0 | 33.00 | | | | Average | |
| | | 3 | 151 | 106.0 | -56.0 | 32.00 | | | | Average | |
| | | 4 | 152 | 180.0 | -86.0 | 30.00 | | | | Average | |
| | | 5 | 153 | 226.0 | -92.0 | 29.00 | | | | Average | |
| | | 6 | 154 | 246.0 | -90.0 | 29.00 | | | | Average | |
| | | 7 | 155 | 268.0 | -90.0 | 29.00 | | | | Average | |
| | | 8 | 156 | 308.0 | -100.0 | 29.00 | | | | Average | |
| | | 9 | 157 | 334.0 | -108.0 | 27.00 | | | | Average | |
| | | 10 | 158 | 368.0 | -105.0 | 26.00 | | | | Average | |
| | | 11 | 159 | 490.0 | -66.0 | 19.00 | | | | Average | |
| | | 12 | 160 | 520.0 | -56.0 | 17.00 | | | | Average | |
| | | 13 | 161 | 568.0 | -30.0 | 16.00 | | | | Average | |
| | | 14 | 162 | 596.0 | -14.0 | 13.00 | | | | Average | |
| | | 15 | 163 | 620.0 | 0.0 | 14.00 | | | | Average | |
| | | 16 | 164 | 636.0 | 6.0 | 12.00 | | | | Average | |
| | | 17 | 165 | 680.0 | -14.0 | 13.00 | | | | Average | |
| | | 18 | 166 | 700.0 | -34.0 | 14.00 | | | | Average | |
| | | 19 | 167 | 718.0 | -44.0 | 14.00 | | | | Average | |
| | | 20 | 168 | 784.0 | -66.0 | 15.00 | | | | Average | |
| | | 21 | 169 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 22 | 170 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 23 | 171 | 1,054.0 | -210.0 | 14.00 | | | | | |
| Gorgas Avenue | 6.0 | 1 | 172 | 1,528.0 | -146.0 | 4.00 | | | | Average | |
| | | 2 | 173 | 1,510.0 | -158.0 | 4.00 | | | | Average | |
| | | 3 | 174 | 1,488.0 | -160.0 | 4.00 | | | | Average | |
| | | 4 | 175 | 1,420.0 | -108.0 | 2.00 | | | | Average | |
| | | 5 | 176 | 1,400.0 | -98.0 | 2.00 | | | | Average | |
| | | 6 | 177 | 1,344.0 | -66.0 | 2.00 | | | | Average | |
| | | 7 | 178 | 1,112.0 | 120.0 | 3.00 | | | | | |
| Halleck Street | 7.3 | 1 | 179 | 910.0 | -136.0 | 14.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 180 | 957.0 | 106.0 | 6.00 | | | | Average | |
| | | 3 | 181 | 938.0 | 214.0 | 4.00 | | | | | |
| Girard Road | 7.3 | 1 | 182 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 2 | 183 | 1,074.0 | -38.0 | 3.00 | | | | Average | |
| | | 3 | 184 | 1,090.0 | -33.0 | 4.00 | | | | Average | |
| | | 4 | 185 | 1,108.0 | -40.0 | 5.00 | | | | | |
| Baker Street | 11.6 | 1 | 186 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 187 | 1,584.0 | 340.0 | 4.00 | | | | | |
| Montgomery Street | 9.2 | 1 | 188 | 510.0 | -300.0 | 15.00 | | | | Average | |
| | | 2 | 189 | 664.0 | -30.0 | 12.00 | | | | Average | |
| | | 3 | 190 | 718.0 | -44.0 | 14.00 | | | | | |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Existing Doyle Drive - No Build 2030 AM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle Drive to Marina | N End | 1 | 6235 | 88 | 64 | 88 | 13 | 88 | 64 | 88 | 64 | 88 |
| | 1 | 2 | 6235 | 88 | 64 | 88 | 13 | 88 | 64 | 88 | 64 | 88 |
| | 2 | 3 | 6235 | 88 | 64 | 88 | 13 | 88 | 64 | 88 | 64 | 88 |
| | 3 | 4 | 6235 | 88 | 64 | 88 | 13 | 88 | 64 | 88 | 64 | 88 |
| | 5 | 6 | 6235 | 88 | 64 | 88 | 13 | 88 | 64 | 88 | 64 | 88 |
| | 6 | 7 | 6235 | 88 | 64 | 88 | 13 | 88 | 64 | 88 | 64 | 88 |
| | 7 | 8 | 4206 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 8 | 9 | 4206 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 9 | 10 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 10 | 11 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 12 | 13 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 13 | 14 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 14 | 15 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 15 | 16 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 16 | 17 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 17 | 18 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 19 | 20 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 20 | 21 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 21 | 22 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 22 | 23 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 23 | 24 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 24 | 25 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 25 | 26 | 4822 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 26 | 27 | 1603 | 88 | 17 | 88 | 3 | 88 | 17 | 88 | 17 | 88 |
| | 27 | 28 | 1603 | 88 | 17 | 88 | 3 | 88 | 17 | 88 | 17 | 88 |
| | 28 | 29 | 1603 | 88 | 17 | 88 | 3 | 88 | 17 | 88 | 17 | 88 |
| | 30 | 31 | 1603 | 88 | 17 | 88 | 3 | 88 | 17 | 88 | 17 | 88 |
| | 31 | 32 | 1603 | 56 | 17 | 56 | 3 | 56 | 17 | 56 | 17 | 56 |
| | 32 | 33 | 1603 | 56 | 17 | 56 | 3 | 56 | 17 | 56 | 17 | 56 |
| | 33 | 34 | 1603 | 56 | 17 | 56 | 3 | 56 | 17 | 56 | 17 | 56 |
| | 34 | 35 | 1603 | 56 | 17 | 56 | 3 | 56 | 17 | 56 | 17 | 56 |
| | 35 | 36 | 1603 | 56 | 17 | 56 | 3 | 56 | 17 | 56 | 17 | 56 |
| | 36 | 37 | | | | | | | | | | |
| WB Doyle Drive from Marina to 0+00 | 1 | 39 | 775 | 56 | 9 | 56 | 10 | 56 | 5 | 56 | 8 | 56 |
| | 2 | 40 | 775 | 56 | 8 | 56 | 10 | 56 | 5 | 56 | 8 | 56 |
| | 3 | 41 | 775 | 56 | 8 | 56 | 10 | 56 | 5 | 56 | 8 | 56 |
| | 4 | 42 | 775 | 56 | 8 | 56 | 10 | 56 | 5 | 56 | 8 | 56 |
| | 5 | 43 | 775 | 88 | 8 | 88 | 10 | 88 | 5 | 88 | 8 | 88 |
| | 6 | 44 | 775 | 88 | 8 | 88 | 10 | 88 | 5 | 88 | 8 | 88 |
| | 8 | 46 | 775 | 88 | 8 | 88 | 10 | 88 | 5 | 88 | 8 | 88 |
| | 9 | 47 | 775 | 88 | 8 | 88 | 10 | 88 | 5 | 88 | 8 | 88 |
| | 10 | 48 | 775 | 88 | 8 | 88 | 10 | 88 | 5 | 88 | 8 | 88 |
| | 11 | 49 | 775 | 88 | 8 | 88 | 10 | 88 | 5 | 88 | 8 | 88 |
| | 12 | 50 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 13 | 51 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 14 | 52 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 15 | 53 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 16 | 54 | 2932 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 17 | 55 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 18 | 56 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 19 | 57 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 20 | 58 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 21 | 59 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 22 | 60 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 23 | 61 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 24 | 62 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 25 | 63 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 26 | 64 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 27 | 65 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 28 | 66 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 29 | 67 | 3464 | 88 | 0 | 0 | 7 | 88 | 97 | 88 | 36 | 88 |
| | 30 | 68 | 2832 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 31 | 69 | 2464 | 88 | 26 | 88 | 33 | 88 | 15 | 88 | 26 | 88 |
| | 32 | 70 | 2464 | 88 | 26 | 88 | 33 | 88 | 15 | 88 | 26 | 88 |
| | 33 | 71 | 2464 | 88 | 26 | 88 | 33 | 88 | 15 | 88 | 26 | 88 |
| | 34 | 72 | 2464 | 88 | 26 | 88 | 33 | 88 | 15 | 88 | 26 | 88 |
| | 35 | 73 | 2464 | 88 | 26 | 88 | 33 | 88 | 15 | 88 | 26 | 88 |
| | 36 | 74 | 2464 | 88 | 26 | 88 | 33 | 88 | 15 | 88 | 26 | 88 |
| | 37 | 75 | 2464 | 88 | 26 | 88 | 33 | 88 | 15 | 88 | 26 | 88 |
| | 38 | 192 | 2464 | 88 | 26 | 88 | 33 | 88 | 15 | 88 | 26 | 88 |
| | 39 | 193 | 4823 | 88 | 50 | 88 | 65 | 88 | 30 | 88 | 50 | 88 |
| | 40 | 76 | | | | | | | | | | |
| SB/EB Richardson from Doyle to Francis | 1 | 77 | 3219 | 56 | 33 | 15 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 2 | 78 | 3219 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 3 | 79 | 3219 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 4 | 80 | 3219 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 5 | 81 | 3219 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 6 | 82 | 3219 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 7 | 83 | 3219 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 8 | 84 | 3219 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 9 | 85 | 3219 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 10 | 86 | 3219 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 11 | 87 | | | | | | | | | | |
| NB/WB Richardson from Francisco to DD | 1 | 88 | 204 | 56 | 2 | 56 | 3 | 56 | 1 | 56 | 2 | 56 |
| | 2 | 89 | 204 | 56 | 2 | 56 | 3 | 56 | 1 | 56 | 2 | 56 |
| | 3 | 90 | 204 | 56 | 2 | 56 | 3 | 56 | 1 | 56 | 2 | 56 |
| | 4 | 91 | 204 | 56 | 2 | 56 | 3 | 56 | 1 | 56 | 2 | 56 |
| | 5 | 92 | 204 | 56 | 2 | 56 | 3 | 56 | 1 | 56 | 2 | 56 |
| | 6 | 93 | 204 | 56 | 2 | 56 | 3 | 56 | 1 | 56 | 2 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 94 | 204 | 56 | 2 | 56 | 3 | 56 | 1 | 56 | 2 | 56 |
| | 8 | 95 | 204 | 56 | 2 | 56 | 3 | 56 | 1 | 56 | 2 | 56 |
| | 9 | 96 | 204 | 56 | 2 | 56 | 3 | 56 | 1 | 56 | 2 | 56 |
| | 10 | 97 | 204 | 56 | 2 | 56 | 3 | 56 | 1 | 56 | 2 | 56 |
| | 11 | 98 | 204 | 56 | 2 | 56 | 3 | 56 | 1 | 56 | 2 | 56 |
| | 12 | 99 | | | | | | | | | | |
| SB PP Ramp from WB Doyle Drive | 1 | 100 | 368 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 2 | 101 | 368 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 3 | 102 | 368 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 4 | 103 | 368 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 5 | 104 | 368 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 6 | 105 | 368 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 7 | 106 | 368 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 8 | 107 | 368 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 9 | 108 | 368 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 10 | 109 | 368 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 11 | 110 | 368 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 12 | 111 | 368 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 13 | 112 | | | | | | | | | | |
| SB PP Ramp from EB Doyle Drive | 1 | 113 | 2029 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 2 | 114 | 2029 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 3 | 115 | 2029 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 4 | 116 | 2029 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 5 | 117 | 2029 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 6 | 118 | 2029 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 7 | 119 | 2029 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 8 | 120 | 2029 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 9 | 121 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 | 122 | 2389 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 2 | 123 | 2389 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 3 | 124 | 2389 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 4 | 125 | 2389 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 5 | 126 | 2389 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 6 | 127 | 2389 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 128 | 2389 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 8 | 129 | 2389 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 9 | 130 | 2389 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 10 | 131 | 2389 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 11 | 132 | 2389 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 12 | 191 | 2389 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 13 | 133 | | | | | | | | | | |
| NB PP ramp to EB Doyle Drive | 1 | 134 | 615 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 2 | 135 | 615 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 3 | 136 | 615 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 4 | 137 | 615 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 5 | 138 | | | | | | | | | | |
| Mason Street | 1 | 139 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 140 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 141 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 142 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 143 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 144 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 145 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 194 | 32 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 9 | 146 | 22 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 147 | 22 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 148 | | | | | | | | | | |
| Lincoln Blvd. | 1 | 149 | 125 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 150 | 231 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 3 | 151 | 231 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 4 | 152 | 231 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 5 | 153 | 231 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 6 | 154 | 231 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 7 | 155 | 231 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 8 | 156 | 231 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 9 | 157 | 233 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 10 | 158 | 85 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 11 | 159 | 85 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 | 160 | 85 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 13 | 161 | 85 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 14 | 162 | 85 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 15 | 163 | 85 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 16 | 164 | 85 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 17 | 165 | 85 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 18 | 166 | 85 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 19 | 167 | 280 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 20 | 168 | 280 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 21 | 169 | 305 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 22 | 170 | 404 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 23 | 171 | | | | | | | | | | |
| Gorgas Avenue | 1 | 172 | 306 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 173 | 306 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 174 | 306 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 175 | 306 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 176 | 209 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 177 | 59 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 178 | | | | | | | | | | |
| Halleck Street | 1 | 179 | 91 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 180 | 60 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 181 | | | | | | | | | | |
| Girard Road | 1 | 182 | 132 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 183 | 132 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 184 | 132 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 185 | | | | | | | | | | |
| Baker Street | 1 | 186 | 289 | 32 | 3 | 32 | 0 | 0 | 0 | 0 | 3 | 32 |
| | 2 | 187 | | | | | | | | | | |
| Montgomery Street | 1 | 188 | 134 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 189 | 103 | 32 | 2 | 32 | 2 | 32 | 2 | 32 | 2 | 32 |
| | 3 | 190 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

30 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Existing Doyle Drive - No Build 2030 AM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 1,426.0 | 0.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 1,446.0 | 202.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3-Building 1187/1188 | 3 | 0 | 1,466.0 | 272.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4-Building 1182 | 5 | 0 | 1,406.0 | 240.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5-Building 1183/1186 | 6 | 0 | 1,326.0 | 230.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6-Building 1184/1185 | 7 | 0 | 1,206.0 | 208.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7-Building 603/Crissy Center | 8 | 0 | 880.0 | 176.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8-PX Building | 9 | 0 | 816.0 | 118.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9-Post Commissary/Sports Basement | 10 | 0 | 552.0 | 16.0 | 4.00 | 1.50 | 69.00 | 71 | 12.0 | 10.0 | Y |
| 10-Battery Blaney/635 | 11 | 0 | 270.0 | -34.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11-Battery Slaughter | 12 | 0 | 208.0 | -40.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12-Battery Sherwood/636 | 13 | 0 | 80.0 | 6.0 | 29.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13-Battery Baldwin | 14 | 0 | 4.0 | 15.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14-Building 644 | 15 | 0 | 42.0 | 66.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15-Building 649 | 16 | 0 | -64.0 | 48.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16-Building 650/Stilwell Hall | 17 | 0 | -140.0 | 52.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17-1253 Armistead Road | 18 | 1 | -502.0 | 258.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18-Home on Armistead Road | 19 | 1 | -674.0 | 320.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19-Building 969 | 20 | 0 | -604.0 | 748.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20-Building 968 | 21 | 0 | -788.0 | 762.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21-Building 967 | 22 | 0 | -910.0 | 750.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22-Building 966 | 23 | 0 | -920.0 | 754.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23-Building 964 | 24 | 1 | -818.0 | 846.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24-Building 963 | 25 | 1 | -840.0 | 804.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25-Building 962 | 26 | 1 | -814.0 | 816.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26-Unknown Building | 27 | 0 | -1,132.0 | 697.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27-Log Cabin | 28 | 0 | -720.0 | 188.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28-Unknown Building | 29 | 0 | -988.0 | 408.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29-Building 1298 Storey Ave. | 30 | 2 | -682.0 | 136.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30-Building 1297 Storey Ave. | 31 | 2 | -664.0 | 140.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31-Building 1295 Storey Ave. | 32 | 2 | -632.0 | 130.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32-Building 1294 Storey Ave. | 33 | 2 | -614.0 | 132.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33-Building 1293 Storey Ave. | 34 | 2 | -580.0 | 122.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34-Building 1291 Storey Ave. | 35 | 2 | -552.0 | 112.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35-Building 1290 Storey Ave. | 36 | 2 | -528.0 | 100.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36-Building 1289 Storey Ave. | 37 | 2 | -510.0 | 66.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37-Building 1263 Storey Ave. | 38 | 2 | -420.0 | -114.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38-Building 682/Cross Cultural Center | 39 | 0 | -350.0 | -228.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | -256.0 | -26.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40-Building 662/Cavalry Stable | 41 | 0 | -214.0 | -50.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41-Building 663/Cavalry Stable | 42 | 0 | -220.0 | -80.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42-Building 667/Cavalry Stable | 43 | 0 | -80.0 | -78.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43-National Cemetery Grave Site | 44 | 0 | 300.0 | -102.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44-Building 129 | 45 | 1 | 414.0 | -100.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45-Building 122 | 46 | 0 | 460.0 | -90.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46-Building 108 | 47 | 0 | 536.0 | -64.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47-Building 107 | 48 | 0 | 546.0 | -48.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48-Building 104 | 49 | 0 | 566.0 | -72.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49-Building 105 | 50 | 0 | 598.0 | -20.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50-Building 106 | 51 | 0 | 632.0 | 0.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51-Building 211 | 52 | 0 | 744.0 | 28.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52-Building 204 | 53 | 0 | 834.0 | 68.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53-Building 210 | 54 | 0 | 734.0 | -16.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54-Building 201 | 55 | 0 | 940.0 | 106.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55-Building 220 | 56 | 0 | 908.0 | -16.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56-Building 231 | 57 | 0 | 970.0 | 80.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57-Building 228 | 58 | 0 | 958.0 | 60.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

**INPUT: RECEIVERS**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58-Building 229 | 60 | 0 | 950.0 | 32.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59-Building 223 | 61 | 0 | 950.0 | -14.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60-Building 230 | 62 | 0 | 1,050.0 | 112.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 1,020.0 | 16.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 1,014.0 | -20.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63-Building 1063 | 66 | 0 | 1,160.0 | 44.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64-Building 1062 | 68 | 0 | 1,178.0 | 0.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65-Building 1060 | 69 | 0 | 1,224.0 | -22.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66-Building 1167 | 70 | 0 | 1,216.0 | 94.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67-Building 1163 | 71 | 0 | 1,212.0 | 76.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68-Building 1169 | 72 | 0 | 1,280.0 | 50.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69-Building 1162 | 73 | 0 | 1,266.0 | 32.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70-Building 1170 | 74 | 0 | 1,360.0 | -16.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71-Building 1161 | 75 | 0 | 1,368.0 | -48.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72-Building 1160 | 76 | 0 | 1,398.0 | -50.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73-Building 1152/YMCA | 77 | 0 | 1,420.0 | -76.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74-Building 1151/YMCA Pool | 78 | 0 | 1,476.0 | -114.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75-Building 1004 | 79 | 0 | 1,300.0 | -140.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76-Home at 3234 Lyon St. | 81 | 8 | 1,560.0 | -150.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Existing Doyle Drive - No Build 2030 AM
BARRIER DESIGN: INPUT HEIGHTS

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

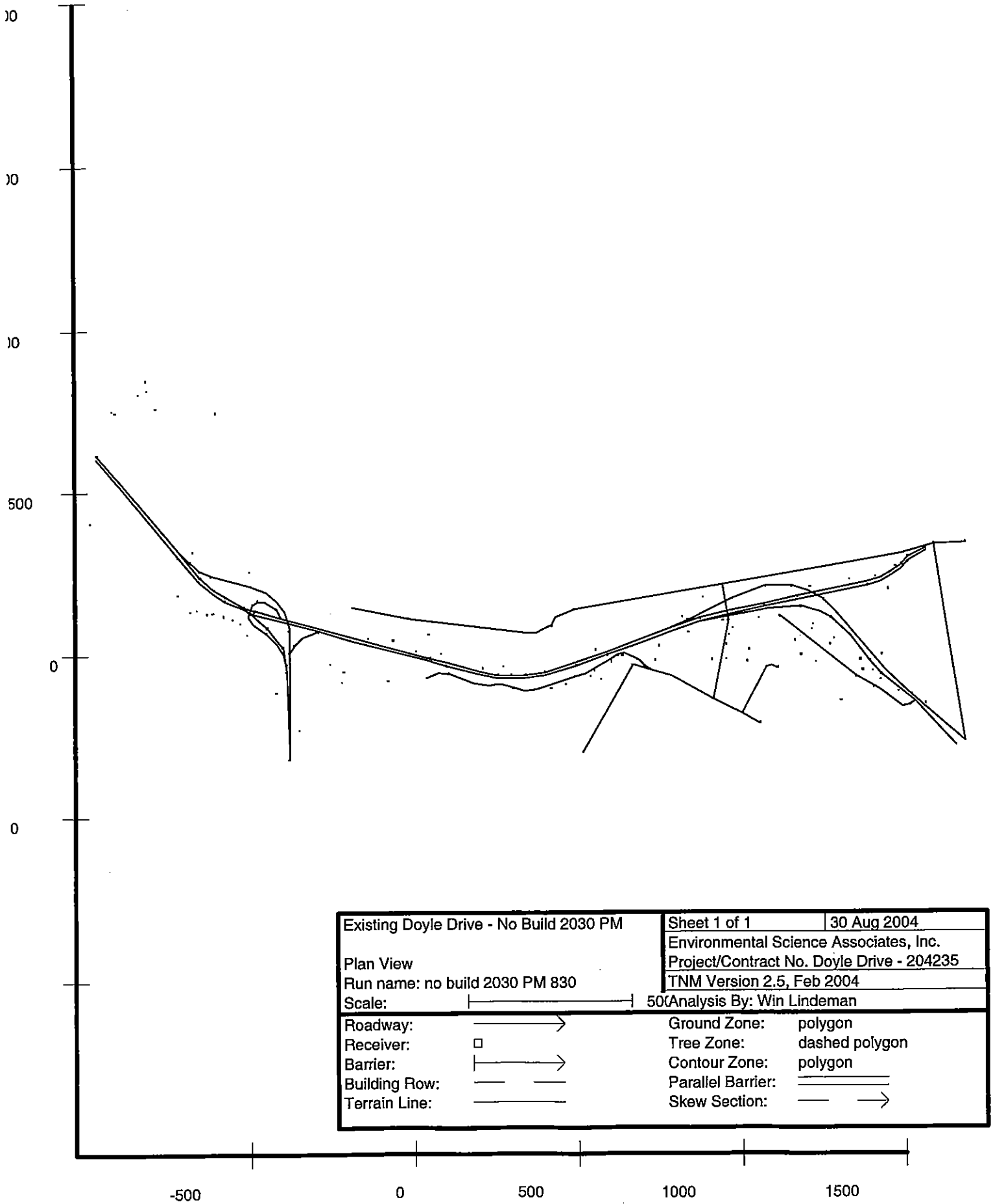
ATMOSPHERICS: 20 deg C, 50% RH

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 65.2 | 66 | 65.2 | 12 | — | 65.2 | 0.0 | 10 | -10.0 |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 65.9 | 66 | 65.9 | 12 | — | 65.9 | 0.0 | 10 | -10.0 |
| 3-Building 1187/1188 | 3 | 0 | 81.0 | 67.0 | 71 | -14.0 | 12 | — | 67.0 | 0.0 | 10 | -10.0 |
| 4-Building 1182 | 5 | 0 | 81.0 | 66.4 | 71 | -14.6 | 12 | — | 66.4 | 0.0 | 10 | -10.0 |
| 5-Building 1183/1186 | 6 | 0 | 81.0 | 67.1 | 71 | -13.9 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 6-Building 1184/1185 | 7 | 0 | 81.0 | 66.8 | 71 | -14.2 | 12 | — | 66.8 | 0.0 | 10 | -10.0 |
| 7-Building 603/Crissy Center | 8 | 0 | 72.0 | 66.0 | 71 | -6.0 | 12 | — | 66.0 | 0.0 | 10 | -10.0 |
| 8-PX Building | 9 | 0 | 0.0 | 68.5 | 71 | 68.5 | 12 | — | 68.5 | 0.0 | 10 | -10.0 |
| 9-Post Commissary/Sports Basement | 10 | 0 | 69.0 | 67.4 | 71 | -1.6 | 12 | — | 67.4 | 0.0 | 10 | -10.0 |
| 10-Battery Blaney/635 | 11 | 0 | 68.0 | 74.0 | 66 | 6.0 | 12 | Snd Lvl | 74.0 | 0.0 | 10 | -10.0 |
| 11-Battery Slaughter | 12 | 0 | 68.0 | 78.9 | 66 | 10.9 | 12 | Snd Lvl | 78.9 | 0.0 | 10 | -10.0 |
| 12-Battery Sherwood/636 | 13 | 0 | 68.0 | 76.2 | 66 | 8.2 | 12 | Snd Lvl | 76.2 | 0.0 | 10 | -10.0 |
| 13-Battery Baldwin | 14 | 0 | 68.0 | 66.2 | 66 | -1.8 | 12 | Snd Lvl | 66.2 | 0.0 | 10 | -10.0 |
| 14-Building 644 | 15 | 0 | 0.0 | 63.6 | 71 | 63.6 | 12 | — | 63.6 | 0.0 | 10 | -10.0 |
| 15-Building 649 | 16 | 0 | 0.0 | 60.6 | 66 | 60.6 | 12 | — | 60.6 | 0.0 | 10 | -10.0 |
| 16-Building 650/Stilwell Hall | 17 | 0 | 70.0 | 60.0 | 66 | -10.0 | 12 | — | 60.0 | 0.0 | 10 | -10.0 |
| 17-1253 Armistead Road | 18 | 1 | 66.0 | 63.8 | 66 | -2.2 | 12 | — | 63.8 | 0.0 | 10 | -10.0 |
| 18-Home on Armistead Road | 19 | 1 | 66.0 | 70.8 | 66 | 4.8 | 12 | Snd Lvl | 70.8 | 0.0 | 10 | -10.0 |
| 19-Building 969 | 20 | 0 | 0.0 | 52.2 | 71 | 52.2 | 12 | — | 52.2 | 0.0 | 10 | -10.0 |
| 20-Building 968 | 21 | 0 | 0.0 | 54.0 | 71 | 54.0 | 12 | — | 54.0 | 0.0 | 10 | -10.0 |
| 21-Building 967 | 22 | 0 | 0.0 | 56.1 | 71 | 56.1 | 12 | — | 56.1 | 0.0 | 10 | -10.0 |
| 22-Building 966 | 23 | 0 | 0.0 | 55.9 | 71 | 55.9 | 12 | — | 55.9 | 0.0 | 10 | -10.0 |
| 23-Building 964 | 24 | 1 | 0.0 | 53.5 | 66 | 53.5 | 12 | — | 53.5 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24-Building 963 | 25 | 1 | 0.0 | 54.3 | 66 | 54.3 | 12 | — | 54.3 | 0.0 | 10 | -10.0 |
| 25-Building 962 | 26 | 1 | 0.0 | 54.3 | 66 | 54.3 | 12 | — | 54.3 | 0.0 | 10 | -10.0 |
| 26-Unknown Building | 27 | 0 | 0.0 | 56.3 | 71 | 56.3 | 12 | — | 56.3 | 0.0 | 10 | -10.0 |
| 27-Log Cabin | 28 | 0 | 63.0 | 68.3 | 66 | 5.3 | 12 | Snd Lvl | 68.3 | 0.0 | 10 | -10.0 |
| 28-Unknown Building | 29 | 0 | 0.0 | 61.9 | 71 | 61.9 | 12 | — | 61.9 | 0.0 | 10 | -10.0 |
| 29-Building 1298 Storey Ave. | 30 | 2 | 66.5 | 67.0 | 66 | 0.5 | 12 | Snd Lvl | 67.0 | 0.0 | 10 | -10.0 |
| 30-Building 1297 Storey Ave. | 31 | 2 | 66.5 | 68.5 | 66 | 2.0 | 12 | Snd Lvl | 68.5 | 0.0 | 10 | -10.0 |
| 31-Building 1295 Storey Ave. | 32 | 2 | 66.5 | 70.1 | 66 | 3.6 | 12 | Snd Lvl | 70.1 | 0.0 | 10 | -10.0 |
| 32-Building 1294 Storey Ave. | 33 | 2 | 66.5 | 71.8 | 66 | 5.3 | 12 | Snd Lvl | 71.8 | 0.0 | 10 | -10.0 |
| 33-Building 1293 Storey Ave. | 34 | 2 | 66.5 | 73.1 | 66 | 6.6 | 12 | Snd Lvl | 73.1 | 0.0 | 10 | -10.0 |
| 34-Building 1291 Storey Ave. | 35 | 2 | 66.5 | 73.5 | 66 | 7.0 | 12 | Snd Lvl | 73.5 | 0.0 | 10 | -10.0 |
| 35-Building 1290 Storey Ave. | 36 | 2 | 66.5 | 73.1 | 66 | 6.6 | 12 | Snd Lvl | 73.1 | 0.0 | 10 | -10.0 |
| 36-Building 1289 Storey Ave. | 37 | 2 | 66.5 | 70.3 | 66 | 3.8 | 12 | Snd Lvl | 70.3 | 0.0 | 10 | -10.0 |
| 37-Building 1263 Storey Ave. | 38 | 2 | 0.0 | 66.4 | 66 | 66.4 | 12 | Snd Lvl | 66.4 | 0.0 | 10 | -10.0 |
| 38-Building 682/Cross Cultural Center | 39 | 0 | 65.5 | 63.4 | 66 | -2.1 | 12 | — | 63.4 | 0.0 | 10 | -10.0 |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | 64.0 | 66.2 | 71 | 2.2 | 12 | — | 66.2 | 0.0 | 10 | -10.0 |
| 40-Building 662/Cavalry Stable | 41 | 0 | 64.0 | 66.1 | 71 | 2.1 | 12 | — | 66.1 | 0.0 | 10 | -10.0 |
| 41-Building 663/Cavalry Stable | 42 | 0 | 64.0 | 65.0 | 71 | 1.0 | 12 | — | 65.0 | 0.0 | 10 | -10.0 |
| 42-Building 667/Cavalry Stable | 43 | 0 | 64.0 | 66.4 | 71 | 2.4 | 12 | — | 66.4 | 0.0 | 10 | -10.0 |
| 43-National Cemetery Grave Site | 44 | 0 | 69.0 | 74.3 | 66 | 5.3 | 12 | Snd Lvl | 74.3 | 0.0 | 10 | -10.0 |
| 44-Building 129 | 45 | 1 | 0.0 | 62.8 | 66 | 62.8 | 12 | — | 62.8 | 0.0 | 10 | -10.0 |
| 45-Building 122 | 46 | 0 | 0.0 | 72.6 | 71 | 72.6 | 12 | Snd Lvl | 72.6 | 0.0 | 10 | -10.0 |
| 46-Building 108 | 47 | 0 | 0.0 | 72.7 | 71 | 72.7 | 12 | Snd Lvl | 72.7 | 0.0 | 10 | -10.0 |
| 47-Building 107 | 48 | 0 | 0.0 | 74.4 | 71 | 74.4 | 12 | Snd Lvl | 74.4 | 0.0 | 10 | -10.0 |
| 48-Building 104 | 49 | 0 | 74.0 | 70.2 | 71 | -3.8 | 12 | — | 70.2 | 0.0 | 10 | -10.0 |
| 49-Building 105 | 50 | 0 | 74.0 | 76.2 | 71 | 2.2 | 12 | Snd Lvl | 76.2 | 0.0 | 10 | -10.0 |
| 50-Building 106 | 51 | 0 | 76.0 | 77.7 | 71 | 1.7 | 12 | Snd Lvl | 77.7 | 0.0 | 10 | -10.0 |
| 51-Building 211 | 52 | 0 | 0.0 | 75.5 | 71 | 75.5 | 12 | Snd Lvl | 75.5 | 0.0 | 10 | -10.0 |
| 52-Building 204 | 53 | 0 | 0.0 | 68.1 | 71 | 68.1 | 12 | — | 68.1 | 0.0 | 10 | -10.0 |
| 53-Building 210 | 54 | 0 | 0.0 | 71.1 | 71 | 71.1 | 12 | Snd Lvl | 71.1 | 0.0 | 10 | -10.0 |
| 54-Building 201 | 55 | 0 | 0.0 | 65.6 | 71 | 65.6 | 12 | — | 65.6 | 0.0 | 10 | -10.0 |
| 55-Building 220 | 56 | 0 | 0.0 | 64.3 | 71 | 64.3 | 12 | — | 64.3 | 0.0 | 10 | -10.0 |
| 56-Building 231 | 57 | 0 | 0.0 | 66.6 | 71 | 66.6 | 12 | — | 66.6 | 0.0 | 10 | -10.0 |
| 57-Building 228 | 58 | 0 | 0.0 | 65.5 | 71 | 65.5 | 12 | — | 65.5 | 0.0 | 10 | -10.0 |
| 58-Building 229 | 60 | 0 | 0.0 | 64.2 | 71 | 64.2 | 12 | — | 64.2 | 0.0 | 10 | -10.0 |
| 59-Building 223 | 61 | 0 | 0.0 | 60.1 | 71 | 60.1 | 12 | — | 60.1 | 0.0 | 10 | -10.0 |
| 60-Building 230 | 62 | 0 | 0.0 | 67.0 | 71 | 67.0 | 12 | — | 67.0 | 0.0 | 10 | -10.0 |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 57.0 | 63.1 | 66 | 6.1 | 12 | — | 63.1 | 0.0 | 10 | -10.0 |
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 57.0 | 61.1 | 66 | 4.1 | 12 | — | 61.1 | 0.0 | 10 | -10.0 |
| 63-Building 1063 | 66 | 0 | 68.5 | 61.5 | 71 | -7.0 | 12 | — | 61.5 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64-Building 1062 | 68 | 0 | 68.5 | 59.1 | 71 | -9.4 | 12 | — | 59.1 | 0.0 | 10 | -10.0 |
| 65-Building 1060 | 69 | 0 | 68.5 | 57.7 | 71 | -10.8 | 12 | — | 57.7 | 0.0 | 10 | -10.0 |
| 66-Building 1167 | 70 | 0 | 68.0 | 65.6 | 71 | -2.4 | 12 | — | 65.6 | 0.0 | 10 | -10.0 |
| 67-Building 1163 | 71 | 0 | 0.0 | 64.1 | 71 | 64.1 | 12 | — | 64.1 | 0.0 | 10 | -10.0 |
| 68-Building 1169 | 72 | 0 | 68.0 | 65.5 | 71 | -2.5 | 12 | — | 65.5 | 0.0 | 10 | -10.0 |
| 69-Building 1162 | 73 | 0 | 0.0 | 62.4 | 71 | 62.4 | 12 | — | 62.4 | 0.0 | 10 | -10.0 |
| 70-Building 1170 | 74 | 0 | 68.0 | 68.3 | 71 | 0.3 | 12 | — | 68.3 | 0.0 | 10 | -10.0 |
| 71-Building 1161 | 75 | 0 | 0.0 | 65.5 | 71 | 65.5 | 12 | — | 65.5 | 0.0 | 10 | -10.0 |
| 72-Building 1160 | 76 | 0 | 0.0 | 70.3 | 71 | 70.3 | 12 | — | 70.3 | 0.0 | 10 | -10.0 |
| 73-Building 1152/YMCA | 77 | 0 | 0.0 | 69.4 | 66 | 69.4 | 12 | Snd Lvl | 69.4 | 0.0 | 10 | -10.0 |
| 74-Building 1151/YMCA Pool | 78 | 0 | 0.0 | 72.3 | 66 | 72.3 | 12 | Snd Lvl | 72.3 | 0.0 | 10 | -10.0 |
| 75-Building 1004 | 79 | 0 | 0.0 | 54.1 | 71 | 54.1 | 12 | — | 54.1 | 0.0 | 10 | -10.0 |
| 76-Home at 3234 Lyon St. | 81 | 8 | 76.5 | 68.5 | 66 | -8.0 | 12 | Snd Lvl | 68.5 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 232 | 0.0 | 0.0 | 0.0 |
| All Impacted | 27 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |




| | | |
|---|---|---|
| Existing Doyle Drive - No Build 2030 PM | Sheet 1 of 1 | 30 Aug 2004 |
| | Environmental Science Associates, Inc. | |
| Plan View | Project/Contract No. Doyle Drive - 204235 | |
| Run name: no build 2030 PM 830 | TNM Version 2.5, Feb 2004 | |
| Scale: 50 | Analysis By: Win Lindeman | |

| | | | |
|---|---|---|---|
| Roadway: | | Ground Zone: | polygon |
| Receiver: | | Tree Zone: | dashed polygon |
| Barrier: | | Contour Zone: | polygon |
| Building Row: | | Parallel Barrier: | |
| Terrain Line: | | Skew Section: | |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Existing Doyle Drive - No Build 2030 PM

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

| Roadway | | Points | | | | | Flow Control | | | Segment | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle Drive to Marina | 9.1 | N End | 1 | -966.0 | 608.0 | 53.00 | | | | Average | |
| | | 1 | 2 | -720.0 | 302.0 | 56.00 | | | | Average | |
| | | 2 | 3 | -654.0 | 228.0 | 53.00 | | | | Average | |
| | | 3 | 4 | -610.0 | 192.0 | 50.00 | | | | Average | |
| | | 5 | 6 | -576.0 | 170.0 | 46.00 | | | | Average | |
| | | 6 | 7 | -516.0 | 144.0 | 46.00 | | | | Average | Y |
| | | 7 | 8 | -488.0 | 130.0 | 45.00 | | | | Average | Y |
| | | 8 | 9 | -380.0 | 100.0 | 41.00 | | | | Average | Y |
| | | 9 | 10 | -292.0 | 76.0 | 41.00 | | | | Average | Y |
| | | 10 | 11 | -194.0 | 47.0 | 37.00 | | | | Average | Y |
| | | 12 | 13 | 51.0 | -18.0 | 29.00 | | | | Average | Y |
| | | 13 | 14 | 50.0 | -18.0 | 29.00 | | | | Average | |
| | | 14 | 15 | 98.0 | -32.0 | 28.00 | | | | Average | |
| | | 15 | 16 | 196.0 | -58.0 | 27.00 | | | | Average | |
| | | 16 | 17 | 232.0 | -66.0 | 26.50 | | | | Average | |
| | | 17 | 18 | 252.0 | -70.0 | 26.00 | | | | Average | |
| | | 19 | 20 | 333.0 | -70.0 | 24.00 | | | | Average | |
| | | 20 | 21 | 334.0 | -70.0 | 24.00 | | | | Average | Y |
| | | 21 | 22 | 396.0 | -60.0 | 21.40 | | | | Average | Y |
| | | 22 | 23 | 492.0 | -32.0 | 17.80 | | | | Average | Y |
| | | 23 | 24 | 586.0 | 0.0 | 14.00 | | | | Average | Y |
| | | 24 | 25 | 680.0 | 35.0 | 12.00 | | | | Average | Y |
| | | 25 | 26 | 776.0 | 70.0 | 12.00 | | | | Average | Y |
| | | 26 | 27 | 868.0 | 102.0 | 11.80 | | | | Average | Y |
| | | 27 | 28 | 968.0 | 126.0 | 11.20 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 28 | 29 | 1,068.0 | 150.0 | 11.20 | | | | Average | Y |
| | | 30 | 31 | 1,381.0 | 213.0 | 5.00 | | | | Average | Y |
| | | 31 | 32 | 1,382.0 | 213.0 | 5.00 | | | | Average | |
| | | 32 | 33 | 1,422.0 | 224.0 | 5.00 | | | | Average | |
| | | 33 | 34 | 1,450.0 | 240.0 | 4.00 | | | | Average | |
| | | 34 | 35 | 1,486.0 | 264.0 | 4.00 | | | | Average | |
| | | 35 | 36 | 1,504.0 | 286.0 | 4.00 | | | | Average | |
| | | 36 | 37 | 1,560.0 | 318.0 | 4.00 | | | | | |
| WB Doyle Drive from Marina to 0+00 | 9.1 | 1 | 39 | 1,560.0 | 326.0 | 4.00 | | | | Average | |
| | | 2 | 40 | 1,504.0 | 300.0 | 4.00 | | | | Average | |
| | | 3 | 41 | 1,486.0 | 276.0 | 4.00 | | | | Average | |
| | | 4 | 42 | 1,450.0 | 251.0 | 4.00 | | | | Average | |
| | | 5 | 43 | 1,422.0 | 234.0 | 5.00 | | | | Average | |
| | | 6 | 44 | 1,382.0 | 224.0 | 5.00 | | | | Average | Y |
| | | 8 | 46 | 1,166.0 | 178.0 | 10.80 | | | | Average | Y |
| | | 9 | 47 | 1,068.0 | 157.0 | 11.20 | | | | Average | Y |
| | | 10 | 48 | 968.0 | 136.0 | 11.20 | | | | Average | Y |
| | | 11 | 49 | 868.0 | 111.0 | 11.80 | | | | Average | Y |
| | | 12 | 50 | 776.0 | 80.0 | 12.00 | | | | Average | Y |
| | | 13 | 51 | 680.0 | 44.0 | 12.00 | | | | Average | Y |
| | | 14 | 52 | 586.0 | 10.0 | 14.00 | | | | Average | Y |
| | | 15 | 53 | 492.0 | -22.0 | 17.80 | | | | Average | Y |
| | | 16 | 54 | 396.0 | -52.0 | 21.40 | | | | Average | Y |
| | | 17 | 55 | 335.0 | -60.0 | 24.00 | | | | Average | Y |
| | | 18 | 56 | 334.0 | -60.0 | 24.00 | | | | Average | |
| | | 19 | 57 | 294.0 | -60.0 | 25.00 | | | | Average | |
| | | 20 | 58 | 252.0 | -60.0 | 26.00 | | | | Average | |
| | | 21 | 59 | 232.0 | -56.0 | 26.50 | | | | Average | |
| | | 22 | 60 | 196.0 | -50.0 | 27.00 | | | | Average | |
| | | 23 | 61 | 98.0 | -22.0 | 28.00 | | | | Average | |
| | | 24 | 62 | 49.0 | -8.0 | 28.40 | | | | Average | |
| | | 25 | 63 | 50.0 | -8.0 | 28.40 | | | | Average | Y |
| | | 26 | 64 | -98.0 | 30.0 | 33.00 | | | | Average | Y |
| | | 27 | 65 | -194.0 | 58.0 | 37.00 | | | | Average | Y |
| | | 28 | 66 | -292.0 | 86.0 | 41.00 | | | | Average | Y |
| | | 29 | 67 | -380.0 | 110.0 | 45.00 | | | | Average | Y |
| | | 30 | 68 | -406.0 | 118.0 | 45.60 | | | | Average | Y |
| | | 31 | 69 | -407.0 | 118.0 | 45.60 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 32 | 70 | -487.0 | 138.5 | 49.20 | | | | Average | |
| | | 33 | 71 | -488.0 | 138.5 | 49.20 | | | | Average | Y |
| | | 34 | 72 | -516.0 | 150.0 | 51.00 | | | | Average | Y |
| | | 35 | 73 | -517.0 | 150.0 | 51.00 | | | | Average | |
| | | 36 | 74 | -576.0 | 182.0 | 49.00 | | | | Average | |
| | | 37 | 75 | -610.0 | 204.0 | 50.00 | | | | Average | |
| | | 38 | 192 | -654.0 | 242.0 | 53.00 | | | | Average | |
| | | 39 | 193 | -720.0 | 322.0 | 56.00 | | | | Average | |
| | | 40 | 76 | -966.0 | 620.0 | 53.00 | | | | | |
| SB/EB Richardson from Doyle to Francis | 11.0 | 1 | 77 | 868.0 | 102.0 | 11.80 | | | | Average | Y |
| | | 2 | 78 | 1,078.0 | 140.0 | 10.00 | | | | Average | Y |
| | | 3 | 79 | 1,178.0 | 147.0 | 7.00 | | | | Average | Y |
| | | 4 | 80 | 1,233.0 | 132.0 | 5.00 | | | | Average | Y |
| | | 5 | 81 | 1,234.0 | 132.0 | 5.00 | | | | Average | |
| | | 6 | 82 | 1,270.0 | 114.0 | 2.00 | | | | Average | |
| | | 7 | 83 | 1,330.0 | 57.0 | 2.00 | | | | Average | |
| | | 8 | 84 | 1,388.0 | -20.0 | 2.00 | | | | Average | |
| | | 9 | 85 | 1,424.0 | -60.0 | 2.00 | | | | Average | |
| | | 10 | 86 | 1,528.0 | -146.0 | 4.00 | | | | Average | |
| | | 11 | 87 | 1,650.0 | -280.0 | 4.00 | | | | | |
| NB/WB Richardson from Francisco to DD | 9.0 | 1 | 88 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 89 | 1,514.0 | -122.0 | 4.00 | | | | Average | |
| | | 3 | 90 | 1,436.0 | -50.0 | 2.00 | | | | Average | |
| | | 4 | 91 | 1,285.0 | 130.0 | 2.00 | | | | Average | |
| | | 5 | 92 | 1,244.0 | 172.0 | 3.00 | | | | Average | |
| | | 6 | 93 | 1,200.0 | 196.0 | 4.00 | | | | Average | |
| | | 7 | 94 | 1,149.0 | 210.0 | 7.00 | | | | Average | |
| | | 8 | 95 | 1,150.0 | 210.0 | 7.00 | | | | Average | Y |
| | | 9 | 96 | 1,068.0 | 210.0 | 10.00 | | | | Average | Y |
| | | 10 | 97 | 968.0 | 172.0 | 11.00 | | | | Average | Y |
| | | 11 | 98 | 830.0 | 106.0 | 12.00 | | | | Average | Y |
| | | 12 | 99 | 776.0 | 80.0 | 12.00 | | | | | |
| SB PP Ramp from WB Doyle Drive | 4.6 | 1 | 100 | -407.0 | 118.0 | 45.60 | | | | Average | |
| | | 2 | 101 | -420.0 | 144.0 | 46.00 | | | | Average | |
| | | 3 | 102 | -456.0 | 170.0 | 41.00 | | | | Average | |
| | | 4 | 103 | -478.0 | 170.0 | 40.00 | | | | Average | |
| | | 5 | 104 | -494.0 | 158.0 | 39.00 | | | | Average | |
| | | 6 | 105 | -505.0 | 120.0 | 39.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 106 | -488.0 | 96.0 | 39.00 | | | | Average | |
| | | 8 | 107 | -450.0 | 70.0 | 38.00 | | | | Average | |
| | | 9 | 108 | -418.0 | 36.0 | 38.00 | | | | Average | |
| | | 10 | 109 | -398.0 | 5.0 | 38.00 | | | | Average | |
| | | 11 | 110 | -390.0 | -26.0 | 37.00 | | | | Average | |
| | | 12 | 111 | -388.0 | -50.0 | 37.00 | | | | Average | |
| | | 13 | 112 | -380.0 | -320.0 | 37.00 | | | | | |
| SB PP Ramp from EB Doyle Drive | 4.8 | 1 | 113 | -515.0 | 143.9 | 51.00 | | | | Average | Y |
| | | 2 | 114 | -495.0 | 130.0 | 50.00 | | | | Average | Y |
| | | 3 | 115 | -494.0 | 130.0 | 50.00 | | | | Average | |
| | | 4 | 116 | -476.0 | 112.0 | 49.00 | | | | Average | |
| | | 5 | 117 | -447.0 | 86.0 | 46.00 | | | | Average | |
| | | 6 | 118 | -410.0 | 38.0 | 47.00 | | | | Average | |
| | | 7 | 119 | -400.0 | 27.0 | 37.00 | | | | Average | |
| | | 8 | 120 | -390.0 | -26.0 | 37.00 | | | | Average | |
| | | 9 | 121 | -388.0 | -27.0 | 37.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 4.6 | 1 | 122 | -380.0 | -320.0 | 37.00 | | | | Average | |
| | | 2 | 123 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 3 | 124 | -380.0 | 80.0 | 37.00 | | | | Average | |
| | | 4 | 125 | -384.0 | 98.0 | 38.00 | | | | Average | |
| | | 5 | 126 | -396.0 | 138.0 | 38.00 | | | | Average | |
| | | 6 | 127 | -418.0 | 170.0 | 41.00 | | | | Average | |
| | | 7 | 128 | -450.0 | 196.0 | 44.00 | | | | Average | |
| | | 8 | 129 | -500.0 | 216.0 | 47.50 | | | | Average | |
| | | 9 | 130 | -620.0 | 246.0 | 54.00 | | | | Average | |
| | | 10 | 131 | -656.0 | 262.0 | 57.00 | | | | Average | |
| | | 11 | 132 | -686.0 | 290.0 | 58.00 | | | | Average | |
| | | 12 | 191 | -703.0 | 306.0 | 58.00 | | | | Average | |
| | | 13 | 133 | -720.0 | 322.0 | 56.00 | | | | | |
| NB PP ramp to EB Doyle Drive | 4.6 | 1 | 134 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 2 | 135 | -364.0 | 34.0 | 38.00 | | | | Average | |
| | | 3 | 136 | -338.0 | 58.0 | 39.00 | | | | Average | |
| | | 4 | 137 | -306.0 | 70.0 | 40.00 | | | | Average | |
| | | 5 | 138 | -292.0 | 76.0 | 41.00 | | | | | |
| Mason Street | 7.3 | 1 | 139 | -188.0 | 150.0 | 3.00 | | | | Average | |
| | | 2 | 140 | -16.0 | 114.0 | 3.00 | | | | Average | |
| | | 3 | 141 | 340.0 | 70.0 | 4.00 | | | | Average | |
| | | 4 | 118 | 370.0 | 70.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 5 | 143 | 416.0 | 92.0 | 4.00 | | | | Average | |
| | | 6 | 144 | 428.0 | 118.0 | 4.00 | | | | Average | |
| | | 7 | 145 | 486.0 | 142.0 | 4.00 | | | | Average | |
| | | 8 | 194 | 938.0 | 214.0 | 4.00 | | | | Average | |
| | | 9 | 146 | 1,486.0 | 310.0 | 4.00 | | | | Average | |
| | | 10 | 147 | 1,584.0 | 340.0 | 4.00 | | | | Average | |
| | | 11 | 148 | 1,680.0 | 344.0 | 4.00 | | | | | |
| Lincoln Blvd. | 7.3 | 1 | 149 | 36.0 | -70.0 | 33.00 | | | | Average | |
| | | 2 | 150 | 74.0 | -53.0 | 33.00 | | | | Average | |
| | | 3 | 151 | 106.0 | -56.0 | 32.00 | | | | Average | |
| | | 4 | 152 | 180.0 | -86.0 | 30.00 | | | | Average | |
| | | 5 | 153 | 226.0 | -92.0 | 29.00 | | | | Average | |
| | | 6 | 154 | 246.0 | -90.0 | 29.00 | | | | Average | |
| | | 7 | 155 | 268.0 | -90.0 | 29.00 | | | | Average | |
| | | 8 | 156 | 308.0 | -100.0 | 29.00 | | | | Average | |
| | | 9 | 157 | 334.0 | -108.0 | 27.00 | | | | Average | |
| | | 10 | 158 | 368.0 | -105.0 | 26.00 | | | | Average | |
| | | 11 | 159 | 490.0 | -66.0 | 19.00 | | | | Average | |
| | | 12 | 160 | 520.0 | -56.0 | 17.00 | | | | Average | |
| | | 13 | 161 | 568.0 | -30.0 | 16.00 | | | | Average | |
| | | 14 | 162 | 596.0 | -14.0 | 13.00 | | | | Average | |
| | | 15 | 163 | 620.0 | 0.0 | 14.00 | | | | Average | |
| | | 16 | 164 | 636.0 | 6.0 | 12.00 | | | | Average | |
| | | 17 | 165 | 680.0 | -14.0 | 13.00 | | | | Average | |
| | | 18 | 166 | 700.0 | -34.0 | 14.00 | | | | Average | |
| | | 19 | 167 | 718.0 | -44.0 | 14.00 | | | | Average | |
| | | 20 | 168 | 784.0 | -66.0 | 15.00 | | | | Average | |
| | | 21 | 169 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 22 | 170 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 23 | 171 | 1,054.0 | -210.0 | 14.00 | | | | | |
| Gorgas Avenue | 6.0 | 1 | 172 | 1,528.0 | -146.0 | 4.00 | | | | Average | |
| | | 2 | 173 | 1,510.0 | -158.0 | 4.00 | | | | Average | |
| | | 3 | 174 | 1,488.0 | -160.0 | 4.00 | | | | Average | |
| | | 4 | 175 | 1,420.0 | -108.0 | 2.00 | | | | Average | |
| | | 5 | 176 | 1,400.0 | -98.0 | 2.00 | | | | Average | |
| | | 6 | 177 | 1,344.0 | -66.0 | 2.00 | | | | Average | |
| | | 7 | 178 | 1,112.0 | 120.0 | 3.00 | | | | | |
| Halleck Street | 7.3 | 1 | 179 | 910.0 | -136.0 | 14.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 180 | 957.0 | 106.0 | 6.00 | | | | Average | |
| | | 3 | 181 | 938.0 | 214.0 | 4.00 | | | | | |
| Girard Road | 7.3 | 1 | 182 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 2 | 183 | 1,074.0 | -38.0 | 3.00 | | | | Average | |
| | | 3 | 184 | 1,090.0 | -33.0 | 4.00 | | | | Average | |
| | | 4 | 185 | 1,108.0 | -40.0 | 5.00 | | | | | |
| Baker Street | 11.6 | 1 | 186 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 187 | 1,584.0 | 340.0 | 4.00 | | | | | |
| Montgomery Street | 9.2 | 1 | 188 | 510.0 | -300.0 | 15.00 | | | | Average | |
| | | 2 | 189 | 664.0 | -30.0 | 12.00 | | | | Average | |
| | | 3 | 190 | 718.0 | -44.0 | 14.00 | | | | | |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Existing Doyle Drive - No Build 2030 PM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle Drive to Marina | N End | 1 | 4917 | 88 | 15 | 88 | 66 | 88 | 56 | 88 | 15 | 88 |
| | 1 | 2 | 4917 | 88 | 15 | 88 | 66 | 88 | 56 | 88 | 15 | 88 |
| | 2 | 3 | 4917 | 88 | 15 | 88 | 66 | 88 | 56 | 88 | 15 | 88 |
| | 3 | 4 | 4917 | 88 | 15 | 88 | 66 | 88 | 56 | 88 | 15 | 88 |
| | 5 | 6 | 4917 | 88 | 15 | 88 | 66 | 88 | 56 | 88 | 15 | 88 |
| | 6 | 7 | 4917 | 88 | 15 | 88 | 66 | 88 | 56 | 88 | 15 | 88 |
| | 7 | 8 | 2829 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 8 | 9 | 2838 | 88 | 9 | 88 | 38 | 88 | 32 | 88 | 9 | 88 |
| | 9 | 10 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 10 | 11 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 12 | 13 | 3470 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 13 | 14 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 14 | 15 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 15 | 16 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 16 | 17 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 17 | 18 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 19 | 20 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 20 | 21 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 21 | 22 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 22 | 23 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 23 | 24 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 24 | 25 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 25 | 26 | 3479 | 88 | 11 | 88 | 47 | 88 | 39 | 88 | 11 | 88 |
| | 26 | 27 | 1015 | 88 | 3 | 88 | 14 | 88 | 12 | 88 | 3 | 88 |
| | 27 | 28 | 1015 | 88 | 3 | 88 | 14 | 88 | 12 | 88 | 3 | 88 |
| | 28 | 29 | 1015 | 88 | 3 | 88 | 14 | 88 | 12 | 88 | 3 | 88 |
| | 30 | 31 | 1015 | 88 | 3 | 88 | 14 | 88 | 12 | 88 | 3 | 88 |
| | 31 | 32 | 1015 | 88 | 3 | 88 | 14 | 88 | 12 | 88 | 3 | 88 |
| | 32 | 33 | 1015 | 56 | 3 | 56 | 14 | 56 | 12 | 56 | 3 | 56 |
| | 33 | 34 | 1015 | 56 | 3 | 56 | 14 | 56 | 12 | 56 | 3 | 56 |
| | 34 | 35 | 1015 | 56 | 3 | 56 | 14 | 56 | 12 | 56 | 3 | 56 |
| | 35 | 36 | 1015 | 56 | 3 | 56 | 14 | 56 | 12 | 56 | 3 | 56 |
| | 36 | 37 | | | | | | | | | | |
| WB Doyle Drive from Marina to 0+00 | 1 | 39 | 1802 | 56 | 0 | 0 | 4 | 56 | 51 | 56 | 19 | 56 |
| | 2 | 40 | 1802 | 56 | 0 | 0 | 4 | 56 | 51 | 56 | 19 | 56 |
| | 3 | 41 | 1802 | 56 | 0 | 0 | 4 | 56 | 51 | 56 | 19 | 56 |
| | 4 | 42 | 1804 | 56 | 0 | 0 | 4 | 56 | 51 | 56 | 19 | 56 |
| | 5 | 43 | 1802 | 88 | 0 | 0 | 4 | 88 | 51 | 88 | 19 | 88 |
| | 6 | 44 | 1802 | 88 | 0 | 0 | 4 | 88 | 51 | 88 | 19 | 88 |
| | 8 | 46 | 1802 | 88 | 0 | 0 | 4 | 88 | 51 | 88 | 19 | 88 |
| | 9 | 47 | 1802 | 88 | 0 | 0 | 4 | 88 | 51 | 88 | 19 | 88 |
| | 10 | 48 | 1802 | 88 | 0 | 0 | 4 | 88 | 51 | 88 | 19 | 88 |
| | 11 | 49 | 1802 | 88 | 0 | 0 | 4 | 88 | 51 | 88 | 19 | 88 |
| | 12 | 50 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 13 | 51 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 14 | 52 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 15 | 53 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 16 | 54 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 17 | 55 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 18 | 56 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 19 | 57 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 20 | 58 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 21 | 59 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 22 | 60 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 23 | 61 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 24 | 62 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 25 | 63 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 26 | 64 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 27 | 65 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 28 | 66 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 29 | 67 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 30 | 68 | 4618 | 88 | 0 | 0 | 10 | 88 | 130 | 88 | 48 | 88 |
| | 31 | 69 | 3859 | 88 | 0 | 0 | 8 | 88 | 108 | 88 | 40 | 88 |
| | 32 | 70 | 3859 | 88 | 0 | 0 | 8 | 88 | 108 | 88 | 40 | 88 |
| | 33 | 71 | 3859 | 88 | 0 | 0 | 8 | 88 | 108 | 88 | 40 | 88 |
| | 34 | 72 | 3859 | 88 | 0 | 0 | 8 | 88 | 108 | 88 | 40 | 88 |
| | 35 | 73 | 3859 | 88 | 0 | 0 | 8 | 88 | 108 | 88 | 40 | 88 |
| | 36 | 74 | 3959 | 88 | 0 | 0 | 8 | 88 | 108 | 88 | 40 | 88 |
| | 37 | 75 | 3859 | 88 | 0 | 0 | 8 | 88 | 108 | 88 | 40 | 88 |
| | 38 | 192 | 3859 | 88 | 0 | 0 | 8 | 88 | 108 | 88 | 40 | 88 |
| | 39 | 193 | 5970 | 88 | 0 | 0 | 12 | 88 | 168 | 88 | 62 | 88 |
| | 40 | 76 | | | | | | | | | | |
| SB/EB Richardson from Doyle to Francis | 1 | 77 | 2464 | 56 | 8 | 56 | 33 | 56 | 28 | 56 | 8 | 56 |
| | 2 | 78 | 2464 | 56 | 8 | 56 | 33 | 56 | 28 | 56 | 8 | 56 |
| | 3 | 79 | 2464 | 56 | 8 | 56 | 33 | 56 | 28 | 56 | 8 | 56 |
| | 4 | 80 | 2464 | 56 | 8 | 56 | 33 | 56 | 28 | 56 | 8 | 56 |
| | 5 | 81 | 2464 | 56 | 8 | 56 | 33 | 56 | 28 | 56 | 8 | 56 |
| | 6 | 82 | 2464 | 56 | 8 | 56 | 33 | 56 | 28 | 56 | 8 | 56 |
| | 7 | 83 | 2464 | 56 | 8 | 56 | 33 | 56 | 28 | 56 | 8 | 56 |
| | 8 | 84 | 2464 | 56 | 8 | 56 | 33 | 56 | 28 | 56 | 8 | 56 |
| | 9 | 85 | 2464 | 56 | 8 | 56 | 33 | 56 | 28 | 56 | 8 | 56 |
| | 10 | 86 | 2464 | 56 | 8 | 56 | 33 | 56 | 28 | 56 | 8 | 56 |
| | 11 | 87 | | | | | | | | | | |
| NB/WB Richardson from Francisco to DD | 1 | 88 | 2928 | 56 | 0 | 0 | 6 | 56 | 82 | 56 | 30 | 56 |
| | 2 | 89 | 2928 | 56 | 0 | 0 | 6 | 56 | 82 | 56 | 30 | 56 |
| | 3 | 90 | 2928 | 56 | 0 | 0 | 6 | 56 | 82 | 56 | 30 | 56 |
| | 4 | 91 | 2928 | 56 | 0 | 0 | 6 | 56 | 82 | 56 | 30 | 56 |
| | 5 | 92 | 2928 | 56 | 0 | 0 | 6 | 56 | 82 | 56 | 30 | 56 |
| | 6 | 93 | 2928 | 56 | 0 | 0 | 6 | 56 | 82 | 56 | 30 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 94 | 2928 | 56 | 0 | 0 | 6 | 56 | 82 | 56 | 30 | 56 |
| | 8 | 95 | 2928 | 56 | 0 | 0 | 6 | 56 | 82 | 56 | 30 | 56 |
| | 9 | 96 | 2928 | 56 | 0 | 0 | 6 | 56 | 82 | 56 | 30 | 56 |
| | 10 | 97 | 2928 | 56 | 0 | 0 | 6 | 56 | 82 | 56 | 30 | 56 |
| | 11 | 98 | 2928 | 56 | 0 | 0 | 6 | 56 | 82 | 56 | 30 | 56 |
| | 12 | 99 | | | | | | | | | | |
| SB PP Ramp from WB Doyle Drive | 1 | 100 | 759 | 56 | 0 | 0 | 2 | 56 | 21 | 56 | 8 | 56 |
| | 2 | 101 | 759 | 56 | 0 | 0 | 2 | 56 | 21 | 56 | 8 | 56 |
| | 3 | 102 | 759 | 56 | 0 | 0 | 2 | 56 | 21 | 56 | 8 | 56 |
| | 4 | 103 | 759 | 56 | 0 | 0 | 2 | 56 | 21 | 56 | 8 | 56 |
| | 5 | 104 | 759 | 56 | 0 | 0 | 2 | 56 | 21 | 56 | 8 | 56 |
| | 6 | 105 | 759 | 56 | 0 | 0 | 2 | 56 | 21 | 56 | 8 | 56 |
| | 7 | 106 | 759 | 56 | 0 | 0 | 2 | 56 | 21 | 56 | 8 | 56 |
| | 8 | 107 | 759 | 56 | 0 | 0 | 2 | 56 | 21 | 56 | 8 | 56 |
| | 9 | 108 | 759 | 56 | 0 | 0 | 2 | 56 | 21 | 56 | 8 | 56 |
| | 10 | 109 | 759 | 56 | 0 | 0 | 2 | 56 | 21 | 56 | 8 | 56 |
| | 11 | 110 | 759 | 56 | 0 | 0 | 2 | 56 | 21 | 56 | 8 | 56 |
| | 12 | 111 | 759 | 56 | 0 | 0 | 2 | 56 | 21 | 56 | 8 | 56 |
| | 13 | 112 | | | | | | | | | | |
| SB PP Ramp from EB Doyle Drive | 1 | 113 | 2079 | 56 | 6 | 56 | 28 | 56 | 24 | 56 | 6 | 56 |
| | 2 | 114 | 2079 | 56 | 6 | 56 | 28 | 56 | 24 | 56 | 6 | 56 |
| | 3 | 115 | 2079 | 56 | 6 | 56 | 28 | 56 | 24 | 56 | 6 | 56 |
| | 4 | 116 | 2079 | 56 | 6 | 56 | 28 | 56 | 24 | 56 | 6 | 56 |
| | 5 | 117 | 2079 | 56 | 6 | 56 | 28 | 56 | 24 | 56 | 6 | 56 |
| | 6 | 118 | 2079 | 56 | 6 | 56 | 28 | 56 | 24 | 56 | 6 | 56 |
| | 7 | 119 | 2079 | 56 | 6 | 56 | 28 | 56 | 24 | 56 | 6 | 56 |
| | 8 | 120 | 2079 | 56 | 6 | 56 | 28 | 56 | 24 | 56 | 6 | 56 |
| | 9 | 121 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 | 122 | 2148 | 56 | 25 | 56 | 0 | 0 | 9 | 56 | 24 | 56 |
| | 2 | 123 | 2148 | 56 | 25 | 56 | 0 | 0 | 9 | 56 | 24 | 56 |
| | 3 | 124 | 2148 | 56 | 25 | 56 | 0 | 0 | 9 | 56 | 24 | 56 |
| | 4 | 125 | 2148 | 56 | 25 | 56 | 0 | 0 | 9 | 56 | 24 | 56 |
| | 5 | 126 | 2148 | 56 | 25 | 56 | 0 | 0 | 9 | 56 | 24 | 56 |
| | 6 | 127 | 2148 | 56 | 25 | 56 | 0 | 0 | 9 | 56 | 24 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 128 | 2148 | 56 | 25 | 56 | 0 | 0 | 9 | 56 | 24 | 56 |
| | 8 | 129 | 2148 | 56 | 25 | 56 | 0 | 0 | 9 | 56 | 24 | 56 |
| | 9 | 130 | 2148 | 56 | 25 | 56 | 0 | 0 | 9 | 56 | 24 | 56 |
| | 10 | 131 | 2148 | 56 | 25 | 56 | 0 | 0 | 9 | 56 | 24 | 56 |
| | 11 | 132 | 2148 | 56 | 25 | 56 | 0 | 0 | 9 | 56 | 24 | 56 |
| | 12 | 191 | 2148 | 56 | 25 | 56 | 0 | 0 | 9 | 56 | 24 | 56 |
| | 13 | 133 | | | | | | | | | | |
| NB PP ramp to EB Doyle Drive | 1 | 134 | 644 | 56 | 0 | 0 | 3 | 56 | 7 | 56 | 7 | 56 |
| | 2 | 135 | 644 | 56 | 0 | 0 | 3 | 56 | 7 | 56 | 7 | 56 |
| | 3 | 136 | 644 | 56 | 0 | 0 | 3 | 56 | 7 | 56 | 7 | 56 |
| | 4 | 137 | 644 | 56 | 0 | 0 | 3 | 56 | 7 | 56 | 7 | 56 |
| | 5 | 138 | | | | | | | | | | |
| Mason Street | 1 | 139 | 18 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 2 | 140 | 18 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 3 | 141 | 18 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 4 | 142 | 18 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 5 | 143 | 18 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 6 | 144 | 18 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 7 | 145 | 18 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 8 | 194 | 155 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 9 | 146 | 155 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 10 | 147 | 153 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 11 | 148 | | | | | | | | | | |
| Lincoln Blvd. | 1 | 149 | 213 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 150 | 399 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 3 | 151 | 399 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 4 | 152 | 399 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 5 | 153 | 399 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 6 | 154 | 399 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 7 | 155 | 399 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 8 | 156 | 399 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 9 | 157 | 410 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 10 | 158 | 239 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 11 | 159 | 239 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 | 160 | 239 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 13 | 161 | 239 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 14 | 162 | 239 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 15 | 163 | 239 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 16 | 164 | 239 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 17 | 165 | 239 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 18 | 166 | 239 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 19 | 167 | 471 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 20 | 168 | 471 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 21 | 169 | 603 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 6 | 32 |
| | 22 | 170 | 711 | 32 | 7 | 32 | 0 | 0 | 7 | 32 | 7 | 32 |
| | 23 | 171 | | | | | | | | | | |
| Gorgas Avenue | 1 | 172 | 544 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 173 | 544 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 174 | 544 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 175 | 544 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 176 | 149 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 177 | 68 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 178 | | | | | | | | | | |
| Halleck Street | 1 | 179 | 227 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 180 | 179 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 181 | | | | | | | | | | |
| Girard Road | 1 | 182 | 176 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 183 | 176 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 184 | 176 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 185 | | | | | | | | | | |
| Baker Street | 1 | 186 | 479 | 32 | 5 | 32 | 0 | 0 | 0 | 0 | 5 | 32 |
| | 2 | 187 | | | | | | | | | | |
| Montgomery Street | 1 | 188 | 148 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 2 | 189 | 148 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 3 | 190 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

30 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Existing Doyle Drive - No Build 2030 PM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 1,426.0 | 0.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 1,446.0 | 202.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3-Building 1187/1188 | 3 | 0 | 1,466.0 | 272.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4-Building 1182 | 5 | 0 | 1,406.0 | 240.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5-Building 1183/1186 | 6 | 0 | 1,326.0 | 230.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6-Building 1184/1185 | 7 | 0 | 1,206.0 | 208.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7-Building 603/Crissy Center | 8 | 0 | 880.0 | 176.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8-PX Building | 9 | 0 | 816.0 | 118.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9-Post Commissary/Sports Basement | 10 | 0 | 552.0 | 16.0 | 4.00 | 1.50 | 69.00 | 71 | 12.0 | 10.0 | Y |
| 10-Battery Blaney/635 | 11 | 0 | 270.0 | -34.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11-Battery Slaughter | 12 | 0 | 208.0 | -40.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12-Battery Sherwood/636 | 13 | 0 | 80.0 | 6.0 | 29.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13-Battery Baldwin | 14 | 0 | 4.0 | 15.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14-Building 644 | 15 | 0 | 42.0 | 66.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15-Building 649 | 16 | 0 | -64.0 | 48.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16-Building 650/Stilwell Hall | 17 | 0 | -140.0 | 52.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17-1253 Armistead Road | 18 | 1 | -502.0 | 258.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18-Home on Armistead Road | 19 | 1 | -674.0 | 320.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19-Building 969 | 20 | 0 | -604.0 | 748.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20-Building 968 | 21 | 0 | -788.0 | 762.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21-Building 967 | 22 | 0 | -910.0 | 750.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22-Building 966 | 23 | 0 | -920.0 | 754.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23-Building 964 | 24 | 1 | -818.0 | 846.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24-Building 963 | 25 | 1 | -840.0 | 804.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25-Building 962 | 26 | 1 | -814.0 | 816.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26-Unknown Building | 27 | 0 | -1,132.0 | 697.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27-Log Cabin | 28 | 0 | -720.0 | 188.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28-Unknown Building | 29 | 0 | -988.0 | 408.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29-Building 1298 Storey Ave. | 30 | 2 | -682.0 | 136.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30-Building 1297 Storey Ave. | 31 | 2 | -664.0 | 140.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31-Building 1295 Storey Ave. | 32 | 2 | -632.0 | 130.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32-Building 1294 Storey Ave. | 33 | 2 | -614.0 | 132.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33-Building 1293 Storey Ave. | 34 | 2 | -580.0 | 122.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34-Building 1291 Storey Ave. | 35 | 2 | -552.0 | 112.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35-Building 1290 Storey Ave. | 36 | 2 | -528.0 | 100.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36-Building 1289 Storey Ave. | 37 | 2 | -510.0 | 66.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37-Building 1263 Storey Ave. | 38 | 2 | -420.0 | -114.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38-Building 682/Cross Cultural Center | 39 | 0 | -350.0 | -228.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | -256.0 | -26.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40-Building 662/Cavalry Stable | 41 | 0 | -214.0 | -50.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41-Building 663/Cavalry Stable | 42 | 0 | -220.0 | -80.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42-Building 667/Cavalry Stable | 43 | 0 | -80.0 | -78.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43-National Cemetery Grave Site | 44 | 0 | 300.0 | -102.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44-Building 129 | 45 | 1 | 414.0 | -100.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45-Building 122 | 46 | 0 | 460.0 | -90.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46-Building 108 | 47 | 0 | 536.0 | -64.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47-Building 107 | 48 | 0 | 546.0 | -48.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48-Building 104 | 49 | 0 | 566.0 | -72.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49-Building 105 | 50 | 0 | 598.0 | -20.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50-Building 106 | 51 | 0 | 632.0 | 0.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51-Building 211 | 52 | 0 | 744.0 | 28.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52-Building 204 | 53 | 0 | 834.0 | 68.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53-Building 210 | 54 | 0 | 734.0 | -16.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54-Building 201 | 55 | 0 | 940.0 | 106.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55-Building 220 | 56 | 0 | 908.0 | -16.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56-Building 231 | 57 | 0 | 970.0 | 80.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57-Building 228 | 58 | 0 | 958.0 | 60.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58-Building 229 | 60 | 0 | 950.0 | 32.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59-Building 223 | 61 | 0 | 950.0 | -14.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60-Building 230 | 62 | 0 | 1,050.0 | 112.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 1,020.0 | 16.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 1,014.0 | -20.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63-Building 1063 | 66 | 0 | 1,160.0 | 44.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64-Building 1062 | 68 | 0 | 1,178.0 | 0.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65-Building 1060 | 69 | 0 | 1,224.0 | -22.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66-Building 1167 | 70 | 0 | 1,216.0 | 94.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67-Building 1163 | 71 | 0 | 1,212.0 | 76.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68-Building 1169 | 72 | 0 | 1,280.0 | 50.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69-Building 1162 | 73 | 0 | 1,266.0 | 32.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70-Building 1170 | 74 | 0 | 1,360.0 | -16.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71-Building 1161 | 75 | 0 | 1,368.0 | -48.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72-Building 1160 | 76 | 0 | 1,398.0 | -50.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73-Building 1152/YMCA | 77 | 0 | 1,420.0 | -76.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74-Building 1151/YMCA Pool | 78 | 0 | 1,476.0 | -114.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75-Building 1004 | 79 | 0 | 1,300.0 | -140.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76-Home at 3234 Lyon St. | 81 | 8 | 1,560.0 | -150.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Existing Doyle Drive - No Build 2030 PM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

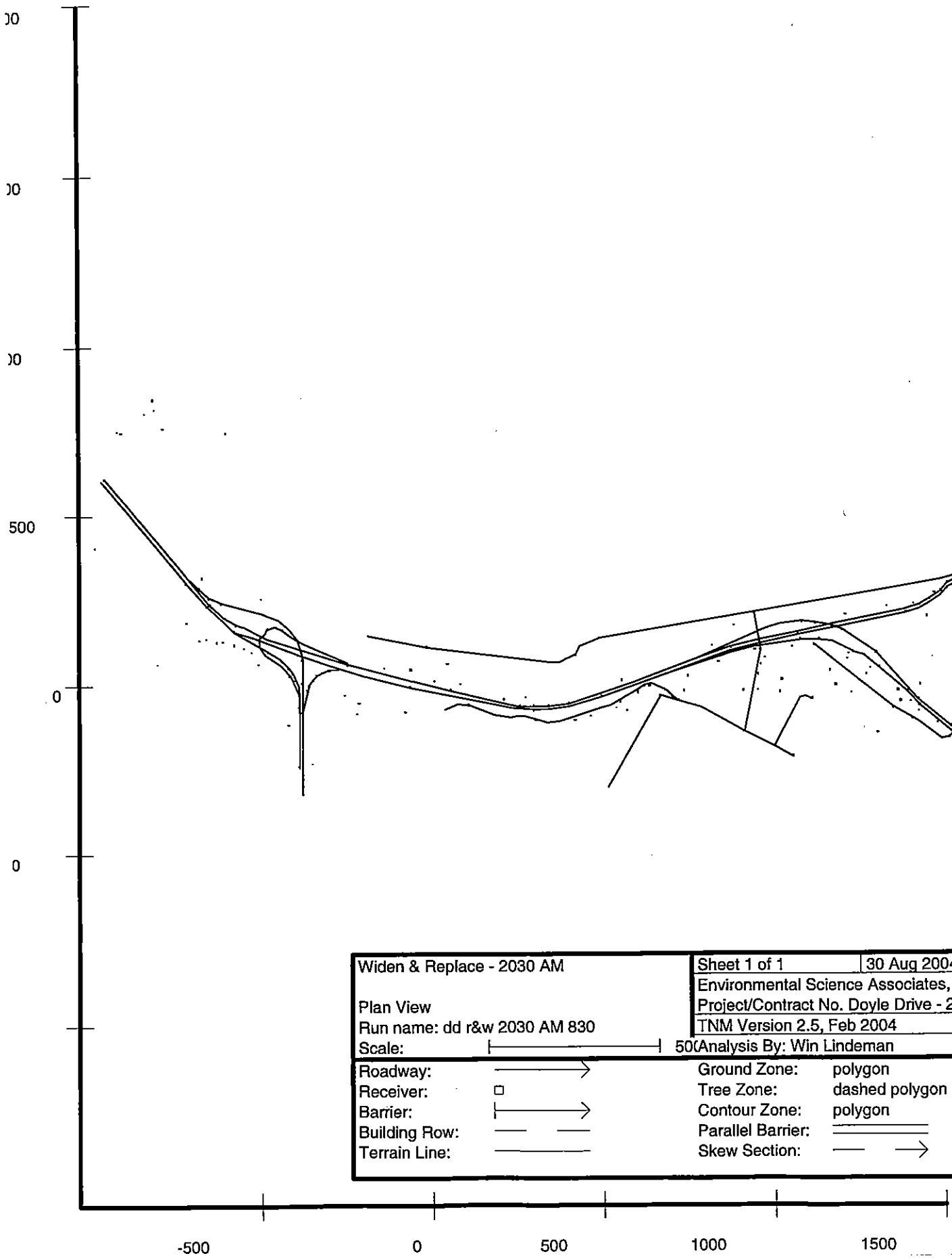
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 68.8 | 66 | 68.8 | 12 | Snd Lvl | 68.8 | 0.0 | 10 | -10.0 |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 67.4 | 66 | 67.4 | 12 | Snd Lvl | 67.4 | 0.0 | 10 | -10.0 |
| 3-Building 1187/1188 | 3 | 0 | 81.0 | 68.9 | 71 | -12.1 | 12 | --- | 68.9 | 0.0 | 10 | -10.0 |
| 4-Building 1182 | 5 | 0 | 81.0 | 69.1 | 71 | -11.9 | 12 | --- | 69.1 | 0.0 | 10 | -10.0 |
| 5-Building 1183/1186 | 6 | 0 | 81.0 | 68.2 | 71 | -12.8 | 12 | --- | 68.2 | 0.0 | 10 | -10.0 |
| 6-Building 1184/1185 | 7 | 0 | 81.0 | 70.3 | 71 | -10.7 | 12 | --- | 70.3 | 0.0 | 10 | -10.0 |
| 7-Building 603/Crissy Center | 8 | 0 | 72.0 | 67.1 | 71 | -4.9 | 12 | --- | 67.1 | 0.0 | 10 | -10.0 |
| 8-PX Building | 9 | 0 | 0.0 | 68.3 | 71 | 68.3 | 12 | --- | 68.3 | 0.0 | 10 | -10.0 |
| 9-Post Commissary/Sports Basement | 10 | 0 | 69.0 | 67.3 | 71 | -1.7 | 12 | --- | 67.3 | 0.0 | 10 | -10.0 |
| 10-Battery Blaney/635 | 11 | 0 | 68.0 | 74.8 | 66 | 6.8 | 12 | Snd Lvl | 74.8 | 0.0 | 10 | -10.0 |
| 11-Battery Slaughter | 12 | 0 | 68.0 | 79.5 | 66 | 11.5 | 12 | Snd Lvl | 79.5 | 0.0 | 10 | -10.0 |
| 12-Battery Sherwood/636 | 13 | 0 | 68.0 | 76.8 | 66 | 8.8 | 12 | Snd Lvl | 76.8 | 0.0 | 10 | -10.0 |
| 13-Battery Baldwin | 14 | 0 | 68.0 | 66.7 | 66 | -1.3 | 12 | Snd Lvl | 66.7 | 0.0 | 10 | -10.0 |
| 14-Building 644 | 15 | 0 | 0.0 | 63.7 | 71 | 63.7 | 12 | --- | 63.7 | 0.0 | 10 | -10.0 |
| 15-Building 649 | 16 | 0 | 0.0 | 60.9 | 66 | 60.9 | 12 | --- | 60.9 | 0.0 | 10 | -10.0 |
| 16-Building 650/Stilwell Hall | 17 | 0 | 70.0 | 60.2 | 66 | -9.8 | 12 | --- | 60.2 | 0.0 | 10 | -10.0 |
| 17-1253 Armistead Road | 18 | 1 | 66.0 | 63.6 | 66 | -2.4 | 12 | --- | 63.6 | 0.0 | 10 | -10.0 |
| 18-Home on Armistead Road | 19 | 1 | 66.0 | 70.7 | 66 | 4.7 | 12 | Snd Lvl | 70.7 | 0.0 | 10 | -10.0 |
| 19-Building 969 | 20 | 0 | 0.0 | 52.4 | 71 | 52.4 | 12 | --- | 52.4 | 0.0 | 10 | -10.0 |
| 20-Building 968 | 21 | 0 | 0.0 | 54.2 | 71 | 54.2 | 12 | --- | 54.2 | 0.0 | 10 | -10.0 |
| 21-Building 967 | 22 | 0 | 0.0 | 56.2 | 71 | 56.2 | 12 | --- | 56.2 | 0.0 | 10 | -10.0 |
| 22-Building 966 | 23 | 0 | 0.0 | 56.0 | 71 | 56.0 | 12 | --- | 56.0 | 0.0 | 10 | -10.0 |
| 23-Building 964 | 24 | 1 | 0.0 | 53.4 | 66 | 53.4 | 12 | --- | 53.4 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24-Building 963 | 25 | 1 | 0.0 | 54.4 | 66 | 54.4 | 12 | --- | 54.4 | 0.0 | 10 | -10.0 |
| 25-Building 962 | 26 | 1 | 0.0 | 54.2 | 66 | 54.2 | 12 | --- | 54.2 | 0.0 | 10 | -10.0 |
| 26-Unknown Building | 27 | 0 | 0.0 | 56.1 | 71 | 56.1 | 12 | --- | 56.1 | 0.0 | 10 | -10.0 |
| 27-Log Cabin | 28 | 0 | 63.0 | 68.5 | 66 | 5.5 | 12 | Snd Lvl | 68.5 | 0.0 | 10 | -10.0 |
| 28-Unknown Building | 29 | 0 | 0.0 | 62.1 | 71 | 62.1 | 12 | --- | 62.1 | 0.0 | 10 | -10.0 |
| 29-Building 1298 Storey Ave. | 30 | 2 | 66.5 | 67.4 | 66 | 0.9 | 12 | Snd Lvl | 67.4 | 0.0 | 10 | -10.0 |
| 30-Building 1297 Storey Ave. | 31 | 2 | 66.5 | 68.8 | 66 | 2.3 | 12 | Snd Lvl | 68.8 | 0.0 | 10 | -10.0 |
| 31-Building 1295 Storey Ave. | 32 | 2 | 66.5 | 70.3 | 66 | 3.8 | 12 | Snd Lvl | 70.3 | 0.0 | 10 | -10.0 |
| 32-Building 1294 Storey Ave. | 33 | 2 | 66.5 | 72.0 | 66 | 5.5 | 12 | Snd Lvl | 72.0 | 0.0 | 10 | -10.0 |
| 33-Building 1293 Storey Ave. | 34 | 2 | 66.5 | 73.2 | 66 | 6.7 | 12 | Snd Lvl | 73.2 | 0.0 | 10 | -10.0 |
| 34-Building 1291 Storey Ave. | 35 | 2 | 66.5 | 73.6 | 66 | 7.1 | 12 | Snd Lvl | 73.6 | 0.0 | 10 | -10.0 |
| 35-Building 1290 Storey Ave. | 36 | 2 | 66.5 | 73.4 | 66 | 6.9 | 12 | Snd Lvl | 73.4 | 0.0 | 10 | -10.0 |
| 36-Building 1289 Storey Ave. | 37 | 2 | 66.5 | 70.6 | 66 | 4.1 | 12 | Snd Lvl | 70.6 | 0.0 | 10 | -10.0 |
| 37-Building 1263 Storey Ave. | 38 | 2 | 0.0 | 66.5 | 66 | 66.5 | 12 | Snd Lvl | 66.5 | 0.0 | 10 | -10.0 |
| 38-Building 682/Cross Cultural Center | 39 | 0 | 65.5 | 63.2 | 66 | -2.3 | 12 | --- | 63.2 | 0.0 | 10 | -10.0 |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | 64.0 | 66.3 | 71 | 2.3 | 12 | --- | 66.3 | 0.0 | 10 | -10.0 |
| 40-Building 662/Cavalry Stable | 41 | 0 | 64.0 | 66.2 | 71 | 2.2 | 12 | --- | 66.2 | 0.0 | 10 | -10.0 |
| 41-Building 663/Cavalry Stable | 42 | 0 | 64.0 | 65.1 | 71 | 1.1 | 12 | --- | 65.1 | 0.0 | 10 | -10.0 |
| 42-Building 667/Cavalry Stable | 43 | 0 | 64.0 | 66.6 | 71 | 2.6 | 12 | --- | 66.6 | 0.0 | 10 | -10.0 |
| 43-National Cemetery Grave Site | 44 | 0 | 69.0 | 74.4 | 66 | 5.4 | 12 | Snd Lvl | 74.4 | 0.0 | 10 | -10.0 |
| 44-Building 129 | 45 | 1 | 0.0 | 63.1 | 66 | 63.1 | 12 | --- | 63.1 | 0.0 | 10 | -10.0 |
| 45-Building 122 | 46 | 0 | 0.0 | 72.5 | 71 | 72.5 | 12 | Snd Lvl | 72.5 | 0.0 | 10 | -10.0 |
| 46-Building 108 | 47 | 0 | 0.0 | 72.7 | 71 | 72.7 | 12 | Snd Lvl | 72.7 | 0.0 | 10 | -10.0 |
| 47-Building 107 | 48 | 0 | 0.0 | 74.4 | 71 | 74.4 | 12 | Snd Lvl | 74.4 | 0.0 | 10 | -10.0 |
| 48-Building 104 | 49 | 0 | 74.0 | 70.2 | 71 | -3.8 | 12 | --- | 70.2 | 0.0 | 10 | -10.0 |
| 49-Building 105 | 50 | 0 | 74.0 | 76.2 | 71 | 2.2 | 12 | Snd Lvl | 76.2 | 0.0 | 10 | -10.0 |
| 50-Building 106 | 51 | 0 | 76.0 | 77.6 | 71 | 1.6 | 12 | Snd Lvl | 77.6 | 0.0 | 10 | -10.0 |
| 51-Building 211 | 52 | 0 | 0.0 | 75.5 | 71 | 75.5 | 12 | Snd Lvl | 75.5 | 0.0 | 10 | -10.0 |
| 52-Building 204 | 53 | 0 | 0.0 | 69.2 | 71 | 69.2 | 12 | --- | 69.2 | 0.0 | 10 | -10.0 |
| 53-Building 210 | 54 | 0 | 0.0 | 71.1 | 71 | 71.1 | 12 | Snd Lvl | 71.1 | 0.0 | 10 | -10.0 |
| 54-Building 201 | 55 | 0 | 0.0 | 67.5 | 71 | 67.5 | 12 | --- | 67.5 | 0.0 | 10 | -10.0 |
| 55-Building 220 | 56 | 0 | 0.0 | 64.5 | 71 | 64.5 | 12 | --- | 64.5 | 0.0 | 10 | -10.0 |
| 56-Building 231 | 57 | 0 | 0.0 | 67.2 | 71 | 67.2 | 12 | --- | 67.2 | 0.0 | 10 | -10.0 |
| 57-Building 228 | 58 | 0 | 0.0 | 66.2 | 71 | 66.2 | 12 | --- | 66.2 | 0.0 | 10 | -10.0 |
| 58-Building 229 | 60 | 0 | 0.0 | 64.9 | 71 | 64.9 | 12 | --- | 64.9 | 0.0 | 10 | -10.0 |
| 59-Building 223 | 61 | 0 | 0.0 | 60.8 | 71 | 60.8 | 12 | --- | 60.8 | 0.0 | 10 | -10.0 |
| 60-Building 230 | 62 | 0 | 0.0 | 67.8 | 71 | 67.8 | 12 | --- | 67.8 | 0.0 | 10 | -10.0 |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 57.0 | 63.7 | 66 | 6.7 | 12 | --- | 63.7 | 0.0 | 10 | -10.0 |
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 57.0 | 61.7 | 66 | 4.7 | 12 | --- | 61.7 | 0.0 | 10 | -10.0 |
| 63-Building 1063 | 66 | 0 | 68.5 | 62.3 | 71 | -6.2 | 12 | --- | 62.3 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64-Building 1062 | 68 | 0 | 68.5 | 60.2 | 71 | -8.3 | 12 | — | 60.2 | 0.0 | 10 | -10.0 |
| 65-Building 1060 | 69 | 0 | 68.5 | 59.3 | 71 | -9.2 | 12 | — | 59.3 | 0.0 | 10 | -10.0 |
| 66-Building 1167 | 70 | 0 | 68.0 | 66.0 | 71 | -2.0 | 12 | — | 66.0 | 0.0 | 10 | -10.0 |
| 67-Building 1163 | 71 | 0 | 0.0 | 64.7 | 71 | 64.7 | 12 | — | 64.7 | 0.0 | 10 | -10.0 |
| 68-Building 1169 | 72 | 0 | 68.0 | 66.2 | 71 | -1.8 | 12 | — | 66.2 | 0.0 | 10 | -10.0 |
| 69-Building 1162 | 73 | 0 | 0.0 | 63.4 | 71 | 63.4 | 12 | — | 63.4 | 0.0 | 10 | -10.0 |
| 70-Building 1170 | 74 | 0 | 68.0 | 69.3 | 71 | 1.3 | 12 | — | 69.3 | 0.0 | 10 | -10.0 |
| 71-Building 1161 | 75 | 0 | 0.0 | 66.2 | 71 | 66.2 | 12 | — | 66.2 | 0.0 | 10 | -10.0 |
| 72-Building 1160 | 76 | 0 | 0.0 | 71.1 | 71 | 71.1 | 12 | Snd Lvl | 71.1 | 0.0 | 10 | -10.0 |
| 73-Building 1152/YMCA | 77 | 0 | 0.0 | 70.3 | 66 | 70.3 | 12 | Snd Lvl | 70.3 | 0.0 | 10 | -10.0 |
| 74-Building 1151/YMCA Pool | 78 | 0 | 0.0 | 73.0 | 66 | 73.0 | 12 | Snd Lvl | 73.0 | 0.0 | 10 | -10.0 |
| 75-Building 1004 | 79 | 0 | 0.0 | 56.2 | 71 | 56.2 | 12 | — | 56.2 | 0.0 | 10 | -10.0 |
| 76-Home at 3234 Lyon St. | 81 | 8 | 76.5 | 72.9 | 66 | -3.6 | 12 | Snd Lvl | 72.9 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 232 | 0.0 | 0.0 | 0.0 |
| All Impacted | 27 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |




| | | |
|---|---|---|
| Widen & Replace - 2030 AM | Sheet 1 of 1 | 30 Aug 2004 |
| | Environmental Science Associates, Inc. | |
| Plan View | Project/Contract No. Doyle Drive - 204235 | |
| Run name: dd r&w 2030 AM 830 | TNM Version 2.5, Feb 2004 | |
| Scale: 50 | Analysis By: Win Lindeman | |

| | | | |
|---|---|---|---|
| Roadway: | | Ground Zone: | polygon |
| Receiver: | | Tree Zone: | dashed polygon |
| Barrier: | | Contour Zone: | polygon |
| Building Row: | | Parallel Barrier: | |
| Terrain Line: | | Skew Section: | |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace - 2030 AM

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

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle Drive to Marina | 11.0 | N End | 1 | -966.0 | 608.0 | 53.00 | | | | Average | |
| | | 2 | 2 | -720.0 | 302.0 | 56.00 | | | | Average | |
| | | 3 | 3 | -660.0 | 234.0 | 57.00 | | | | Average | |
| | | 4 | 4 | -614.0 | 196.0 | 55.00 | | | | Average | |
| | | 5 | 6 | -580.0 | 162.0 | 53.00 | | | | Average | |
| | | 6 | 7 | -579.0 | 162.0 | 53.00 | | | | Average | Y |
| | | 7 | 8 | -526.0 | 144.0 | 51.00 | | | | Average | Y |
| | | 8 | 9 | -392.0 | 92.0 | 46.00 | | | | Average | Y |
| | | 9 | 10 | -298.0 | 60.0 | 42.00 | | | | Average | Y |
| | | 10 | 11 | -200.0 | 30.0 | 37.00 | | | | Average | Y |
| | | 11 | 13 | -64.0 | -4.0 | 29.00 | | | | Average | Y |
| | | 12 | 14 | -63.0 | -4.0 | 29.00 | | | | Average | |
| | | 13 | 15 | 196.0 | -58.0 | 29.00 | | | | Average | |
| | | 14 | 16 | 232.0 | -66.0 | 28.00 | | | | Average | |
| | | 15 | 17 | 294.0 | -71.0 | 27.00 | | | | Average | |
| | | 16 | 18 | 334.0 | -70.0 | 24.00 | | | | Average | |
| | | 17 | 20 | 335.0 | -70.0 | 24.00 | | | | Average | Y |
| | | 18 | 21 | 396.0 | -60.0 | 24.00 | | | | Average | Y |
| | | 19 | 22 | 492.0 | -32.0 | 23.00 | | | | Average | Y |
| | | 19A | 208 | 680.0 | 35.0 | 18.50 | | | | Average | Y |
| | | 20 | 23 | 868.0 | 102.0 | 14.00 | | | | Average | Y |
| | | 21 | 24 | 968.0 | 126.0 | 14.00 | | | | Average | Y |
| | | 22 | 25 | 1,068.0 | 150.0 | 11.00 | | | | Average | Y |
| | | 23 | 26 | 1,166.0 | 170.0 | 10.80 | | | | Average | Y |
| | | 24 | 27 | 1,381.0 | 213.0 | 5.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 25 | 28 | 1,382.0 | 213.0 | 5.00 | | | | Average | |
| | | 26 | 29 | 1,422.0 | 224.0 | 5.00 | | | | Average | |
| | | 27 | 31 | 1,450.0 | 240.0 | 4.00 | | | | Average | |
| | | 28 | 32 | 1,486.0 | 264.0 | 4.00 | | | | Average | |
| | | 29 | 33 | 1,504.0 | 286.0 | 4.00 | | | | Average | |
| | | 30 | 35 | 1,520.0 | 296.0 | 4.00 | | | | Average | |
| | | 31 | 36 | 1,540.0 | 307.0 | 4.00 | | | | Average | |
| | | 32 | 37 | 1,560.0 | 318.0 | 4.00 | | | | | |
| WB Doyle Drive from Marina to 0+00 | 11.0 | 1 | 39 | 1,560.0 | 326.0 | 4.00 | | | | Average | |
| | | 2 | 40 | 1,504.0 | 300.0 | 4.00 | | | | Average | |
| | | 3 | 41 | 1,486.0 | 276.0 | 4.00 | | | | Average | |
| | | 4 | 42 | 1,450.0 | 251.0 | 4.00 | | | | Average | |
| | | 5 | 43 | 1,422.0 | 234.0 | 5.00 | | | | Average | |
| | | 6 | 44 | 1,383.0 | 224.0 | 5.00 | | | | Average | |
| | | 7 | 46 | 1,384.0 | 224.0 | 5.00 | | | | Average | Y |
| | | 8 | 47 | 1,166.0 | 178.0 | 10.80 | | | | Average | Y |
| | | 9 | 48 | 1,068.0 | 157.0 | 13.00 | | | | Average | Y |
| | | 10 | 49 | 968.0 | 136.0 | 13.00 | | | | Average | Y |
| | | 11 | 50 | 868.0 | 111.0 | 14.00 | | | | Average | Y |
| | | 12 | 51 | 776.0 | 80.0 | 14.00 | | | | Average | Y |
| | | 13 | 52 | 680.0 | 44.0 | 14.00 | | | | Average | Y |
| | | 14 | 53 | 586.0 | 10.0 | 14.00 | | | | Average | Y |
| | | 15 | 54 | 492.0 | -22.0 | 17.80 | | | | Average | Y |
| | | 16 | 55 | 396.0 | -52.0 | 21.40 | | | | Average | Y |
| | | 17 | 56 | 335.0 | -60.0 | 26.00 | | | | Average | Y |
| | | 18 | 57 | 334.0 | -60.0 | 26.00 | | | | Average | |
| | | 19 | 58 | 294.0 | -60.0 | 28.00 | | | | Average | |
| | | 20 | 59 | 252.0 | -60.0 | 29.00 | | | | Average | |
| | | 21 | 60 | 232.0 | -56.0 | 29.00 | | | | Average | |
| | | 22 | 61 | 50.0 | -12.0 | 29.00 | | | | Average | |
| | | 23 | 62 | -60.0 | 14.0 | 29.00 | | | | Average | |
| | | 24 | 63 | -61.0 | 14.0 | 29.00 | | | | Average | Y |
| | | 25 | 64 | -250.0 | 64.0 | 41.00 | | | | Average | Y |
| | | 26 | 65 | -484.0 | 142.0 | 50.00 | | | | Average | Y |
| | | 27 | 66 | -554.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 28 | 67 | -555.0 | 176.0 | 51.00 | | | | Average | |
| | | 29 | 68 | -576.0 | 182.0 | 49.00 | | | | Average | |
| | | 30 | 69 | -610.0 | 204.0 | 50.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 31 | 70 | -654.0 | 242.0 | 53.00 | | | | Average | |
| | | 32 | 71 | -720.0 | 322.0 | 56.00 | | | | Average | |
| | | 34 | 73 | -961.0 | 614.0 | 53.00 | | | | | |
| SB/EB Richardson from Doyle to Francis | 11.0 | 1 | 77 | 680.0 | 35.0 | 18.50 | | | | Average | Y |
| | | 2 | 78 | 876.0 | 98.0 | 14.00 | | | | Average | Y |
| | | 3 | 79 | 938.0 | 114.0 | 14.00 | | | | Average | Y |
| | | 4 | 80 | 1,076.0 | 134.0 | 12.00 | | | | Average | Y |
| | | 5 | 81 | 1,130.0 | 134.0 | 12.00 | | | | Average | Y |
| | | 6 | 82 | 1,168.0 | 128.0 | 11.00 | | | | Average | Y |
| | | 7 | 83 | 1,225.0 | 101.0 | 8.00 | | | | Average | Y |
| | | 8 | 84 | 1,227.0 | 98.0 | 8.00 | | | | Average | |
| | | 9 | 85 | 1,260.0 | 88.0 | 6.00 | | | | Average | |
| | | 10 | 86 | 1,306.0 | 50.0 | 3.00 | | | | Average | |
| | | 11 | 195 | 1,388.0 | -20.0 | 2.00 | | | | Average | |
| | | 12 | 196 | 1,424.0 | -60.0 | 4.00 | | | | Average | |
| | | 13 | 197 | 1,522.0 | -146.0 | 4.00 | | | | Average | |
| | | 14 | 87 | 1,650.0 | -280.0 | 4.00 | | | | | |
| NB/WB Richardson from Francisco to DD | 9.0 | 1 | 88 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 89 | 1,514.0 | -122.0 | 4.00 | | | | Average | |
| | | 3 | 90 | 1,418.0 | -40.0 | 3.00 | | | | Average | |
| | | 4 | 91 | 1,296.0 | 96.0 | 3.00 | | | | Average | |
| | | 5 | 92 | 1,196.0 | 163.0 | 3.00 | | | | Average | |
| | | 6 | 93 | 1,160.0 | 176.0 | 3.00 | | | | Average | |
| | | 7 | 94 | 1,159.0 | 176.0 | 3.00 | | | | Average | Y |
| | | 8 | 95 | 1,116.0 | 182.0 | 3.00 | | | | Average | Y |
| | | 9 | 96 | 1,076.0 | 186.0 | 5.00 | | | | Average | Y |
| | | 10 | 97 | 1,014.0 | 180.0 | 8.00 | | | | Average | Y |
| | | 11 | 98 | 976.0 | 168.0 | 12.00 | | | | Average | Y |
| | | 12 | 99 | 776.0 | 80.0 | 14.00 | | | | | |
| SB PP Ramp from WB Doyle Drive | 4.6 | 1 | 100 | -250.0 | 68.0 | 40.00 | | | | Average | Y |
| | | 2 | 101 | -376.0 | 124.0 | 45.00 | | | | Average | Y |
| | | 3 | 102 | -410.0 | 144.0 | 45.00 | | | | Average | Y |
| | | 4 | 103 | -411.0 | 144.0 | 45.00 | | | | Average | |
| | | 5 | 104 | -440.0 | 170.0 | 44.20 | | | | Average | |
| | | 6 | 105 | -460.0 | 176.0 | 44.00 | | | | Average | |
| | | 7 | 106 | -484.0 | 170.0 | 44.00 | | | | Average | |
| | | 8 | 107 | -490.0 | 156.0 | 44.00 | | | | Average | |
| | | 9 | 108 | -504.0 | 144.0 | 44.50 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 10 | 109 | -504.0 | 117.0 | 45.00 | | | | Average | |
| | | 11 | 110 | -488.0 | 94.0 | 43.50 | | | | Average | |
| | | 12 | 111 | -440.0 | 60.0 | 42.50 | | | | Average | |
| | | 13 | 203 | -416.0 | 30.0 | 42.00 | | | | Average | |
| | | 14 | 202 | -406.0 | 14.0 | 41.00 | | | | Average | |
| | | 15 | 204 | -388.0 | -28.0 | 38.00 | | | | | |
| SB PP Ramp from EB Doyle Drive | 4.8 | 1 | 113 | -579.0 | 160.0 | 53.00 | | | | Average | Y |
| | | 2 | 114 | -479.0 | 100.0 | 49.00 | | | | Average | Y |
| | | 3 | 115 | -478.0 | 100.0 | 49.00 | | | | Average | |
| | | 4 | 116 | -446.0 | 80.0 | 49.00 | | | | Average | |
| | | 5 | 117 | -420.0 | 54.0 | 48.00 | | | | Average | |
| | | 6 | 118 | -408.0 | 36.0 | 44.00 | | | | Average | |
| | | 7 | 119 | -400.0 | 17.0 | 40.00 | | | | Average | |
| | | 8 | 120 | -390.0 | 0.0 | 39.00 | | | | Average | |
| | | 9 | 205 | -388.0 | -28.0 | 38.00 | | | | Average | |
| | | 10 | 206 | -388.0 | -62.0 | 38.00 | | | | Average | |
| | | 11 | 121 | -388.0 | -238.0 | 38.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 4.6 | 1 | 122 | -380.0 | -320.0 | 37.00 | | | | Average | |
| | | 2 | 207 | -380.0 | -74.0 | 40.00 | | | | Average | |
| | | 3 | 123 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 4 | 124 | -380.0 | 80.0 | 37.00 | | | | Average | |
| | | 5 | 125 | -384.0 | 98.0 | 38.00 | | | | Average | |
| | | 6 | 126 | -396.0 | 138.0 | 38.00 | | | | Average | |
| | | 7 | 127 | -418.0 | 170.0 | 41.00 | | | | Average | |
| | | 8 | 128 | -450.0 | 196.0 | 44.00 | | | | Average | |
| | | 9 | 129 | -500.0 | 216.0 | 47.50 | | | | Average | |
| | | 10 | 130 | -620.0 | 246.0 | 54.00 | | | | Average | |
| | | 11 | 131 | -656.0 | 262.0 | 57.00 | | | | Average | |
| | | 12 | 132 | -686.0 | 290.0 | 58.00 | | | | Average | |
| | | 13 | 191 | -703.0 | 306.0 | 58.00 | | | | Average | |
| | | 14 | 133 | -720.0 | 322.0 | 56.00 | | | | | |
| NB PP ramp to EB Doyle Drive | 4.6 | 1 | 134 | -380.0 | -74.0 | 40.00 | | | | Average | |
| | | 2 | 199 | -364.0 | -10.0 | 38.20 | | | | Average | |
| | | 3 | 200 | -360.0 | 5.0 | 38.80 | | | | Average | |
| | | 4 | 201 | -348.0 | 20.0 | 40.20 | | | | Average | |
| | | 5 | 135 | -336.0 | 34.0 | 41.40 | | | | Average | |
| | | 6 | 136 | -320.0 | 42.0 | 41.80 | | | | Average | |
| | | 7 | 137 | -300.0 | 48.0 | 41.20 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 | 138 | -274.0 | 49.0 | 41.00 | | | | | |
| Mason Street | 7.3 | 1 | 139 | -188.0 | 150.0 | 3.00 | | | | Average | |
| | | 2 | 140 | -16.0 | 114.0 | 3.00 | | | | Average | |
| | | 3 | 141 | 340.0 | 70.0 | 4.00 | | | | Average | |
| | | 4 | 142 | 370.0 | 70.0 | 4.00 | | | | Average | |
| | | 5 | 143 | 416.0 | 92.0 | 4.00 | | | | Average | |
| | | 6 | 144 | 428.0 | 118.0 | 4.00 | | | | Average | |
| | | 7 | 145 | 486.0 | 142.0 | 4.00 | | | | Average | |
| | | 8 | 194 | 938.0 | 214.0 | 4.00 | | | | Average | |
| | | 9 | 146 | 1,486.0 | 310.0 | 4.00 | | | | Average | |
| | | 10 | 147 | 1,584.0 | 340.0 | 4.00 | | | | Average | |
| | | 11 | 148 | 1,680.0 | 344.0 | 4.00 | | | | | |
| Lincoln Blvd. | 7.3 | 1 | 149 | 36.0 | -70.0 | 33.00 | | | | Average | |
| | | 2 | 150 | 74.0 | -53.0 | 33.00 | | | | Average | |
| | | 3 | 151 | 106.0 | -56.0 | 32.00 | | | | Average | |
| | | 4 | 152 | 180.0 | -86.0 | 30.00 | | | | Average | |
| | | 5 | 153 | 226.0 | -92.0 | 29.00 | | | | Average | |
| | | 6 | 154 | 246.0 | -90.0 | 29.00 | | | | Average | |
| | | 7 | 155 | 268.0 | -90.0 | 29.00 | | | | Average | |
| | | 8 | 156 | 308.0 | -100.0 | 29.00 | | | | Average | |
| | | 9 | 157 | 334.0 | -108.0 | 27.00 | | | | Average | |
| | | 10 | 158 | 368.0 | -105.0 | 26.00 | | | | Average | |
| | | 11 | 159 | 490.0 | -66.0 | 19.00 | | | | Average | |
| | | 12 | 160 | 520.0 | -56.0 | 17.00 | | | | Average | |
| | | 13 | 161 | 568.0 | -30.0 | 16.00 | | | | Average | |
| | | 14 | 162 | 596.0 | -14.0 | 13.00 | | | | Average | |
| | | 15 | 163 | 620.0 | 0.0 | 14.00 | | | | Average | |
| | | 16 | 164 | 636.0 | 6.0 | 12.00 | | | | Average | |
| | | 17 | 165 | 680.0 | -14.0 | 13.00 | | | | Average | |
| | | 18 | 166 | 700.0 | -34.0 | 14.00 | | | | Average | |
| | | 19 | 167 | 718.0 | -44.0 | 14.00 | | | | Average | |
| | | 20 | 168 | 784.0 | -66.0 | 15.00 | | | | Average | |
| | | 21 | 169 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 22 | 170 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 23 | 171 | 1,054.0 | -210.0 | 14.00 | | | | | |
| Gorgas Avenue | 6.0 | 1 | 172 | 1,522.0 | -146.0 | 4.00 | | | | Average | |
| | | 2 | 173 | 1,510.0 | -158.0 | 4.00 | | | | Average | |
| | | 3 | 174 | 1,488.0 | -160.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 4 | 175 | 1,420.0 | -108.0 | 2.00 | | | | Average | |
| | | 5 | 176 | 1,400.0 | -98.0 | 2.00 | | | | Average | |
| | | 6 | 177 | 1,344.0 | -66.0 | 2.00 | | | | Average | |
| | | 7 | 178 | 1,112.0 | 120.0 | 3.00 | | | | | |
| Halleck Street | 7.3 | 1 | 179 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 2 | 180 | 957.0 | 106.0 | 6.00 | | | | Average | |
| | | 3 | 181 | 938.0 | 214.0 | 4.00 | | | | | |
| Girard Road | 7.3 | 1 | 182 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 2 | 183 | 1,074.0 | -38.0 | 3.00 | | | | Average | |
| | | 3 | 184 | 1,090.0 | -33.0 | 4.00 | | | | Average | |
| | | 4 | 185 | 1,108.0 | -40.0 | 5.00 | | | | | |
| Baker Street | 11.6 | 1 | 186 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 187 | 1,584.0 | 340.0 | 4.00 | | | | | |
| Montgomery Street | 9.2 | 1 | 188 | 510.0 | -300.0 | 15.00 | | | | Average | |
| | | 2 | 189 | 664.0 | -30.0 | 12.00 | | | | Average | |
| | | 3 | 190 | 718.0 | -44.0 | 14.00 | | | | | |

Environmental Science Associates, Inc. 30 August 2004
Win Lindeman TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace - 2030 AM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle Drive to Marina | N End | 1 | 6209 | 88 | 64 | 88 | 13 | 88 | 64 | 88 | 64 | 88 |
| | 2 | 2 | 6209 | 88 | 64 | 88 | 13 | 88 | 64 | 88 | 64 | 88 |
| | 3 | 3 | 6209 | 88 | 64 | 88 | 13 | 88 | 64 | 88 | 64 | 88 |
| | 4 | 4 | 6209 | 88 | 64 | 88 | 13 | 88 | 64 | 88 | 64 | 88 |
| | 5 | 6 | 5144 | 88 | 53 | 88 | 11 | 88 | 53 | 88 | 53 | 88 |
| | 6 | 7 | 5144 | 88 | 53 | 88 | 11 | 88 | 53 | 88 | 53 | 88 |
| | 7 | 8 | 5144 | 88 | 53 | 88 | 11 | 88 | 53 | 88 | 53 | 88 |
| | 8 | 9 | 5144 | 88 | 53 | 88 | 11 | 88 | 53 | 88 | 53 | 88 |
| | 9 | 10 | 5144 | 88 | 53 | 88 | 11 | 88 | 53 | 88 | 53 | 88 |
| | 10 | 11 | 4836 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 11 | 13 | 4836 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 12 | 14 | 4836 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 13 | 15 | 4836 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 14 | 16 | 4836 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 15 | 17 | 4836 | 88 | 50 | 88 | 11 | 88 | 50 | 88 | 50 | 88 |
| | 16 | 18 | 4836 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 17 | 20 | 4836 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 18 | 21 | 4836 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 19 | 22 | 4836 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 19A | 208 | 1676 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 20 | 23 | 1676 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 21 | 24 | 1676 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 22 | 25 | 1676 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 23 | 26 | 1676 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 24 | 27 | 1676 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 25 | 28 | 1676 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 26 | 29 | 1676 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 27 | 31 | 1676 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 28 | 32 | 1676 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 29 | 33 | 1676 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 30 | 35 | 1676 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 31 | 36 | 1676 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 32 | 37 | | | | | | | | | | |
| WB Doyle Drive from Marina to 0+00 | 1 | 39 | 770 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 40 | 770 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 41 | 770 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 42 | 770 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 43 | 770 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 44 | 770 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 46 | 770 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 47 | 770 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 48 | 770 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 49 | 770 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 50 | 770 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 51 | 2863 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 13 | 52 | 2863 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 14 | 53 | 2863 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 15 | 54 | 2863 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 16 | 55 | 2863 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 17 | 56 | 2863 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 18 | 57 | 2863 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 19 | 58 | 2863 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 20 | 59 | 2863 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 21 | 60 | 2863 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 22 | 61 | 2863 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |

**INPUT: TRAFFIC FOR LAeq1h Volumes** **Doyle Drive - 204235**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 23 | 62 | 2863 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 24 | 63 | 2863 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 25 | 64 | 2492 | 88 | 26 | 88 | 34 | 88 | 16 | 88 | 26 | 88 |
| | 26 | 65 | 2492 | 88 | 26 | 88 | 34 | 88 | 16 | 88 | 26 | 88 |
| | 27 | 66 | 2492 | 88 | 26 | 88 | 34 | 88 | 16 | 88 | 26 | 88 |
| | 28 | 67 | 2492 | 88 | 26 | 88 | 34 | 88 | 16 | 88 | 26 | 88 |
| | 29 | 68 | 2492 | 88 | 26 | 88 | 34 | 88 | 16 | 88 | 26 | 88 |
| | 30 | 69 | 2492 | 88 | 26 | 88 | 34 | 88 | 16 | 88 | 26 | 88 |
| | 31 | 70 | 2492 | 88 | 26 | 88 | 34 | 88 | 16 | 88 | 26 | 88 |
| | 32 | 71 | 4817 | 88 | 50 | 88 | 65 | 88 | 30 | 88 | 50 | 88 |
| | 34 | 73 | | | | | | | | | | |
| SB/EB Richardson from Doyle to Francis | 1 | 77 | 3214 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 2 | 78 | 3214 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 3 | 79 | 3214 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 4 | 80 | 3214 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 5 | 81 | 3214 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 6 | 82 | 3214 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 7 | 83 | 3214 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 8 | 84 | 3214 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 9 | 85 | 3214 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 10 | 86 | 3214 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 11 | 195 | 3214 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 12 | 196 | 3214 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 13 | 197 | 3214 | 56 | 33 | 56 | 7 | 56 | 33 | 56 | 33 | 56 |
| | 14 | 87 | | | | | | | | | | |
| NB/WB Richardson from Francisco to DD | 1 | 88 | 2122 | 56 | 22 | 56 | 29 | 56 | 13 | 56 | 22 | 56 |
| | 2 | 89 | 2122 | 56 | 22 | 56 | 29 | 56 | 13 | 56 | 22 | 56 |
| | 3 | 90 | 2122 | 56 | 22 | 56 | 29 | 56 | 13 | 56 | 22 | 56 |
| | 4 | 91 | 2122 | 56 | 22 | 56 | 29 | 56 | 13 | 56 | 22 | 56 |
| | 5 | 92 | 2122 | 56 | 22 | 56 | 29 | 56 | 13 | 56 | 22 | 56 |
| | 6 | 93 | 2122 | 56 | 22 | 56 | 29 | 56 | 13 | 56 | 22 | 56 |
| | 7 | 94 | 2122 | 56 | 22 | 56 | 29 | 56 | 13 | 56 | 22 | 56 |
| | 8 | 95 | 2122 | 56 | 22 | 56 | 29 | 56 | 13 | 56 | 22 | 56 |
| | 9 | 96 | 2122 | 56 | 22 | 56 | 29 | 56 | 13 | 56 | 22 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | 97 | 2122 | 56 | 22 | 56 | 29 | 56 | 13 | 56 | 22 | 56 |
| | 11 | 98 | 2122 | 56 | 22 | 56 | 29 | 56 | 13 | 56 | 22 | 56 |
| | 12 | 99 | | | | | | | | | | |
| SB PP Ramp from WB Doyle Drive | 1 | 100 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 2 | 101 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 3 | 102 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 4 | 103 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 5 | 104 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 6 | 105 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 7 | 106 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 8 | 107 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 9 | 108 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 10 | 109 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 11 | 110 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 12 | 111 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 13 | 203 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 14 | 202 | 371 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 15 | 204 | | | | | | | | | | |
| SB PP Ramp from EB Doyle Drive | 1 | 113 | 2032 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 2 | 114 | 2032 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 3 | 115 | 2032 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 4 | 116 | 2032 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 5 | 117 | 2032 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 6 | 118 | 2032 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 7 | 119 | 2032 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 8 | 120 | 2032 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 9 | 205 | 2032 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 10 | 206 | 2032 | 56 | 21 | 56 | 4 | 56 | 21 | 56 | 21 | 56 |
| | 11 | 121 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 | 122 | 2355 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |
| | 2 | 207 | 2355 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |
| | 3 | 123 | 2355 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |
| | 4 | 124 | 2355 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |
| | 5 | 125 | 2355 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 126 | 2355 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |
| | 7 | 127 | 2355 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |
| | 8 | 128 | 2355 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |
| | 9 | 129 | 2355 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |
| | 10 | 130 | 2355 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |
| | 11 | 131 | 2355 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |
| | 12 | 132 | 2355 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |
| | 13 | 191 | 2355 | 56 | 24 | 56 | 24 | 56 | 0 | 0 | 17 | 56 |
| | 14 | 133 | | | | | | | | | | |
| NB PP ramp to EB Doyle Drive | 1 | 134 | 368 | 56 | 3 | 56 | 4 | 56 | 4 | 56 | 3 | 56 |
| | 2 | 199 | 368 | 56 | 3 | 56 | 4 | 56 | 4 | 56 | 3 | 56 |
| | 3 | 200 | 368 | 56 | 3 | 56 | 4 | 56 | 4 | 56 | 3 | 56 |
| | 4 | 201 | 368 | 56 | 3 | 56 | 4 | 56 | 4 | 56 | 3 | 56 |
| | 5 | 135 | 368 | 56 | 3 | 56 | 4 | 56 | 4 | 56 | 3 | 56 |
| | 6 | 136 | 368 | 56 | 3 | 56 | 4 | 56 | 4 | 56 | 3 | 56 |
| | 7 | 137 | 368 | 56 | 3 | 56 | 4 | 56 | 4 | 56 | 3 | 56 |
| | 8 | 138 | | | | | | | | | | |
| Mason Street | 1 | 139 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 140 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 141 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 142 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 143 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 144 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 145 | 10 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 194 | 23 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 146 | 82 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 147 | 83 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 148 | | | | | | | | | | |
| Lincoln Blvd. | 1 | 149 | 123 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 2 | 150 | 214 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 3 | 151 | 214 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 4 | 152 | 214 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 5 | 153 | 214 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 6 | 154 | 214 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 155 | 214 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 8 | 156 | 218 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 9 | 157 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 10 | 158 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 11 | 159 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 12 | 160 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 13 | 161 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 14 | 162 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 15 | 163 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 16 | 164 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 17 | 165 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 18 | 166 | 55 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 19 | 167 | 192 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 20 | 168 | 191 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 21 | 169 | 365 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 0 | 0 |
| | 22 | 170 | 456 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 0 | 0 |
| | 23 | 171 | | | | | | | | | | |
| Gorgas Avenue | 1 | 172 | 392 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 173 | 392 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 174 | 392 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 175 | 392 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 176 | 193 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 177 | 132 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 178 | | | | | | | | | | |
| Halleck Street | 1 | 179 | 149 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 180 | 55 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 181 | | | | | | | | | | |
| Girard Road | 1 | 182 | 132 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 183 | 132 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 184 | 132 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 185 | | | | | | | | | | |
| Baker Street | 1 | 186 | 262 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 187 | | | | | | | | | | |
| Montgomery Street | 1 | 188 | 140 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

INPUT: TRAFFIC FOR LAeq1h Volumes

Doyle Drive - 204235

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 189 | 140 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 190 | | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

30 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace - 2030 AM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 1,426.0 | 0.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 1,446.0 | 202.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3-Building 1187/1188 | 3 | 0 | 1,466.0 | 272.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4-Building 1182 | 5 | 0 | 1,406.0 | 240.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5-Building 1183/1186 | 6 | 0 | 1,326.0 | 230.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6-Building 1184/1185 | 7 | 0 | 1,206.0 | 208.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7-Building 603/Crissy Center | 8 | 0 | 880.0 | 176.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8-PX Building | 9 | 0 | 816.0 | 118.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9-Post Commissary/Sports Basement | 10 | 0 | 552.0 | 16.0 | 4.00 | 1.50 | 69.00 | 71 | 12.0 | 10.0 | Y |
| 10-Battery Blaney/635 | 11 | 0 | 270.0 | -34.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11-Battery Slaughter | 12 | 0 | 208.0 | -40.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12-Battery Sherwood/636 | 13 | 0 | 80.0 | 6.0 | 29.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13-Battery Baldwin | 14 | 0 | 4.0 | 15.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14-Building 644 | 15 | 0 | 42.0 | 66.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15-Building 649 | 16 | 0 | -64.0 | 48.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16-Building 650/Stilwell Hall | 17 | 0 | -140.0 | 52.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17-1253 Armistead Road | 18 | 1 | -502.0 | 258.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18-Home on Armistead Road | 19 | 1 | -674.0 | 320.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19-Building 969 | 20 | 0 | -604.0 | 748.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20-Building 968 | 21 | 0 | -788.0 | 762.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21-Building 967 | 22 | 0 | -910.0 | 750.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22-Building 966 | 23 | 0 | -920.0 | 754.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

**INPUT: RECEIVERS** **Doyle Drive - 204235**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23-Building 964 | 24 | 1 | -818.0 | 846.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24-Building 963 | 25 | 1 | -840.0 | 804.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25-Building 962 | 26 | 1 | -814.0 | 816.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26-Unknown Building | 27 | 0 | -1,132.0 | 697.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27-Log Cabin | 28 | 0 | -720.0 | 188.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28-Unknown Building | 29 | 0 | -988.0 | 408.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29-Building 1298 Storey Ave. | 30 | 2 | -682.0 | 136.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30-Building 1297 Storey Ave. | 31 | 2 | -664.0 | 140.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31-Building 1295 Storey Ave. | 32 | 2 | -632.0 | 130.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32-Building 1294 Storey Ave. | 33 | 2 | -614.0 | 132.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33-Building 1293 Storey Ave. | 34 | 2 | -580.0 | 122.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34-Building 1291 Storey Ave. | 35 | 2 | -552.0 | 112.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35-Building 1290 Storey Ave. | 36 | 2 | -528.0 | 100.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36-Building 1289 Storey Ave. | 37 | 2 | -510.0 | 66.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37-Building 1263 Storey Ave. | 38 | 2 | -420.0 | -114.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38-Building 682/Cross Cultural Center | 39 | 0 | -350.0 | -228.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | -256.0 | -26.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40-Building 662/Cavalry Stable | 41 | 0 | -214.0 | -50.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41-Building 663/Cavalry Stable | 42 | 0 | -220.0 | -80.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42-Building 667/Cavalry Stable | 43 | 0 | -80.0 | -78.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43-National Cemetery Grave Site | 44 | 0 | 300.0 | -102.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44-Building 129 | 45 | 1 | 414.0 | -100.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45-Building 122 | 46 | 0 | 460.0 | -90.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46-Building 108 | 47 | 0 | 536.0 | -64.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47-Building 107 | 48 | 0 | 546.0 | -48.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48-Building 104 | 49 | 0 | 566.0 | -72.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49-Building 105 | 50 | 0 | 598.0 | -20.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50-Building 106 | 51 | 0 | 632.0 | 0.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51-Building 211 | 52 | 0 | 744.0 | 28.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52-Building 204 | 53 | 0 | 834.0 | 68.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53-Building 210 | 54 | 0 | 734.0 | -16.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54-Building 201 | 55 | 0 | 940.0 | 106.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55-Building 220 | 56 | 0 | 908.0 | -16.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56-Building 231 | 57 | 0 | 970.0 | 80.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57-Building 228 | 58 | 0 | 958.0 | 60.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

**INPUT: RECEIVERS** **Doyle Drive - 204235**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58-Building 229 | 60 | 0 | 950.0 | 32.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59-Building 223 | 61 | 0 | 950.0 | -14.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60-Building 230 | 62 | 0 | 1,050.0 | 112.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 1,020.0 | 16.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 1,014.0 | -20.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63-Building 1063 | 66 | 0 | 1,160.0 | 44.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64-Building 1062 | 68 | 0 | 1,178.0 | 0.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65-Building 1060 | 69 | 0 | 1,224.0 | -22.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66-Building 1167 | 70 | 0 | 1,216.0 | 94.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67-Building 1163 | 71 | 0 | 1,212.0 | 76.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68-Building 1169 | 72 | 0 | 1,280.0 | 50.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69-Building 1162 | 73 | 0 | 1,266.0 | 32.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70-Building 1170 | 74 | 0 | 1,360.0 | -16.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71-Building 1161 | 75 | 0 | 1,368.0 | -48.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72-Building 1160 | 76 | 0 | 1,398.0 | -50.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73-Building 1152/YMCA | 77 | 0 | 1,420.0 | -76.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74-Building 1151/YMCA Pool | 78 | 0 | 1,476.0 | -114.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75-Building 1004 | 79 | 0 | 1,300.0 | -140.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76-Home at 3234 Lyon St. | 81 | 8 | 1,560.0 | -150.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace - 2030 AM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

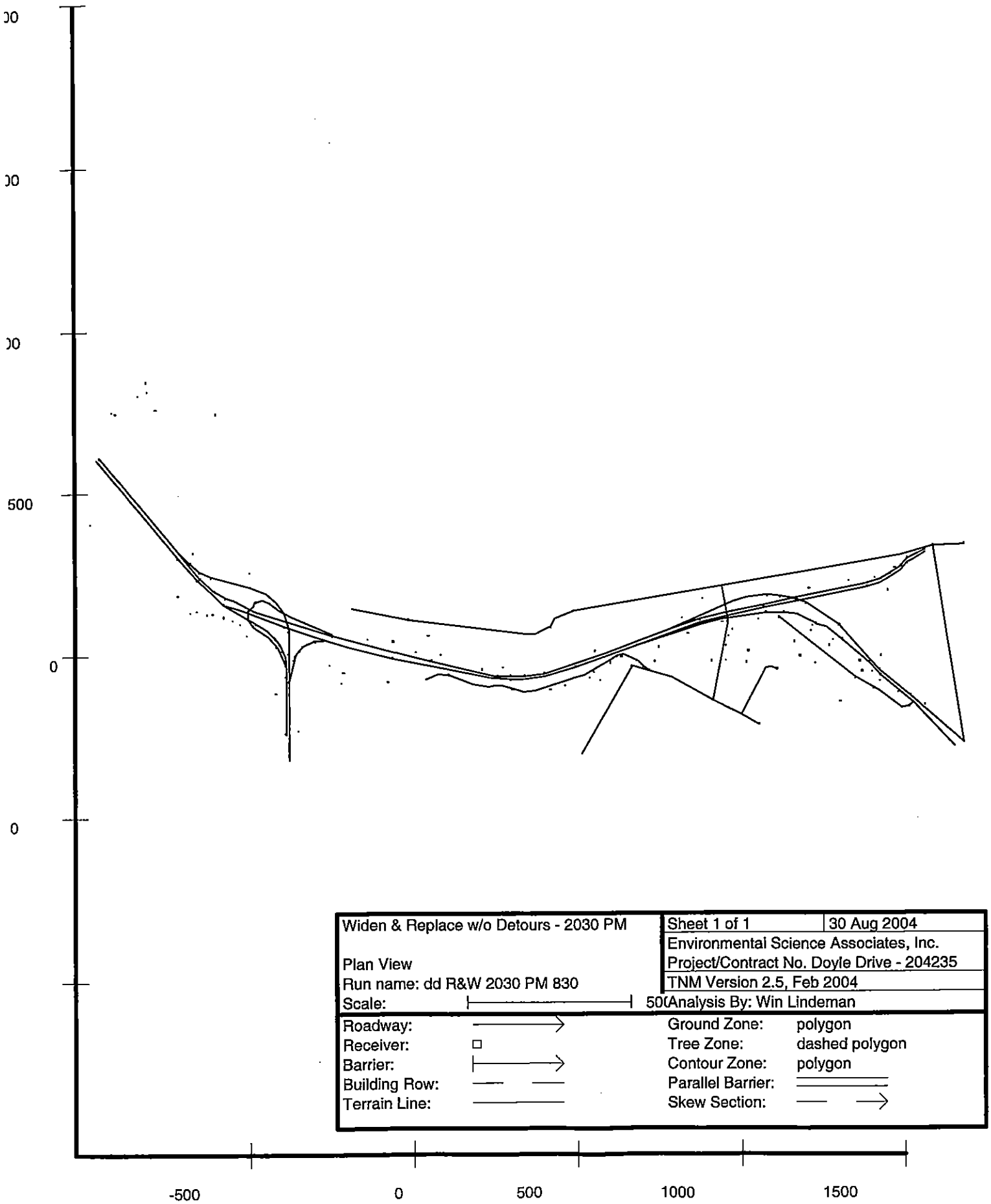
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 67.3 | 66 | 67.3 | 12 | Snd Lvl | 67.3 | 0.0 | 10 | -10.0 |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 63.8 | 66 | 63.8 | 12 | — | 63.8 | 0.0 | 10 | -10.0 |
| 3-Building 1187/1188 | 3 | 0 | 81.0 | 64.9 | 71 | -16.1 | 12 | — | 64.9 | 0.0 | 10 | -10.0 |
| 4-Building 1182 | 5 | 0 | 81.0 | 61.8 | 71 | -19.2 | 12 | — | 61.8 | 0.0 | 10 | -10.0 |
| 5-Building 1183/1186 | 6 | 0 | 81.0 | 63.6 | 71 | -17.4 | 12 | — | 63.6 | 0.0 | 10 | -10.0 |
| 6-Building 1184/1185 | 7 | 0 | 81.0 | 64.8 | 71 | -16.2 | 12 | — | 64.8 | 0.0 | 10 | -10.0 |
| 7-Building 603/Crissy Center | 8 | 0 | 72.0 | 65.3 | 71 | -6.7 | 12 | — | 65.3 | 0.0 | 10 | -10.0 |
| 8-PX Building | 9 | 0 | 0.0 | 64.2 | 71 | 64.2 | 12 | — | 64.2 | 0.0 | 10 | -10.0 |
| 9-Post Commissary/Sports Basement | 10 | 0 | 69.0 | 63.6 | 71 | -5.4 | 12 | — | 63.6 | 0.0 | 10 | -10.0 |
| 10-Battery Blaney/635 | 11 | 0 | 68.0 | 69.6 | 66 | 1.6 | 12 | Snd Lvl | 69.6 | 0.0 | 10 | -10.0 |
| 11-Battery Slaughter | 12 | 0 | 68.0 | 79.2 | 66 | 11.2 | 12 | Snd Lvl | 79.2 | 0.0 | 10 | -10.0 |
| 12-Battery Sherwood/636 | 13 | 0 | 68.0 | 75.4 | 66 | 7.4 | 12 | Snd Lvl | 75.4 | 0.0 | 10 | -10.0 |
| 13-Battery Baldwin | 14 | 0 | 68.0 | 64.9 | 66 | -3.1 | 12 | — | 64.9 | 0.0 | 10 | -10.0 |
| 14-Building 644 | 15 | 0 | 0.0 | 60.6 | 71 | 60.6 | 12 | — | 60.6 | 0.0 | 10 | -10.0 |
| 15-Building 649 | 16 | 0 | 0.0 | 59.9 | 66 | 59.9 | 12 | — | 59.9 | 0.0 | 10 | -10.0 |
| 16-Building 650/Stilwell Hall | 17 | 0 | 70.0 | 59.5 | 66 | -10.5 | 12 | — | 59.5 | 0.0 | 10 | -10.0 |
| 17-1253 Armistead Road | 18 | 1 | 66.0 | 65.8 | 66 | -0.2 | 12 | — | 65.8 | 0.0 | 10 | -10.0 |
| 18-Home on Armistead Road | 19 | 1 | 66.0 | 72.3 | 66 | 6.3 | 12 | Snd Lvl | 72.3 | 0.0 | 10 | -10.0 |
| 19-Building 969 | 20 | 0 | 0.0 | 52.3 | 71 | 52.3 | 12 | — | 52.3 | 0.0 | 10 | -10.0 |
| 20-Building 968 | 21 | 0 | 0.0 | 53.9 | 71 | 53.9 | 12 | — | 53.9 | 0.0 | 10 | -10.0 |
| 21-Building 967 | 22 | 0 | 0.0 | 55.8 | 71 | 55.8 | 12 | — | 55.8 | 0.0 | 10 | -10.0 |
| 22-Building 966 | 23 | 0 | 0.0 | 55.9 | 71 | 55.9 | 12 | — | 55.9 | 0.0 | 10 | -10.0 |
| 23-Building 964 | 24 | 1 | 0.0 | 53.7 | 66 | 53.7 | 12 | — | 53.7 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24-Building 963 | 25 | 1 | 0.0 | 54.5 | 66 | 54.5 | 12 | — | 54.5 | 0.0 | 10 | -10.0 |
| 25-Building 962 | 26 | 1 | 0.0 | 54.4 | 66 | 54.4 | 12 | — | 54.4 | 0.0 | 10 | -10.0 |
| 26-Unknown Building | 27 | 0 | 0.0 | 57.5 | 71 | 57.5 | 12 | — | 57.5 | 0.0 | 10 | -10.0 |
| 27-Log Cabin | 28 | 0 | 63.0 | 67.9 | 66 | 4.9 | 12 | Snd Lvl | 67.9 | 0.0 | 10 | -10.0 |
| 28-Unknown Building | 29 | 0 | 0.0 | 60.9 | 71 | 60.9 | 12 | — | 60.9 | 0.0 | 10 | -10.0 |
| 29-Building 1298 Storey Ave. | 30 | 2 | 66.5 | 67.2 | 66 | 0.7 | 12 | Snd Lvl | 67.2 | 0.0 | 10 | -10.0 |
| 30-Building 1297 Storey Ave. | 31 | 2 | 66.5 | 68.7 | 66 | 2.2 | 12 | Snd Lvl | 68.7 | 0.0 | 10 | -10.0 |
| 31-Building 1295 Storey Ave. | 32 | 2 | 66.5 | 70.7 | 66 | 4.2 | 12 | Snd Lvl | 70.7 | 0.0 | 10 | -10.0 |
| 32-Building 1294 Storey Ave. | 33 | 2 | 66.5 | 72.6 | 66 | 6.1 | 12 | Snd Lvl | 72.6 | 0.0 | 10 | -10.0 |
| 33-Building 1293 Storey Ave. | 34 | 2 | 66.5 | 73.9 | 66 | 7.4 | 12 | Snd Lvl | 73.9 | 0.0 | 10 | -10.0 |
| 34-Building 1291 Storey Ave. | 35 | 2 | 66.5 | 74.2 | 66 | 7.7 | 12 | Snd Lvl | 74.2 | 0.0 | 10 | -10.0 |
| 35-Building 1290 Storey Ave. | 36 | 2 | 66.5 | 74.2 | 66 | 7.7 | 12 | Snd Lvl | 74.2 | 0.0 | 10 | -10.0 |
| 36-Building 1289 Storey Ave. | 37 | 2 | 66.5 | 71.7 | 66 | 5.2 | 12 | Snd Lvl | 71.7 | 0.0 | 10 | -10.0 |
| 37-Building 1263 Storey Ave. | 38 | 2 | 0.0 | 67.9 | 66 | 67.9 | 12 | Snd Lvl | 67.9 | 0.0 | 10 | -10.0 |
| 38-Building 682/Cross Cultural Center | 39 | 0 | 65.5 | 63.6 | 66 | -1.9 | 12 | — | 63.6 | 0.0 | 10 | -10.0 |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | 64.0 | 66.0 | 71 | 2.0 | 12 | — | 66.0 | 0.0 | 10 | -10.0 |
| 40-Building 662/Cavalry Stable | 41 | 0 | 64.0 | 66.1 | 71 | 2.1 | 12 | — | 66.1 | 0.0 | 10 | -10.0 |
| 41-Building 663/Cavalry Stable | 42 | 0 | 64.0 | 64.9 | 71 | 0.9 | 12 | — | 64.9 | 0.0 | 10 | -10.0 |
| 42-Building 667/Cavalry Stable | 43 | 0 | 64.0 | 65.1 | 71 | 1.1 | 12 | — | 65.1 | 0.0 | 10 | -10.0 |
| 43-National Cemetery Grave Site | 44 | 0 | 69.0 | 75.0 | 66 | 6.0 | 12 | Snd Lvl | 75.0 | 0.0 | 10 | -10.0 |
| 44-Building 129 | 45 | 1 | 0.0 | 68.2 | 66 | 68.2 | 12 | Snd Lvl | 68.2 | 0.0 | 10 | -10.0 |
| 45-Building 122 | 46 | 0 | 0.0 | 71.7 | 71 | 71.7 | 12 | Snd Lvl | 71.7 | 0.0 | 10 | -10.0 |
| 46-Building 108 | 47 | 0 | 0.0 | 70.9 | 71 | 70.9 | 12 | — | 70.9 | 0.0 | 10 | -10.0 |
| 47-Building 107 | 48 | 0 | 0.0 | 72.3 | 71 | 72.3 | 12 | Snd Lvl | 72.3 | 0.0 | 10 | -10.0 |
| 48-Building 104 | 49 | 0 | 74.0 | 69.1 | 71 | -4.9 | 12 | — | 69.1 | 0.0 | 10 | -10.0 |
| 49-Building 105 | 50 | 0 | 74.0 | 73.3 | 71 | -0.7 | 12 | Snd Lvl | 73.3 | 0.0 | 10 | -10.0 |
| 50-Building 106 | 51 | 0 | 76.0 | 71.2 | 71 | -4.8 | 12 | Snd Lvl | 71.2 | 0.0 | 10 | -10.0 |
| 51-Building 211 | 52 | 0 | 0.0 | 71.9 | 71 | 71.9 | 12 | Snd Lvl | 71.9 | 0.0 | 10 | -10.0 |
| 52-Building 204 | 53 | 0 | 0.0 | 64.5 | 71 | 64.5 | 12 | — | 64.5 | 0.0 | 10 | -10.0 |
| 53-Building 210 | 54 | 0 | 0.0 | 69.0 | 71 | 69.0 | 12 | — | 69.0 | 0.0 | 10 | -10.0 |
| 54-Building 201 | 55 | 0 | 0.0 | 63.4 | 71 | 63.4 | 12 | — | 63.4 | 0.0 | 10 | -10.0 |
| 55-Building 220 | 56 | 0 | 0.0 | 63.3 | 71 | 63.3 | 12 | — | 63.3 | 0.0 | 10 | -10.0 |
| 56-Building 231 | 57 | 0 | 0.0 | 66.0 | 71 | 66.0 | 12 | — | 66.0 | 0.0 | 10 | -10.0 |
| 57-Building 228 | 58 | 0 | 0.0 | 65.0 | 71 | 65.0 | 12 | — | 65.0 | 0.0 | 10 | -10.0 |
| 58-Building 229 | 60 | 0 | 0.0 | 63.6 | 71 | 63.6 | 12 | — | 63.6 | 0.0 | 10 | -10.0 |
| 59-Building 223 | 61 | 0 | 0.0 | 60.8 | 71 | 60.8 | 12 | — | 60.8 | 0.0 | 10 | -10.0 |
| 60-Building 230 | 62 | 0 | 0.0 | 66.1 | 71 | 66.1 | 12 | — | 66.1 | 0.0 | 10 | -10.0 |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 57.0 | 62.6 | 66 | 5.6 | 12 | — | 62.6 | 0.0 | 10 | -10.0 |
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 57.0 | 60.9 | 66 | 3.9 | 12 | — | 60.9 | 0.0 | 10 | -10.0 |
| 63-Building 1063 | 66 | 0 | 68.5 | 61.9 | 71 | -6.6 | 12 | — | 61.9 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64-Building 1062 | 68 | 0 | 68.5 | 59.6 | 71 | -8.9 | 12 | --- | 59.6 | 0.0 | 10 | -10.0 |
| 65-Building 1060 | 69 | 0 | 68.5 | 58.8 | 71 | -9.7 | 12 | --- | 58.8 | 0.0 | 10 | -10.0 |
| 66-Building 1167 | 70 | 0 | 68.0 | 64.7 | 71 | -3.3 | 12 | --- | 64.7 | 0.0 | 10 | -10.0 |
| 67-Building 1163 | 71 | 0 | 0.0 | 64.2 | 71 | 64.2 | 12 | --- | 64.2 | 0.0 | 10 | -10.0 |
| 68-Building 1169 | 72 | 0 | 68.0 | 67.4 | 71 | -0.6 | 12 | --- | 67.4 | 0.0 | 10 | -10.0 |
| 69-Building 1162 | 73 | 0 | 0.0 | 64.3 | 71 | 64.3 | 12 | --- | 64.3 | 0.0 | 10 | -10.0 |
| 70-Building 1170 | 74 | 0 | 68.0 | 70.6 | 71 | 2.6 | 12 | --- | 70.6 | 0.0 | 10 | -10.0 |
| 71-Building 1161 | 75 | 0 | 0.0 | 66.8 | 71 | 66.8 | 12 | --- | 66.8 | 0.0 | 10 | -10.0 |
| 72-Building 1160 | 76 | 0 | 0.0 | 71.1 | 71 | 71.1 | 12 | Snd Lvl | 71.1 | 0.0 | 10 | -10.0 |
| 73-Building 1152/YMCA | 77 | 0 | 0.0 | 67.6 | 66 | 67.6 | 12 | Snd Lvl | 67.6 | 0.0 | 10 | -10.0 |
| 74-Building 1151/YMCA Pool | 78 | 0 | 0.0 | 74.6 | 66 | 74.6 | 12 | Snd Lvl | 74.6 | 0.0 | 10 | -10.0 |
| 75-Building 1004 | 79 | 0 | 0.0 | 56.0 | 71 | 56.0 | 12 | --- | 56.0 | 0.0 | 10 | -10.0 |
| 76-Home at 3234 Lyon St. | 81 | 8 | 76.5 | 72.1 | 66 | -4.4 | 12 | Snd Lvl | 72.1 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 232 | 0.0 | 0.0 | 0.0 |
| All Impacted | 28 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |


500
0
0
-500
0
500
1000
1500
Widen & Replace w/o Detours - 2030 PM
Plan View
Run name: dd R&W 2030 PM 830
Scale:
500
Sheet 1 of 1
30 Aug 2004
Environmental Science Associates, Inc.
Project/Contract No. Doyle Drive - 204235
TNM Version 2.5, Feb 2004
Analysis By: Win Lindeman
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace 2030 PM

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

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle Drive to Marina | 11.0 | N End | 1 | -966.0 | 608.0 | 53.00 | | | | Average | |
| | | 2 | 2 | -720.0 | 302.0 | 56.00 | | | | Average | |
| | | 3 | 3 | -660.0 | 234.0 | 57.00 | | | | Average | |
| | | 4 | 4 | -614.0 | 196.0 | 55.00 | | | | Average | |
| | | 5 | 6 | -580.0 | 162.0 | 53.00 | | | | Average | |
| | | 6 | 7 | -579.0 | 162.0 | 53.00 | | | | Average | Y |
| | | 7 | 8 | -526.0 | 144.0 | 51.00 | | | | Average | Y |
| | | 8 | 9 | -392.0 | 92.0 | 46.00 | | | | Average | Y |
| | | 9 | 10 | -298.0 | 60.0 | 42.00 | | | | Average | Y |
| | | 10 | 11 | -200.0 | 30.0 | 37.00 | | | | Average | Y |
| | | 11 | 13 | -64.0 | -4.0 | 29.00 | | | | Average | Y |
| | | 12 | 14 | -63.0 | -4.0 | 29.00 | | | | Average | |
| | | 13 | 15 | 196.0 | -58.0 | 29.00 | | | | Average | |
| | | 14 | 16 | 232.0 | -66.0 | 28.00 | | | | Average | |
| | | 15 | 17 | 294.0 | -71.0 | 27.00 | | | | Average | |
| | | 16 | 18 | 334.0 | -70.0 | 24.00 | | | | Average | |
| | | 17 | 20 | 335.0 | -70.0 | 24.00 | | | | Average | Y |
| | | 18 | 21 | 396.0 | -60.0 | 24.00 | | | | Average | Y |
| | | 19 | 22 | 492.0 | -32.0 | 23.00 | | | | Average | Y |
| | | 19A | 208 | 680.0 | 35.0 | 18.50 | | | | Average | Y |
| | | 20 | 23 | 868.0 | 102.0 | 14.00 | | | | Average | Y |
| | | 21 | 24 | 968.0 | 126.0 | 14.00 | | | | Average | Y |
| | | 22 | 25 | 1,068.0 | 150.0 | 11.00 | | | | Average | Y |
| | | 23 | 26 | 1,166.0 | 170.0 | 10.80 | | | | Average | Y |
| | | 24 | 27 | 1,381.0 | 213.0 | 5.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 25 | 28 | 1,382.0 | 213.0 | 5.00 | | | | Average | |
| | | 26 | 29 | 1,422.0 | 224.0 | 5.00 | | | | Average | |
| | | 27 | 31 | 1,450.0 | 240.0 | 4.00 | | | | Average | |
| | | 28 | 32 | 1,486.0 | 264.0 | 4.00 | | | | Average | |
| | | 29 | 33 | 1,504.0 | 286.0 | 4.00 | | | | Average | |
| | | 30 | 35 | 1,520.0 | 296.0 | 4.00 | | | | Average | |
| | | 31 | 36 | 1,540.0 | 307.0 | 4.00 | | | | Average | |
| | | 32 | 37 | 1,560.0 | 318.0 | 4.00 | | | | | |
| WB Doyle Drive from Marina to 0+00 | 11.0 | 1 | 39 | 1,560.0 | 326.0 | 4.00 | | | | Average | |
| | | 2 | 40 | 1,504.0 | 300.0 | 4.00 | | | | Average | |
| | | 3 | 41 | 1,486.0 | 276.0 | 4.00 | | | | Average | |
| | | 4 | 42 | 1,450.0 | 251.0 | 4.00 | | | | Average | |
| | | 5 | 43 | 1,422.0 | 234.0 | 5.00 | | | | Average | |
| | | 6 | 44 | 1,383.0 | 224.0 | 5.00 | | | | Average | |
| | | 7 | 46 | 1,384.0 | 224.0 | 5.00 | | | | Average | Y |
| | | 8 | 47 | 1,166.0 | 178.0 | 10.80 | | | | Average | Y |
| | | 9 | 48 | 1,068.0 | 157.0 | 13.00 | | | | Average | Y |
| | | 10 | 49 | 968.0 | 136.0 | 13.00 | | | | Average | Y |
| | | 11 | 50 | 868.0 | 111.0 | 14.00 | | | | Average | Y |
| | | 12 | 51 | 776.0 | 80.0 | 14.00 | | | | Average | Y |
| | | 13 | 52 | 680.0 | 44.0 | 14.00 | | | | Average | Y |
| | | 14 | 53 | 586.0 | 10.0 | 14.00 | | | | Average | Y |
| | | 15 | 54 | 492.0 | -22.0 | 17.80 | | | | Average | Y |
| | | 16 | 55 | 396.0 | -52.0 | 21.40 | | | | Average | Y |
| | | 17 | 56 | 335.0 | -60.0 | 26.00 | | | | Average | Y |
| | | 18 | 57 | 334.0 | -60.0 | 26.00 | | | | Average | |
| | | 19 | 58 | 294.0 | -60.0 | 28.00 | | | | Average | |
| | | 20 | 59 | 252.0 | -60.0 | 29.00 | | | | Average | |
| | | 21 | 60 | 232.0 | -56.0 | 29.00 | | | | Average | |
| | | 22 | 61 | 50.0 | -12.0 | 29.00 | | | | Average | |
| | | 23 | 62 | -60.0 | 14.0 | 29.00 | | | | Average | |
| | | 24 | 63 | -61.0 | 14.0 | 29.00 | | | | Average | Y |
| | | 25 | 64 | -250.0 | 64.0 | 41.00 | | | | Average | Y |
| | | 26 | 65 | -484.0 | 142.0 | 50.00 | | | | Average | Y |
| | | 27 | 66 | -554.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 28 | 67 | -555.0 | 176.0 | 51.00 | | | | Average | |
| | | 29 | 68 | -576.0 | 182.0 | 49.00 | | | | Average | |
| | | 30 | 69 | -610.0 | 204.0 | 50.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 31 | 70 | -654.0 | 242.0 | 53.00 | | | | Average | |
| | | 32 | 71 | -720.0 | 322.0 | 56.00 | | | | Average | |
| | | 33 | 198 | -960.0 | 614.0 | 53.00 | | | | Average | |
| | | 34 | 73 | -961.0 | 614.0 | 53.00 | | | | | |
| SB/EB Richardson from Doyle to Francis | 11.0 | 1 | 77 | 680.0 | 35.0 | 18.50 | | | | Average | Y |
| | | 2 | 78 | 876.0 | 98.0 | 14.00 | | | | Average | Y |
| | | 3 | 79 | 938.0 | 114.0 | 14.00 | | | | Average | Y |
| | | 4 | 80 | 1,076.0 | 134.0 | 12.00 | | | | Average | Y |
| | | 5 | 81 | 1,130.0 | 134.0 | 12.00 | | | | Average | Y |
| | | 6 | 82 | 1,168.0 | 128.0 | 11.00 | | | | Average | Y |
| | | 7 | 83 | 1,225.0 | 101.0 | 8.00 | | | | Average | Y |
| | | 8 | 84 | 1,227.0 | 98.0 | 8.00 | | | | Average | |
| | | 9 | 85 | 1,260.0 | 88.0 | 6.00 | | | | Average | |
| | | 10 | 86 | 1,306.0 | 50.0 | 3.00 | | | | Average | |
| | | 11 | 195 | 1,388.0 | -20.0 | 2.00 | | | | Average | |
| | | 12 | 196 | 1,424.0 | -60.0 | 4.00 | | | | Average | |
| | | 13 | 197 | 1,522.0 | -146.0 | 4.00 | | | | Average | |
| | | 14 | 87 | 1,650.0 | -280.0 | 4.00 | | | | | |
| NB/WB Richardson from Francisco to DD | 9.0 | 1 | 88 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 89 | 1,514.0 | -122.0 | 4.00 | | | | Average | |
| | | 3 | 90 | 1,418.0 | -40.0 | 3.00 | | | | Average | |
| | | 4 | 91 | 1,296.0 | 96.0 | 3.00 | | | | Average | |
| | | 5 | 92 | 1,196.0 | 163.0 | 3.00 | | | | Average | |
| | | 6 | 93 | 1,160.0 | 176.0 | 3.00 | | | | Average | |
| | | 7 | 94 | 1,159.0 | 176.0 | 3.00 | | | | Average | Y |
| | | 8 | 95 | 1,116.0 | 182.0 | 3.00 | | | | Average | Y |
| | | 9 | 96 | 1,076.0 | 186.0 | 5.00 | | | | Average | Y |
| | | 10 | 97 | 1,014.0 | 180.0 | 8.00 | | | | Average | Y |
| | | 11 | 98 | 976.0 | 168.0 | 12.00 | | | | Average | Y |
| | | 12 | 99 | 776.0 | 80.0 | 14.00 | | | | | |
| SB PP Ramp from WB Doyle Drive | 4.6 | 1 | 100 | -250.0 | 68.0 | 40.00 | | | | Average | Y |
| | | 2 | 101 | -376.0 | 124.0 | 45.00 | | | | Average | Y |
| | | 3 | 102 | -410.0 | 144.0 | 45.00 | | | | Average | Y |
| | | 4 | 103 | -411.0 | 144.0 | 45.00 | | | | Average | |
| | | 5 | 104 | -440.0 | 170.0 | 44.20 | | | | Average | |
| | | 6 | 105 | -460.0 | 176.0 | 44.00 | | | | Average | |
| | | 7 | 106 | -484.0 | 170.0 | 44.00 | | | | Average | |
| | | 8 | 107 | -490.0 | 156.0 | 44.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 9 | 108 | -504.0 | 144.0 | 44.50 | | | | Average | |
| | | 10 | 109 | -504.0 | 117.0 | 45.00 | | | | Average | |
| | | 11 | 110 | -488.0 | 94.0 | 43.50 | | | | Average | |
| | | 12 | 111 | -440.0 | 60.0 | 42.50 | | | | Average | |
| | | 13 | 203 | -416.0 | 30.0 | 42.00 | | | | Average | |
| | | 14 | 202 | -406.0 | 14.0 | 41.00 | | | | Average | |
| | | 15 | 204 | -388.0 | -28.0 | 38.00 | | | | | |
| SB PP Ramp from EB Doyle Drive | 4.8 | 1 | 113 | -579.0 | 160.0 | 53.00 | | | | Average | Y |
| | | 2 | 114 | -479.0 | 100.0 | 49.00 | | | | Average | Y |
| | | 3 | 115 | -478.0 | 100.0 | 49.00 | | | | Average | |
| | | 4 | 116 | -446.0 | 80.0 | 49.00 | | | | Average | |
| | | 5 | 117 | -420.0 | 54.0 | 48.00 | | | | Average | |
| | | 6 | 118 | -408.0 | 36.0 | 44.00 | | | | Average | |
| | | 7 | 119 | -400.0 | 17.0 | 40.00 | | | | Average | |
| | | 8 | 120 | -390.0 | 0.0 | 39.00 | | | | Average | |
| | | 9 | 205 | -388.0 | -28.0 | 38.00 | | | | Average | |
| | | 10 | 206 | -388.0 | -62.0 | 38.00 | | | | Average | |
| | | 11 | 121 | -388.0 | -238.0 | 38.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 4.6 | 1 | 122 | -380.0 | -320.0 | 37.00 | | | | Average | |
| | | 2 | 207 | -380.0 | -74.0 | 40.00 | | | | Average | |
| | | 3 | 123 | -380.0 | 10.0 | 37.00 | | | | Average | |
| | | 4 | 124 | -380.0 | 80.0 | 37.00 | | | | Average | |
| | | 5 | 125 | -384.0 | 98.0 | 38.00 | | | | Average | |
| | | 6 | 126 | -396.0 | 138.0 | 38.00 | | | | Average | |
| | | 7 | 127 | -418.0 | 170.0 | 41.00 | | | | Average | |
| | | 8 | 128 | -450.0 | 196.0 | 44.00 | | | | Average | |
| | | 9 | 129 | -500.0 | 216.0 | 47.50 | | | | Average | |
| | | 10 | 130 | -620.0 | 246.0 | 54.00 | | | | Average | |
| | | 11 | 131 | -656.0 | 262.0 | 57.00 | | | | Average | |
| | | 12 | 132 | -686.0 | 290.0 | 58.00 | | | | Average | |
| | | 13 | 191 | -703.0 | 306.0 | 58.00 | | | | Average | |
| | | 14 | 133 | -720.0 | 322.0 | 56.00 | | | | | |
| NB PP ramp to EB Doyle Drive | 4.6 | 1 | 134 | -380.0 | -74.0 | 40.00 | | | | Average | |
| | | 2 | 199 | -364.0 | -10.0 | 38.20 | | | | Average | |
| | | 3 | 200 | -360.0 | 5.0 | 38.80 | | | | Average | |
| | | 4 | 201 | -348.0 | 20.0 | 40.20 | | | | Average | |
| | | 5 | 135 | -336.0 | 34.0 | 41.40 | | | | Average | |
| | | 6 | 136 | -320.0 | 42.0 | 41.80 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 | 137 | -300.0 | 48.0 | 41.20 | | | | Average | |
| | | 8 | 138 | -274.0 | 49.0 | 41.00 | | | | | |
| Mason Street | 7.3 | 1 | 139 | -188.0 | 150.0 | 3.00 | | | | Average | |
| | | 2 | 140 | -16.0 | 114.0 | 3.00 | | | | Average | |
| | | 3 | 141 | 340.0 | 70.0 | 4.00 | | | | Average | |
| | | 4 | 142 | 370.0 | 70.0 | 4.00 | | | | Average | |
| | | 5 | 143 | 416.0 | 92.0 | 4.00 | | | | Average | |
| | | 6 | 144 | 428.0 | 118.0 | 4.00 | | | | Average | |
| | | 7 | 145 | 486.0 | 142.0 | 4.00 | | | | Average | |
| | | 8 | 194 | 938.0 | 214.0 | 4.00 | | | | Average | |
| | | 9 | 146 | 1,486.0 | 310.0 | 4.00 | | | | Average | |
| | | 10 | 147 | 1,584.0 | 340.0 | 4.00 | | | | Average | |
| | | 11 | 148 | 1,680.0 | 344.0 | 4.00 | | | | | |
| Lincoln Blvd. | 7.3 | 1 | 149 | 36.0 | -70.0 | 33.00 | | | | Average | |
| | | 2 | 150 | 74.0 | -53.0 | 33.00 | | | | Average | |
| | | 3 | 151 | 106.0 | -56.0 | 32.00 | | | | Average | |
| | | 4 | 152 | 180.0 | -86.0 | 30.00 | | | | Average | |
| | | 5 | 153 | 226.0 | -92.0 | 29.00 | | | | Average | |
| | | 6 | 154 | 246.0 | -90.0 | 29.00 | | | | Average | |
| | | 7 | 155 | 268.0 | -90.0 | 29.00 | | | | Average | |
| | | 8 | 156 | 308.0 | -100.0 | 29.00 | | | | Average | |
| | | 9 | 157 | 334.0 | -108.0 | 27.00 | | | | Average | |
| | | 10 | 158 | 368.0 | -105.0 | 26.00 | | | | Average | |
| | | 11 | 159 | 490.0 | -66.0 | 19.00 | | | | Average | |
| | | 12 | 160 | 520.0 | -56.0 | 17.00 | | | | Average | |
| | | 13 | 161 | 568.0 | -30.0 | 16.00 | | | | Average | |
| | | 14 | 162 | 596.0 | -14.0 | 13.00 | | | | Average | |
| | | 15 | 163 | 620.0 | 0.0 | 14.00 | | | | Average | |
| | | 16 | 164 | 636.0 | 6.0 | 12.00 | | | | Average | |
| | | 17 | 165 | 680.0 | -14.0 | 13.00 | | | | Average | |
| | | 18 | 166 | 700.0 | -34.0 | 14.00 | | | | Average | |
| | | 19 | 167 | 718.0 | -44.0 | 14.00 | | | | Average | |
| | | 20 | 168 | 784.0 | -66.0 | 15.00 | | | | Average | |
| | | 21 | 169 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 22 | 170 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 23 | 171 | 1,054.0 | -210.0 | 14.00 | | | | | |
| Gorgas Avenue | 6.0 | 1 | 172 | 1,522.0 | -146.0 | 4.00 | | | | Average | |
| | | 2 | 173 | 1,510.0 | -158.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3 | 174 | 1,488.0 | -160.0 | 4.00 | | | | Average | |
| | | 4 | 175 | 1,420.0 | -108.0 | 2.00 | | | | Average | |
| | | 5 | 176 | 1,400.0 | -98.0 | 2.00 | | | | Average | |
| | | 6 | 177 | 1,344.0 | -66.0 | 2.00 | | | | Average | |
| | | 7 | 178 | 1,112.0 | 120.0 | 3.00 | | | | | |
| Halleck Street | 7.3 | 1 | 179 | 910.0 | -136.0 | 14.00 | | | | Average | |
| | | 2 | 180 | 957.0 | 106.0 | 6.00 | | | | Average | |
| | | 3 | 181 | 938.0 | 214.0 | 4.00 | | | | | |
| Girard Road | 7.3 | 1 | 182 | 998.0 | -180.0 | 14.00 | | | | Average | |
| | | 2 | 183 | 1,074.0 | -38.0 | 3.00 | | | | Average | |
| | | 3 | 184 | 1,090.0 | -33.0 | 4.00 | | | | Average | |
| | | 4 | 185 | 1,108.0 | -40.0 | 5.00 | | | | | |
| Baker Street | 11.6 | 1 | 186 | 1,680.0 | -266.0 | 4.00 | | | | Average | |
| | | 2 | 187 | 1,584.0 | 340.0 | 4.00 | | | | | |
| Montgomery Street | 9.2 | 1 | 188 | 510.0 | -300.0 | 15.00 | | | | Average | |
| | | 2 | 189 | 664.0 | -30.0 | 12.00 | | | | Average | |
| | | 3 | 190 | 718.0 | -44.0 | 14.00 | | | | | |

Environmental Science Associates, Inc. 30 August 2004
Win Lindeman TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace 2030 PM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle Drive to Marina | N End | 1 | 5399 | 88 | 17 | 88 | 72 | 88 | 61 | 88 | 17 | 88 |
| | 2 | 2 | 5399 | 88 | 17 | 88 | 72 | 88 | 61 | 88 | 17 | 88 |
| | 3 | 3 | 5399 | 88 | 17 | 88 | 72 | 88 | 61 | 88 | 17 | 88 |
| | 4 | 4 | 5399 | 88 | 17 | 88 | 72 | 88 | 61 | 88 | 17 | 88 |
| | 5 | 6 | 5399 | 88 | 17 | 88 | 72 | 88 | 61 | 88 | 17 | 88 |
| | 6 | 7 | 3065 | 88 | 9 | 88 | 41 | 88 | 35 | 88 | 9 | 88 |
| | 7 | 8 | 3065 | 88 | 9 | 88 | 41 | 88 | 35 | 88 | 9 | 88 |
| | 8 | 9 | 3065 | 88 | 9 | 88 | 41 | 88 | 35 | 88 | 9 | 88 |
| | 9 | 10 | 3636 | 88 | 11 | 88 | 49 | 88 | 41 | 88 | 11 | 88 |
| | 10 | 11 | 3636 | 88 | 11 | 88 | 49 | 88 | 41 | 88 | 11 | 88 |
| | 11 | 13 | 3636 | 88 | 11 | 88 | 49 | 88 | 41 | 88 | 11 | 88 |
| | 12 | 14 | 3636 | 88 | 11 | 88 | 49 | 88 | 41 | 88 | 11 | 88 |
| | 13 | 15 | 3636 | 88 | 11 | 88 | 49 | 88 | 41 | 88 | 11 | 88 |
| | 14 | 16 | 3636 | 88 | 11 | 88 | 49 | 88 | 41 | 88 | 11 | 88 |
| | 15 | 17 | 3636 | 88 | 11 | 88 | 49 | 88 | 41 | 88 | 11 | 88 |
| | 16 | 18 | 3636 | 88 | 11 | 88 | 49 | 88 | 41 | 88 | 11 | 88 |
| | 17 | 20 | 3636 | 88 | 11 | 88 | 49 | 88 | 41 | 88 | 11 | 88 |
| | 18 | 21 | 3636 | 88 | 11 | 88 | 49 | 88 | 41 | 88 | 11 | 88 |
| | 19 | 22 | 3636 | 88 | 11 | 88 | 49 | 88 | 41 | 88 | 11 | 88 |
| | 19A | 208 | 3636 | 88 | 11 | 88 | 49 | 88 | 41 | 88 | 11 | 88 |
| | 20 | 23 | 795 | 88 | 2 | 88 | 11 | 88 | 9 | 88 | 2 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 21 | 24 | 795 | 88 | 2 | 88 | 11 | 88 | 9 | 88 | 2 | 88 |
| | 22 | 25 | 795 | 88 | 2 | 88 | 11 | 88 | 9 | 88 | 2 | 88 |
| | 23 | 26 | 795 | 56 | 2 | 56 | 11 | 56 | 9 | 56 | 2 | 56 |
| | 24 | 27 | 795 | 56 | 2 | 56 | 11 | 56 | 9 | 56 | 2 | 56 |
| | 25 | 28 | 795 | 56 | 2 | 56 | 11 | 56 | 9 | 56 | 2 | 56 |
| | 26 | 29 | 795 | 56 | 2 | 56 | 11 | 56 | 9 | 56 | 2 | 56 |
| | 27 | 31 | 795 | 56 | 2 | 56 | 11 | 56 | 9 | 56 | 2 | 56 |
| | 28 | 32 | 795 | 56 | 2 | 56 | 11 | 56 | 9 | 56 | 2 | 56 |
| | 29 | 33 | 795 | 56 | 2 | 56 | 11 | 56 | 9 | 56 | 2 | 56 |
| | 30 | 35 | 795 | 56 | 2 | 56 | 11 | 56 | 9 | 56 | 2 | 56 |
| | 31 | 36 | 795 | 56 | 2 | 56 | 11 | 56 | 9 | 56 | 2 | 56 |
| | 32 | 37 | | | | | | | | | | |
| WB Doyle Drive from Marina to 0+00 | 1 | 39 | 1185 | 56 | 0 | 0 | 2 | 56 | 33 | 56 | 12 | 56 |
| | 2 | 40 | 1185 | 56 | 0 | 0 | 2 | 56 | 33 | 56 | 12 | 56 |
| | 3 | 41 | 1185 | 56 | 0 | 0 | 2 | 56 | 33 | 56 | 12 | 56 |
| | 4 | 42 | 1185 | 56 | 0 | 0 | 2 | 56 | 33 | 56 | 12 | 56 |
| | 5 | 43 | 1185 | 56 | 0 | 0 | 2 | 56 | 33 | 56 | 12 | 56 |
| | 6 | 44 | 1185 | 56 | 0 | 0 | 2 | 56 | 33 | 56 | 12 | 56 |
| | 7 | 46 | 1185 | 88 | 0 | 0 | 2 | 88 | 33 | 88 | 12 | 88 |
| | 8 | 47 | 1185 | 88 | 0 | 0 | 2 | 88 | 33 | 88 | 12 | 88 |
| | 9 | 48 | 1185 | 88 | 0 | 0 | 2 | 88 | 33 | 88 | 12 | 88 |
| | 10 | 49 | 1185 | 88 | 0 | 0 | 2 | 88 | 33 | 88 | 12 | 88 |
| | 11 | 50 | 1185 | 88 | 0 | 0 | 2 | 88 | 33 | 88 | 12 | 88 |
| | 12 | 51 | 4711 | 88 | 0 | 0 | 10 | 88 | 132 | 88 | 49 | 88 |
| | 13 | 52 | 4711 | 88 | 0 | 0 | 10 | 88 | 132 | 88 | 49 | 88 |
| | 14 | 53 | 4711 | 88 | 0 | 0 | 10 | 88 | 132 | 88 | 49 | 88 |
| | 15 | 54 | 4711 | 88 | 0 | 0 | 10 | 88 | 132 | 88 | 49 | 88 |
| | 16 | 55 | 4711 | 88 | 0 | 0 | 10 | 88 | 132 | 88 | 49 | 88 |
| | 17 | 56 | 4711 | 88 | 0 | 0 | 10 | 88 | 132 | 88 | 49 | 88 |
| | 18 | 57 | 4711 | 88 | 0 | 0 | 10 | 88 | 132 | 88 | 49 | 88 |
| | 19 | 58 | 4711 | 88 | 0 | 0 | 10 | 88 | 132 | 88 | 49 | 88 |
| | 20 | 59 | 4711 | 88 | 0 | 0 | 10 | 88 | 132 | 88 | 49 | 88 |
| | 21 | 60 | 4711 | 88 | 0 | 0 | 10 | 88 | 132 | 88 | 49 | 88 |
| | 22 | 61 | 4711 | 88 | 0 | 0 | 10 | 88 | 132 | 88 | 49 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 23 | 62 | 4711 | 88 | 0 | 0 | 10 | 88 | 132 | 88 | 49 | 88 |
| | 24 | 63 | 5711 | 88 | 0 | 0 | 10 | 88 | 132 | 88 | 49 | 88 |
| | 25 | 64 | 4065 | 88 | 0 | 0 | 8 | 88 | 114 | 88 | 42 | 88 |
| | 26 | 65 | 4065 | 88 | 0 | 0 | 8 | 88 | 114 | 88 | 42 | 88 |
| | 27 | 66 | 4065 | 88 | 0 | 0 | 8 | 88 | 114 | 88 | 42 | 88 |
| | 28 | 67 | 4065 | 88 | 0 | 0 | 8 | 88 | 114 | 88 | 42 | 88 |
| | 29 | 68 | 4065 | 88 | 0 | 0 | 8 | 88 | 114 | 88 | 42 | 88 |
| | 30 | 69 | 4065 | 88 | 0 | 0 | 8 | 88 | 114 | 88 | 42 | 88 |
| | 31 | 70 | 4065 | 88 | 0 | 0 | 8 | 88 | 114 | 88 | 42 | 88 |
| | 32 | 71 | 6180 | 88 | 0 | 0 | 13 | 88 | 174 | 88 | 64 | 88 |
| | 33 | 198 | 6180 | 88 | 0 | 0 | 13 | 88 | 174 | 88 | 64 | 88 |
| | 34 | 73 | | | | | | | | | | |
| SB/EB Richardson from Doyle to Francis | 1 | 77 | 2582 | 56 | 8 | 56 | 35 | 56 | 29 | 56 | 8 | 56 |
| | 2 | 78 | 2582 | 56 | 8 | 56 | 35 | 56 | 29 | 56 | 8 | 56 |
| | 3 | 79 | 2582 | 56 | 8 | 56 | 35 | 56 | 29 | 56 | 8 | 56 |
| | 4 | 80 | 2582 | 56 | 8 | 56 | 35 | 56 | 29 | 56 | 8 | 56 |
| | 5 | 81 | 2582 | 56 | 8 | 56 | 35 | 56 | 29 | 56 | 8 | 56 |
| | 6 | 82 | 2582 | 56 | 8 | 56 | 35 | 56 | 29 | 56 | 8 | 56 |
| | 7 | 83 | 2582 | 56 | 8 | 56 | 35 | 56 | 29 | 56 | 8 | 56 |
| | 8 | 84 | 2582 | 56 | 8 | 56 | 35 | 56 | 29 | 56 | 8 | 56 |
| | 9 | 85 | 2582 | 56 | 8 | 56 | 35 | 56 | 29 | 56 | 8 | 56 |
| | 10 | 86 | 2582 | 56 | 8 | 56 | 35 | 56 | 29 | 56 | 8 | 56 |
| | 11 | 195 | 2582 | 56 | 8 | 56 | 35 | 56 | 29 | 56 | 8 | 56 |
| | 12 | 196 | 2582 | 56 | 8 | 56 | 35 | 56 | 29 | 56 | 8 | 56 |
| | 13 | 197 | 2582 | 56 | 8 | 56 | 35 | 56 | 29 | 56 | 8 | 56 |
| | 14 | 87 | | | | | | | | | | |
| NB/WB Richardson from Francisco to DD | 1 | 88 | 3285 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 2 | 89 | 3285 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 3 | 90 | 3285 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 4 | 91 | 3285 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 5 | 92 | 3285 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 6 | 93 | 3285 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 7 | 94 | 3285 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 8 | 95 | 3285 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9 | 96 | 3285 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 10 | 97 | 3285 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 11 | 98 | 3285 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 12 | 99 | | | | | | | | | | |
| SB PP Ramp from WB Doyle Drive | 1 | 100 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 2 | 101 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 3 | 102 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 4 | 103 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 5 | 104 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 6 | 105 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 7 | 106 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 8 | 107 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 9 | 108 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 10 | 109 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 11 | 110 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 12 | 111 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 13 | 203 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 14 | 202 | 646 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 15 | 204 | | | | | | | | | | |
| SB PP Ramp from EB Doyle Drive | 1 | 113 | 2326 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 2 | 114 | 2326 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 3 | 115 | 2326 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 4 | 116 | 2326 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 5 | 117 | 2326 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 6 | 118 | 2326 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 7 | 119 | 2326 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 8 | 120 | 2326 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 9 | 205 | 2326 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 10 | 206 | 2326 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 11 | 121 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 | 122 | 2146 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 2 | 207 | 2146 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 3 | 123 | 2146 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 4 | 124 | 2146 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 125 | 2146 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 6 | 126 | 2146 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 7 | 127 | 2146 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 8 | 128 | 2146 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 9 | 129 | 2146 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 10 | 130 | 2146 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 11 | 131 | 2146 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 12 | 132 | 2146 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 13 | 191 | 2146 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 14 | 133 | | | | | | | | | | |
| NB PP ramp to EB Doyle Drive | 1 | 134 | 574 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 6 | 56 |
| | 2 | 199 | 574 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 6 | 56 |
| | 3 | 200 | 574 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 6 | 56 |
| | 4 | 201 | 574 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 6 | 56 |
| | 5 | 135 | 574 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 6 | 56 |
| | 6 | 136 | 574 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 6 | 56 |
| | 7 | 137 | 574 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 6 | 56 |
| | 8 | 138 | | | | | | | | | | |
| Mason Street | 1 | 139 | 9 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 140 | 9 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 141 | 9 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 142 | 9 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 143 | 9 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 144 | 9 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 145 | 46 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 194 | 46 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 146 | 53 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 147 | 1815 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 148 | | | | | | | | | | |
| Lincoln Blvd. | 1 | 149 | 218 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 150 | 249 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 3 | 151 | 249 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 4 | 152 | 249 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 5 | 153 | 249 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 154 | 249 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 7 | 155 | 249 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 8 | 156 | 249 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 9 | 157 | 290 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 10 | 158 | 141 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 11 | 159 | 141 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 12 | 160 | 141 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 13 | 161 | 141 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 14 | 162 | 141 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 15 | 163 | 141 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 16 | 164 | 141 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 17 | 165 | 141 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 18 | 166 | 141 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 19 | 167 | 404 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 20 | 168 | 404 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 21 | 169 | 848 | 32 | 8 | 32 | 0 | 0 | 8 | 32 | 8 | 32 |
| | 22 | 170 | 913 | 32 | 9 | 32 | 0 | 0 | 9 | 32 | 9 | 32 |
| | 23 | 171 | | | | | | | | | | |
| Gorgas Avenue | 1 | 172 | 320 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 173 | 320 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 174 | 320 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 175 | 320 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 176 | 320 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 177 | 320 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 178 | | | | | | | | | | |
| Halleck Street | 1 | 179 | 67 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 180 | 67 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 181 | | | | | | | | | | |
| Girard Road | 1 | 182 | 698 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 183 | 698 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 184 | 698 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 185 | | | | | | | | | | |
| Baker Street | 1 | 186 | 19 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 187 | | | | | | | | | | |

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Doyle Drive - 204235**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Montgomery Street | 1 | 188 | 114 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 189 | 114 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 3 | 190 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

30 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace 2030 PM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 1,426.0 | 0.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 1,446.0 | 202.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3-Building 1187/1188 | 3 | 0 | 1,466.0 | 272.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4-Building 1182 | 5 | 0 | 1,406.0 | 240.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5-Building 1183/1186 | 6 | 0 | 1,326.0 | 230.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6-Building 1184/1185 | 7 | 0 | 1,206.0 | 208.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7-Building 603/Crissy Center | 8 | 0 | 880.0 | 176.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8-PX Building | 9 | 0 | 816.0 | 118.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9-Post Commissary/Sports Basement | 10 | 0 | 552.0 | 16.0 | 4.00 | 1.50 | 69.00 | 71 | 12.0 | 10.0 | Y |
| 10-Battery Blaney/635 | 11 | 0 | 270.0 | -34.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11-Battery Slaughter | 12 | 0 | 208.0 | -40.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12-Battery Sherwood/636 | 13 | 0 | 80.0 | 6.0 | 29.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13-Battery Baldwin | 14 | 0 | 4.0 | 15.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14-Building 644 | 15 | 0 | 42.0 | 66.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15-Building 649 | 16 | 0 | -64.0 | 48.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16-Building 650/Stilwell Hall | 17 | 0 | -140.0 | 52.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17-1253 Armistead Road | 18 | 1 | -502.0 | 258.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18-Home on Armistead Road | 19 | 1 | -674.0 | 320.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19-Building 969 | 20 | 0 | -604.0 | 748.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20-Building 968 | 21 | 0 | -788.0 | 762.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21-Building 967 | 22 | 0 | -910.0 | 750.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22-Building 966 | 23 | 0 | -920.0 | 754.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23-Building 964 | 24 | 1 | -818.0 | 846.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24-Building 963 | 25 | 1 | -840.0 | 804.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25-Building 962 | 26 | 1 | -814.0 | 816.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26-Unknown Building | 27 | 0 | -1,132.0 | 697.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27-Log Cabin | 28 | 0 | -720.0 | 188.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28-Unknown Building | 29 | 0 | -988.0 | 408.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29-Building 1298 Storey Ave. | 30 | 2 | -682.0 | 136.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30-Building 1297 Storey Ave. | 31 | 2 | -664.0 | 140.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31-Building 1295 Storey Ave. | 32 | 2 | -632.0 | 130.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32-Building 1294 Storey Ave. | 33 | 2 | -614.0 | 132.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33-Building 1293 Storey Ave. | 34 | 2 | -580.0 | 122.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34-Building 1291 Storey Ave. | 35 | 2 | -552.0 | 112.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35-Building 1290 Storey Ave. | 36 | 2 | -528.0 | 100.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36-Building 1289 Storey Ave. | 37 | 2 | -510.0 | 66.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37-Building 1263 Storey Ave. | 38 | 2 | -420.0 | -114.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38-Building 682/Cross Cultural Center | 39 | 0 | -350.0 | -228.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | -256.0 | -26.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40-Building 662/Cavalry Stable | 41 | 0 | -214.0 | -50.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41-Building 663/Cavalry Stable | 42 | 0 | -220.0 | -80.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42-Building 667/Cavalry Stable | 43 | 0 | -80.0 | -78.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43-National Cemetery Grave Site | 44 | 0 | 300.0 | -102.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44-Building 129 | 45 | 1 | 414.0 | -100.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45-Building 122 | 46 | 0 | 460.0 | -90.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46-Building 108 | 47 | 0 | 536.0 | -64.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47-Building 107 | 48 | 0 | 546.0 | -48.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48-Building 104 | 49 | 0 | 566.0 | -72.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49-Building 105 | 50 | 0 | 598.0 | -20.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50-Building 106 | 51 | 0 | 632.0 | 0.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51-Building 211 | 52 | 0 | 744.0 | 28.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52-Building 204 | 53 | 0 | 834.0 | 68.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53-Building 210 | 54 | 0 | 734.0 | -16.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54-Building 201 | 55 | 0 | 940.0 | 106.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55-Building 220 | 56 | 0 | 908.0 | -16.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56-Building 231 | 57 | 0 | 970.0 | 80.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57-Building 228 | 58 | 0 | 958.0 | 60.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58-Building 229 | 60 | 0 | 950.0 | 32.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59-Building 223 | 61 | 0 | 950.0 | -14.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60-Building 230 | 62 | 0 | 1,050.0 | 112.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 1,020.0 | 16.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 1,014.0 | -20.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63-Building 1063 | 66 | 0 | 1,160.0 | 44.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64-Building 1062 | 68 | 0 | 1,178.0 | 0.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65-Building 1060 | 69 | 0 | 1,224.0 | -22.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66-Building 1167 | 70 | 0 | 1,216.0 | 94.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67-Building 1163 | 71 | 0 | 1,212.0 | 76.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68-Building 1169 | 72 | 0 | 1,280.0 | 50.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69-Building 1162 | 73 | 0 | 1,266.0 | 32.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70-Building 1170 | 74 | 0 | 1,360.0 | -16.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71-Building 1161 | 75 | 0 | 1,368.0 | -48.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72-Building 1160 | 76 | 0 | 1,398.0 | -50.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73-Building 1152/YMCA | 77 | 0 | 1,420.0 | -76.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74-Building 1151/YMCA Pool | 78 | 0 | 1,476.0 | -114.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75-Building 1004 | 79 | 0 | 1,300.0 | -140.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76-Home at 3234 Lyon St. | 81 | 8 | 1,560.0 | -150.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Widen & Replace 2030 PM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

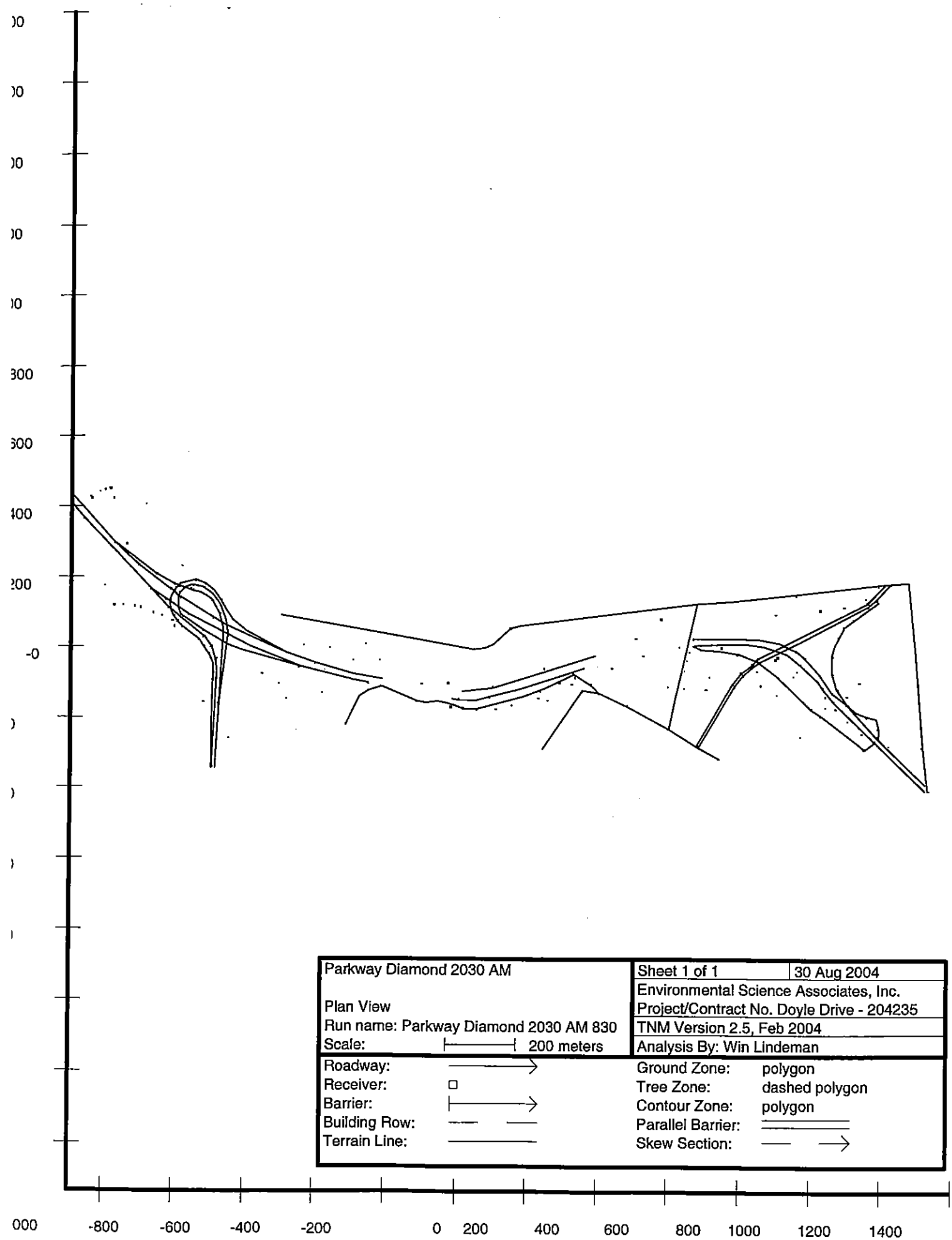
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1-Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 67.9 | 66 | 67.9 | 12 | Snd Lvl | 67.9 | 0.0 | 10 | -10.0 |
| 2-Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 64.1 | 66 | 64.1 | 12 | — | 64.1 | 0.0 | 10 | -10.0 |
| 3-Building 1187/1188 | 3 | 0 | 81.0 | 66.6 | 71 | -14.4 | 12 | — | 66.6 | 0.0 | 10 | -10.0 |
| 4-Building 1182 | 5 | 0 | 81.0 | 64.0 | 71 | -17.0 | 12 | — | 64.0 | 0.0 | 10 | -10.0 |
| 5-Building 1183/1186 | 6 | 0 | 81.0 | 65.3 | 71 | -15.7 | 12 | — | 65.3 | 0.0 | 10 | -10.0 |
| 6-Building 1184/1185 | 7 | 0 | 81.0 | 65.8 | 71 | -15.2 | 12 | — | 65.8 | 0.0 | 10 | -10.0 |
| 7-Building 603/Crissy Center | 8 | 0 | 72.0 | 66.3 | 71 | -5.7 | 12 | — | 66.3 | 0.0 | 10 | -10.0 |
| 8-PX Building | 9 | 0 | 0.0 | 65.6 | 71 | 65.6 | 12 | — | 65.6 | 0.0 | 10 | -10.0 |
| 9-Post Commissary/Sports Basement | 10 | 0 | 69.0 | 64.3 | 71 | -4.7 | 12 | — | 64.3 | 0.0 | 10 | -10.0 |
| 10-Battery Blaney/635 | 11 | 0 | 68.0 | 70.6 | 66 | 2.6 | 12 | Snd Lvl | 70.6 | 0.0 | 10 | -10.0 |
| 11-Battery Slaughter | 12 | 0 | 68.0 | 80.1 | 66 | 12.1 | 12 | Both | 80.1 | 0.0 | 10 | -10.0 |
| 12-Battery Sherwood/636 | 13 | 0 | 68.0 | 76.1 | 66 | 8.1 | 12 | Snd Lvl | 76.1 | 0.0 | 10 | -10.0 |
| 13-Battery Baldwin | 14 | 0 | 68.0 | 64.9 | 66 | -3.1 | 12 | — | 64.9 | 0.0 | 10 | -10.0 |
| 14-Building 644 | 15 | 0 | 0.0 | 61.1 | 71 | 61.1 | 12 | — | 61.1 | 0.0 | 10 | -10.0 |
| 15-Building 649 | 16 | 0 | 0.0 | 60.9 | 66 | 60.9 | 12 | — | 60.9 | 0.0 | 10 | -10.0 |
| 16-Building 650/Stilwell Hall | 17 | 0 | 70.0 | 59.9 | 66 | -10.1 | 12 | — | 59.9 | 0.0 | 10 | -10.0 |
| 17-1253 Armistead Road | 18 | 1 | 66.0 | 65.5 | 66 | -0.5 | 12 | — | 65.5 | 0.0 | 10 | -10.0 |
| 18-Home on Armistead Road | 19 | 1 | 66.0 | 72.3 | 66 | 6.3 | 12 | Snd Lvl | 72.3 | 0.0 | 10 | -10.0 |
| 19-Building 969 | 20 | 0 | 0.0 | 52.7 | 71 | 52.7 | 12 | — | 52.7 | 0.0 | 10 | -10.0 |
| 20-Building 968 | 21 | 0 | 0.0 | 54.2 | 71 | 54.2 | 12 | — | 54.2 | 0.0 | 10 | -10.0 |
| 21-Building 967 | 22 | 0 | 0.0 | 56.2 | 71 | 56.2 | 12 | — | 56.2 | 0.0 | 10 | -10.0 |
| 22-Building 966 | 23 | 0 | 0.0 | 56.1 | 71 | 56.1 | 12 | — | 56.1 | 0.0 | 10 | -10.0 |
| 23-Building 964 | 24 | 1 | 0.0 | 53.8 | 66 | 53.8 | 12 | — | 53.8 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24-Building 963 | 25 | 1 | 0.0 | 54.7 | 66 | 54.7 | 12 | — | 54.7 | 0.0 | 10 | -10.0 |
| 25-Building 962 | 26 | 1 | 0.0 | 54.5 | 66 | 54.5 | 12 | — | 54.5 | 0.0 | 10 | -10.0 |
| 26-Unknown Building | 27 | 0 | 0.0 | 57.6 | 71 | 57.6 | 12 | — | 57.6 | 0.0 | 10 | -10.0 |
| 27-Log Cabin | 28 | 0 | 63.0 | 67.8 | 66 | 4.8 | 12 | Snd Lvl | 67.8 | 0.0 | 10 | -10.0 |
| 28-Unknown Building | 29 | 0 | 0.0 | 61.6 | 71 | 61.6 | 12 | — | 61.6 | 0.0 | 10 | -10.0 |
| 29-Building 1298 Storey Ave. | 30 | 2 | 66.5 | 66.9 | 66 | 0.4 | 12 | Snd Lvl | 66.9 | 0.0 | 10 | -10.0 |
| 30-Building 1297 Storey Ave. | 31 | 2 | 66.5 | 68.4 | 66 | 1.9 | 12 | Snd Lvl | 68.4 | 0.0 | 10 | -10.0 |
| 31-Building 1295 Storey Ave. | 32 | 2 | 66.5 | 70.4 | 66 | 3.9 | 12 | Snd Lvl | 70.4 | 0.0 | 10 | -10.0 |
| 32-Building 1294 Storey Ave. | 33 | 2 | 66.5 | 72.2 | 66 | 5.7 | 12 | Snd Lvl | 72.2 | 0.0 | 10 | -10.0 |
| 33-Building 1293 Storey Ave. | 34 | 2 | 66.5 | 73.4 | 66 | 6.9 | 12 | Snd Lvl | 73.4 | 0.0 | 10 | -10.0 |
| 34-Building 1291 Storey Ave. | 35 | 2 | 66.5 | 73.8 | 66 | 7.3 | 12 | Snd Lvl | 73.8 | 0.0 | 10 | -10.0 |
| 35-Building 1290 Storey Ave. | 36 | 2 | 66.5 | 73.8 | 66 | 7.3 | 12 | Snd Lvl | 73.8 | 0.0 | 10 | -10.0 |
| 36-Building 1289 Storey Ave. | 37 | 2 | 66.5 | 71.3 | 66 | 4.8 | 12 | Snd Lvl | 71.3 | 0.0 | 10 | -10.0 |
| 37-Building 1263 Storey Ave. | 38 | 2 | 0.0 | 67.9 | 66 | 67.9 | 12 | Snd Lvl | 67.9 | 0.0 | 10 | -10.0 |
| 38-Building 682/Cross Cultural Center | 39 | 0 | 65.5 | 63.5 | 66 | -2.0 | 12 | — | 63.5 | 0.0 | 10 | -10.0 |
| 39-Building 661/Cavalry Stables Pen | 40 | 0 | 64.0 | 66.4 | 71 | 2.4 | 12 | — | 66.4 | 0.0 | 10 | -10.0 |
| 40-Building 662/Cavalry Stable | 41 | 0 | 64.0 | 66.5 | 71 | 2.5 | 12 | — | 66.5 | 0.0 | 10 | -10.0 |
| 41-Building 663/Cavalry Stable | 42 | 0 | 64.0 | 65.3 | 71 | 1.3 | 12 | — | 65.3 | 0.0 | 10 | -10.0 |
| 42-Building 667/Cavalry Stable | 43 | 0 | 64.0 | 65.5 | 71 | 1.5 | 12 | — | 65.5 | 0.0 | 10 | -10.0 |
| 43-National Cemetery Grave Site | 44 | 0 | 69.0 | 75.1 | 66 | 6.1 | 12 | Snd Lvl | 75.1 | 0.0 | 10 | -10.0 |
| 44-Building 129 | 45 | 1 | 0.0 | 67.6 | 66 | 67.6 | 12 | Snd Lvl | 67.6 | 0.0 | 10 | -10.0 |
| 45-Building 122 | 46 | 0 | 0.0 | 72.1 | 71 | 72.1 | 12 | Snd Lvl | 72.1 | 0.0 | 10 | -10.0 |
| 46-Building 108 | 47 | 0 | 0.0 | 71.7 | 71 | 71.7 | 12 | Snd Lvl | 71.7 | 0.0 | 10 | -10.0 |
| 47-Building 107 | 48 | 0 | 0.0 | 73.1 | 71 | 73.1 | 12 | Snd Lvl | 73.1 | 0.0 | 10 | -10.0 |
| 48-Building 104 | 49 | 0 | 74.0 | 70.0 | 71 | -4.0 | 12 | — | 70.0 | 0.0 | 10 | -10.0 |
| 49-Building 105 | 50 | 0 | 74.0 | 74.4 | 71 | 0.4 | 12 | Snd Lvl | 74.4 | 0.0 | 10 | -10.0 |
| 50-Building 106 | 51 | 0 | 76.0 | 72.8 | 71 | -3.2 | 12 | Snd Lvl | 72.8 | 0.0 | 10 | -10.0 |
| 51-Building 211 | 52 | 0 | 0.0 | 73.9 | 71 | 73.9 | 12 | Snd Lvl | 73.9 | 0.0 | 10 | -10.0 |
| 52-Building 204 | 53 | 0 | 0.0 | 66.5 | 71 | 66.5 | 12 | — | 66.5 | 0.0 | 10 | -10.0 |
| 53-Building 210 | 54 | 0 | 0.0 | 70.7 | 71 | 70.7 | 12 | — | 70.7 | 0.0 | 10 | -10.0 |
| 54-Building 201 | 55 | 0 | 0.0 | 64.1 | 71 | 64.1 | 12 | — | 64.1 | 0.0 | 10 | -10.0 |
| 55-Building 220 | 56 | 0 | 0.0 | 64.6 | 71 | 64.6 | 12 | — | 64.6 | 0.0 | 10 | -10.0 |
| 56-Building 231 | 57 | 0 | 0.0 | 66.2 | 71 | 66.2 | 12 | — | 66.2 | 0.0 | 10 | -10.0 |
| 57-Building 228 | 58 | 0 | 0.0 | 65.2 | 71 | 65.2 | 12 | — | 65.2 | 0.0 | 10 | -10.0 |
| 58-Building 229 | 60 | 0 | 0.0 | 63.9 | 71 | 63.9 | 12 | — | 63.9 | 0.0 | 10 | -10.0 |
| 59-Building 223 | 61 | 0 | 0.0 | 61.2 | 71 | 61.2 | 12 | — | 61.2 | 0.0 | 10 | -10.0 |
| 60-Building 230 | 62 | 0 | 0.0 | 66.6 | 71 | 66.6 | 12 | — | 66.6 | 0.0 | 10 | -10.0 |
| 61-Building 1029/Swords to Plowshares | 63 | 100 | 57.0 | 62.8 | 66 | 5.8 | 12 | — | 62.8 | 0.0 | 10 | -10.0 |
| 62-Building 1030/Swords to Plowshares | 64 | 100 | 57.0 | 61.2 | 66 | 4.2 | 12 | — | 61.2 | 0.0 | 10 | -10.0 |
| 63-Building 1063 | 66 | 0 | 68.5 | 61.9 | 71 | -6.6 | 12 | — | 61.9 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64-Building 1062 | 68 | 0 | 68.5 | 59.7 | 71 | -8.8 | 12 | — | 59.7 | 0.0 | 10 | -10.0 |
| 65-Building 1060 | 69 | 0 | 68.5 | 59.0 | 71 | -9.5 | 12 | — | 59.0 | 0.0 | 10 | -10.0 |
| 66-Building 1167 | 70 | 0 | 68.0 | 65.2 | 71 | -2.8 | 12 | — | 65.2 | 0.0 | 10 | -10.0 |
| 67-Building 1163 | 71 | 0 | 0.0 | 64.4 | 71 | 64.4 | 12 | — | 64.4 | 0.0 | 10 | -10.0 |
| 68-Building 1169 | 72 | 0 | 68.0 | 67.1 | 71 | -0.9 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 69-Building 1162 | 73 | 0 | 0.0 | 64.1 | 71 | 64.1 | 12 | — | 64.1 | 0.0 | 10 | -10.0 |
| 70-Building 1170 | 74 | 0 | 68.0 | 70.7 | 71 | 2.7 | 12 | — | 70.7 | 0.0 | 10 | -10.0 |
| 71-Building 1161 | 75 | 0 | 0.0 | 67.1 | 71 | 67.1 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 72-Building 1160 | 76 | 0 | 0.0 | 71.4 | 71 | 71.4 | 12 | Snd Lvl | 71.4 | 0.0 | 10 | -10.0 |
| 73-Building 1152/YMCA | 77 | 0 | 0.0 | 67.8 | 66 | 67.8 | 12 | Snd Lvl | 67.8 | 0.0 | 10 | -10.0 |
| 74-Building 1151/YMCA Pool | 78 | 0 | 0.0 | 74.8 | 66 | 74.8 | 12 | Snd Lvl | 74.8 | 0.0 | 10 | -10.0 |
| 75-Building 1004 | 79 | 0 | 0.0 | 56.5 | 71 | 56.5 | 12 | — | 56.5 | 0.0 | 10 | -10.0 |
| 76-Home at 3234 Lyon St. | 81 | 8 | 76.5 | 72.9 | 66 | -3.6 | 12 | Snd Lvl | 72.9 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 232 | 0.0 | 0.0 | 0.0 |
| All Impacted | 28 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |


Parkway Diamond 2030 AM
Plan View
Run name: Parkway Diamond 2030 AM 830
Scale: 200 meters
Sheet 1 of 1
30 Aug 2004
Environmental Science Associates, Inc.
Project/Contract No. Doyle Drive - 204235
TNM Version 2.5, Feb 2004
Analysis By: Win Lindeman
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
-800
-600
-400
-200
0
200
400
600
800
1000
1200
1400

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2030 AM

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

| Roadway | | Points | | | | | Flow Control | | | Segment | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle to North Tunnel | 18.0 | 1 - North | 11 | -1,185.0 | 519.0 | 53.00 | | | | Average | |
| | | 2 - 1+97.5 | 10 | -1,060.0 | 368.0 | 56.00 | | | | Average | |
| | | 3 - 4+74 | 9 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 4 - 5+27 | 8 | -827.0 | 138.0 | 51.50 | | | | Average | |
| | | 5 - 5+27 | 7 | -826.0 | 138.0 | 51.50 | | | | Average | Y |
| | | 6 - 6+00 | 6 | -764.0 | 95.0 | 49.00 | | | | Average | Y |
| | | 7 - 8+00 | 5 | -588.0 | 7.0 | 40.00 | | | | Average | Y |
| | | 8 - 9+57 | 4 | -450.0 | -50.0 | 33.00 | | | | Average | Y |
| | | 9 - 11+10 | 3 | -294.0 | -88.0 | 27.00 | | | | Average | Y |
| | | 10 - 11+1 | 2 | -293.0 | -88.0 | 27.00 | | | | Average | |
| | | 11 - 11+53 | 1 | -253.0 | -96.0 | 26.00 | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 18.0 | 1 - 13+93 | 18 | -17.0 | -142.0 | 16.00 | | | | Average | |
| | | 2 - 14+10 | 17 | 0.0 | -143.0 | 16.00 | | | | Average | |
| | | 3 - 14+60 | 16 | 49.0 | -143.0 | 14.00 | | | | Average | |
| | | 4 - 15+00 | 15 | 88.0 | -135.0 | 12.00 | | | | Average | |
| | | 5 - 15+85. | 14 | 170.0 | -112.0 | 9.00 | | | | Average | |
| | | 6 - 17+33. | 13 | 310.0 | -65.0 | 5.00 | | | | Average | |
| | | 7 - 17+80 | 12 | 354.0 | -52.0 | 4.00 | | | | | |
| EB Doyle from South Tunnel to Francisco | 18.0 | 1 - 20+95 | 19 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 21+20 | 20 | 684.0 | 14.0 | 3.00 | | | | Average | |
| | | 3 - 21+20 | 21 | 685.0 | 14.0 | 3.00 | | | | Average | Y |
| | | 4 - 22+42. | 22 | 807.0 | 18.0 | 5.00 | | | | Average | Y |
| | | 5 - 23+00 | 23 | 859.0 | 12.0 | 6.00 | | | | Average | Y |
| | | 6 - 23+25 | 24 | 925.0 | -10.0 | 6.00 | | | | Average | Y |
| | | 7 - 23+25 | 25 | 926.0 | -10.0 | 6.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 - 24+20 | 26 | 966.0 | -41.0 | 5.00 | | | | Average | |
| | | 9 - 24+85. | 27 | 1,016.0 | -88.0 | 4.00 | | | | Average | |
| | | 10 - 25+17 | 28 | 1,030.0 | -108.0 | 3.50 | | | | Average | |
| | | 11 - 25+64 | 29 | 1,062.0 | -146.0 | 3.00 | | | | Average | |
| | | 12 - Gorg | 30 | 1,178.0 | -259.0 | 4.00 | | | | Average | |
| | | 13 - Franc | 31 | 1,320.0 | -400.0 | 4.00 | | | | | |
| WB Doyle from Fancisco to South Tunnel | 10.8 | 1 - Francis | 32 | 1,320.0 | -380.0 | 4.00 | | | | Average | |
| | | 2 - 27+20. | 33 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 3 - 26+00 | 34 | 1,095.0 | -152.0 | 3.50 | | | | Average | |
| | | 4 - 25+40 | 35 | 1,055.0 | -120.0 | 3.50 | | | | Average | |
| | | 5 - 24+73 | 36 | 1,018.0 | -65.0 | 4.00 | | | | Average | |
| | | 6 - 24+20 | 37 | 977.0 | -21.0 | 5.00 | | | | Average | |
| | | 7 - 23+75 | 38 | 950.0 | 0.0 | 6.00 | | | | Average | |
| | | 8 - 23+75 | 39 | 949.0 | 0.0 | 6.00 | | | | Average | Y |
| | | 9 - 23+22 | 40 | 900.0 | 22.0 | 6.00 | | | | Average | Y |
| | | 10 - 23+22 | 41 | 899.0 | 22.0 | 6.00 | | | | Average | |
| | | 11 - 22+68 | 42 | 843.0 | 34.0 | 6.00 | | | | Average | |
| | | 12 - 22+00 | 43 | 775.0 | 33.0 | 4.00 | | | | Average | |
| | | 13 - 20+85 | 44 | 661.0 | 31.0 | 2.00 | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 10.8 | 1 - 18+05 | 45 | 386.0 | -15.0 | 3.50 | | | | Average | |
| | | 2 - 15+00 | 46 | 96.0 | -107.0 | 10.00 | | | | Average | |
| | | 3 - 14+10 | 47 | 10.0 | -119.0 | 14.00 | | | | | |
| WB Doyle from North Tunnel to North End | 13.2 | 1 - 11+80 | 51 | -216.0 | -85.0 | 24.00 | | | | Average | |
| | | 2 - 11+00 | 52 | -295.0 | -69.0 | 27.00 | | | | Average | |
| | | 3 - 11+00 | 53 | -296.0 | -69.0 | 27.00 | | | | Average | Y |
| | | 4 - 9+80 | 54 | -407.0 | -39.0 | 32.00 | | | | Average | Y |
| | | 5 - 8+73 | 55 | -488.0 | -9.0 | 36.00 | | | | Average | Y |
| | | 6 - 7+00 | 56 | -661.0 | 69.0 | 44.00 | | | | Average | Y |
| | | 7 - 6+60 | 57 | -696.0 | 88.0 | 46.00 | | | | Average | Y |
| | | 8 - 6+60 | 58 | -697.0 | 88.0 | 46.00 | | | | Average | |
| | | 9 - 5+54 | 59 | -789.0 | 145.0 | 50.00 | | | | Average | |
| | | 10 - 5+54 | 60 | -790.0 | 145.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+14 | 61 | -817.0 | 169.0 | 52.00 | | | | Average | Y |
| | | 12 - 5+14 | 62 | -818.0 | 169.0 | 52.00 | | | | Average | |
| | | 13 - 4+00 | 63 | -907.0 | 237.0 | 56.00 | | | | Average | |
| | | 14 - 3+10 | 64 | -975.0 | 300.0 | 56.00 | | | | Average | |
| | | 15 - 0+00 | 65 | -1,170.0 | 522.0 | 53.00 | | | | | |
| WB Doyle off ramp to SB Park Presidio | 7.0 | 1 - 0+00 | 66 | -488.0 | -9.0 | 42.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 - 1+30 | 67 | -600.0 | 52.0 | 42.00 | | | | Average | Y |
| | | 3 - 1+80 | 68 | -639.0 | 82.0 | 42.00 | | | | Average | Y |
| | | 4 - 2+20 | 69 | -661.0 | 114.0 | 42.00 | | | | Average | Y |
| | | 5 - 2+20 | 70 | -662.0 | 114.0 | 42.00 | | | | Average | |
| | | 6 - 2+48 | 71 | -673.0 | 139.0 | 42.00 | | | | Average | |
| | | 7 - 3+09 | 72 | -693.0 | 165.0 | 42.00 | | | | Average | |
| | | 8 - 3+40 | 73 | -718.0 | 184.0 | 42.00 | | | | Average | |
| | | 9 - 3+60 | 74 | -746.0 | 194.0 | 42.00 | | | | Average | |
| | | 10 - 3+80 | 75 | -787.0 | 185.0 | 42.00 | | | | Average | |
| | | 11 - 4+00 | 76 | -803.0 | 171.0 | 42.00 | | | | Average | |
| | | 12 - 4+20 | 77 | -813.0 | 153.0 | 42.00 | | | | Average | |
| | | 13 - 4+40 | 78 | -818.0 | 134.0 | 42.00 | | | | Average | |
| | | 14 - 4+59 | 79 | -815.0 | 112.0 | 42.00 | | | | Average | |
| | | 15 - 4+80 | 80 | -807.0 | 93.0 | 42.00 | | | | Average | |
| | | 16 - 5+00 | 81 | -796.0 | 76.0 | 41.00 | | | | Average | |
| | | 17 - 5+20 | 82 | -782.0 | 61.0 | 40.00 | | | | Average | |
| | | 18 - 5+80 | 83 | -735.0 | 24.0 | 40.00 | | | | Average | |
| | | 19 - 6+06 | 84 | -719.0 | 5.0 | 40.00 | | | | Average | |
| | | 20 - 6+31 | 85 | -706.0 | -15.0 | 40.00 | | | | Average | |
| | | 21 - 6+60 | 86 | -696.0 | -42.0 | 40.00 | | | | Average | |
| | | 22 - 6+88 | 87 | -694.0 | -68.0 | 40.00 | | | | Average | |
| | | 23 - 8+23 | 169 | -699.0 | -203.0 | 40.00 | | | | Average | |
| | | 24 - 5+88. | 88 | -698.0 | -337.0 | 40.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 10.2 | 1 - 0+00 | 89 | -690.0 | -337.0 | 40.00 | | | | Average | |
| | | 2A | 170 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 3+72.3 | 90 | -667.0 | 32.0 | 37.00 | | | | Average | |
| | | 3 - 4+00 | 91 | -667.0 | 61.0 | 38.00 | | | | Average | |
| | | 4 - 4+40 | 92 | -677.0 | 101.0 | 40.00 | | | | Average | |
| | | 5 - 4+60 | 93 | -698.0 | 137.0 | 48.00 | | | | Average | |
| | | 6 - 5+00 | 94 | -715.0 | 150.0 | 48.00 | | | | Average | |
| | | 7 - 5+20 | 95 | -734.0 | 160.0 | 49.00 | | | | Average | |
| | | 8 - 5+40 | 96 | -753.0 | 165.0 | 49.00 | | | | Average | |
| | | 9 - 5+53 | 97 | -760.0 | 168.0 | 50.00 | | | | Average | |
| | | 10 - 5+53 | 98 | -761.0 | 168.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+80 | 99 | -792.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 12 - 5+98 | 100 | -807.0 | 183.0 | 52.00 | | | | Average | Y |
| | | 13 - 5+98 | 101 | -808.0 | 183.0 | 52.00 | | | | Average | |
| | | 14 - 6+58. | 102 | -857.0 | 212.0 | 53.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15 - 8+04. | 103 | -975.0 | 300.0 | 56.00 | | | | | |
| NB Park Presidio to EB Doyle Drive | 7.0 | 1 - 0+00 | 104 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 1+35.9 | 105 | -657.0 | 20.0 | 36.00 | | | | Average | |
| | | 3 - 1+60 | 106 | -654.0 | 44.0 | 40.00 | | | | Average | |
| | | 4 - 1+80 | 107 | -657.0 | 65.0 | 40.00 | | | | Average | |
| | | 5 - 2+00 | 108 | -661.0 | 85.0 | 40.00 | | | | Average | |
| | | 6 - 2+20 | 109 | -667.0 | 104.0 | 42.00 | | | | Average | |
| | | 7 - 2+40 | 110 | -675.0 | 123.0 | 42.00 | | | | Average | |
| | | 8 - 2+60 | 111 | -686.0 | 140.0 | 42.00 | | | | Average | |
| | | 9 - 2+81.9 | 112 | -700.0 | 157.0 | 42.00 | | | | Average | |
| | | 10 - 3+09. | 113 | -723.0 | 175.0 | 42.00 | | | | Average | |
| | | 11 - 3+40 | 114 | -754.0 | 180.0 | 42.00 | | | | Average | |
| | | 12 - 3+60 | 115 | -775.0 | 173.0 | 42.00 | | | | Average | |
| | | 13 - 3+80 | 116 | -790.0 | 158.0 | 42.00 | | | | Average | |
| | | 14 - 4+00 | 117 | -796.0 | 138.0 | 42.00 | | | | Average | |
| | | 15 - 4+20 | 118 | -795.0 | 116.0 | 42.00 | | | | Average | |
| | | 16 - 4+40 | 119 | -788.0 | 97.0 | 42.00 | | | | Average | |
| | | 17 - 4+53. | 120 | -778.0 | 88.0 | 42.00 | | | | Average | |
| | | 18 - 5+20 | 121 | -722.0 | 51.0 | 42.00 | | | | Average | |
| | | 19 - 5+20 | 122 | -721.0 | 51.0 | 42.00 | | | | Average | Y |
| | | 20 - 6+00 | 123 | -652.0 | 11.0 | 42.00 | | | | Average | Y |
| | | 21 - 6+40 | 124 | -614.0 | -3.0 | 42.00 | | | | Average | |
| | | 22 - 8+19. | 125 | -450.0 | -50.0 | 33.00 | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 10.0 | 1 - 0+00 | 128 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 2 - 0+65 | 129 | -823.0 | 116.0 | 52.00 | | | | Average | |
| | | 3 - 0+65 | 130 | -822.0 | 116.0 | 52.00 | | | | Average | Y |
| | | 4 - 2+00 | 131 | -723.0 | 35.0 | 44.00 | | | | Average | Y |
| | | 5 - 2+00 | 132 | -722.0 | 35.0 | 44.00 | | | | Average | |
| | | 6 - 2+40 | 133 | -700.0 | 5.0 | 42.00 | | | | Average | |
| | | 7 - 2+80 | 134 | -687.0 | -30.0 | 40.00 | | | | Average | |
| | | 8 - 3+14.5 | 135 | -685.0 | -63.0 | 37.00 | | | | Average | |
| | | 9 - 5+88.1 | 136 | -698.0 | -337.0 | 40.00 | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 6.0 | 1 - 0+00 | 137 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 0+42 | 138 | 685.0 | 0.0 | 2.00 | | | | Average | |
| | | 3 - 0+42 | 139 | 686.0 | 0.0 | 2.00 | | | | Average | Y |
| | | 4 - 1+00 | 140 | 740.0 | -2.0 | 2.00 | | | | Average | Y |
| | | 5 - 1+50 | 141 | 786.0 | -11.0 | 2.00 | | | | Average | Y |
| | | 6 - 1+50 | 142 | 787.0 | -11.0 | 2.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 - 2+12.1 | 143 | 843.0 | -30.0 | 1.00 | | | | Average | Y |
| | | 8 - EC 0+7 | 144 | 898.0 | -75.0 | 1.50 | | | | Average | |
| | | 9 | 145 | 998.0 | -167.0 | 3.00 | | | | Average | |
| | | 10 | 146 | 1,024.0 | -186.0 | 3.00 | | | | Average | |
| | | 11 | 147 | 1,128.0 | -265.0 | 4.00 | | | | Average | |
| | | 12 | 148 | 1,148.0 | -281.0 | 4.00 | | | | Average | |
| | | 13 - Infers | 149 | 1,178.0 | -259.0 | 4.00 | | | | | |
| NB Girard Rd. from Marina to Lincoln | 3.7 | 1 - 0+00 | 150 | 1,201.0 | 188.0 | 4.00 | | | | Average | |
| | | 2 - 0+65 | 151 | 1,153.0 | 136.0 | 3.60 | | | | Average | |
| | | 3 - 2+80 | 152 | 965.0 | 40.0 | 0.50 | | | | Average | |
| | | 4 - 4+09.9 | 153 | 843.0 | -23.0 | 0.00 | | | | Average | |
| | | 5 - 4+40 | 154 | 828.0 | -40.0 | 1.00 | | | | Average | |
| | | 6 - 4+80 | 155 | 796.0 | -65.0 | 4.70 | | | | Average | |
| | | 7 - 5+20 | 156 | 772.0 | -98.0 | 5.50 | | | | Average | |
| | | 8 - 7+20 | 157 | 673.0 | -273.0 | 11.50 | | | | | |
| SB Girard Rd. from Lincoln to Marina | 3.7 | 1 - 7+20 | 158 | 678.0 | -273.0 | 11.50 | | | | Average | |
| | | 2 - 5+20 | 159 | 779.0 | -102.0 | 5.50 | | | | Average | |
| | | 3 - 4+80 | 160 | 803.0 | -70.0 | 4.70 | | | | Average | |
| | | 4 - 4+40 | 161 | 831.0 | -44.0 | 1.00 | | | | Average | |
| | | 5 - 4+09.9 | 162 | 852.0 | -31.0 | 0.00 | | | | Average | |
| | | 6 - 2+80 | 163 | 965.0 | 27.0 | 0.50 | | | | Average | |
| | | 7 - 0+65 | 164 | 1,156.0 | 127.0 | 3.60 | | | | Average | |
| | | 8 - Palace | 239 | 1,178.0 | 146.0 | 4.00 | | | | Average | |
| | | 9 - Mason | 165 | 1,218.0 | 191.0 | 4.00 | | | | | |
| Halleck St. from Lincon to Mason | 7.2 | 1 - 3+65 | 166 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 2 - 2+77.9 | 167 | 612.0 | -139.0 | 10.00 | | | | Average | |
| | | 3 - 0+00 | 168 | 673.0 | 130.0 | 4.00 | | | | | |
| Lincoln from McDowell to Letterman | 7.3 | 1 | 180 | -316.0 | -214.0 | 33.00 | | | | Average | |
| | | 2 | 181 | -279.0 | -132.0 | 33.00 | | | | Average | |
| | | 3 | 182 | -251.0 | -115.0 | 33.00 | | | | Average | |
| | | 4 | 183 | -216.0 | -104.0 | 32.00 | | | | Average | |
| | | 5 | 184 | -118.0 | -147.0 | 31.00 | | | | Average | |
| | | 6 | 185 | -93.0 | -152.0 | 29.00 | | | | Average | |
| | | 7 | 186 | -59.0 | -148.0 | 29.00 | | | | Average | |
| | | 8 | 187 | -38.0 | -151.0 | 29.00 | | | | Average | |
| | | 9 | 188 | -14.0 | -158.0 | 29.00 | | | | Average | |
| | | 10 | 189 | 13.0 | -167.0 | 27.00 | | | | Average | |
| | | 11 | 190 | 50.0 | -170.0 | 26.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12 | 191 | 182.0 | -134.0 | 19.00 | | | | Average | |
| | | 13 | 192 | 245.0 | -108.0 | 15.00 | | | | Average | |
| | | 14 | 193 | 324.0 | -68.0 | 12.00 | | | | Average | |
| | | 15 | 194 | 376.0 | -100.0 | 13.00 | | | | Average | |
| | | 16 | 195 | 396.0 | -124.0 | 13.00 | | | | Average | |
| | | 17 | 196 | 478.0 | -160.0 | 12.00 | | | | Average | |
| | | 18 | 197 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 19 | 198 | 673.0 | -273.0 | 11.50 | | | | Average | |
| | | 20 | 199 | 735.0 | -310.0 | 12.00 | | | | | |
| Mason St. from Crissy Ave. to Marina | 7.3 | 1 | 200 | -500.0 | 96.0 | 3.00 | | | | Average | |
| | | 2 | 201 | 40.0 | 0.0 | 4.00 | | | | Average | |
| | | 3 | 202 | 72.0 | 4.0 | 4.00 | | | | Average | |
| | | 4 | 203 | 96.0 | 15.0 | 4.00 | | | | Average | |
| | | 5 | 204 | 144.0 | 60.0 | 4.00 | | | | Average | |
| | | 6 | 205 | 174.0 | 68.0 | 4.00 | | | | Average | |
| | | 7 | 206 | 673.0 | 130.0 | 4.00 | | | | Average | |
| | | 8 | 207 | 768.0 | 138.0 | 4.00 | | | | Average | |
| | | 9 | 208 | 952.0 | 159.0 | 4.00 | | | | Average | |
| | | 10 | 209 | 1,185.0 | 187.0 | 4.00 | | | | Average | |
| | | 11 | 210 | 1,218.0 | 191.0 | 4.00 | | | | Average | |
| | | 12 | 211 | 1,270.0 | 196.0 | 4.00 | | | | | |
| Baker St. from Marina to Richardson | 7.3 | 1 | 212 | 1,270.0 | 196.0 | 4.00 | | | | Average | |
| | | 2 | 213 | 1,280.0 | 93.0 | 4.00 | | | | Average | |
| | | 3 | 214 | 1,290.0 | -7.0 | 4.00 | | | | Average | |
| | | 4 | 215 | 1,310.0 | -276.0 | 4.00 | | | | Average | |
| | | 5 | 216 | 1,327.0 | -400.0 | 4.00 | | | | | |
| Palace Drive from Richardson to Marina | 7.3 | 1 | 217 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 2 | 218 | 1,186.0 | -245.0 | 4.00 | | | | Average | |
| | | 3 | 219 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 4 | 220 | 1,180.0 | -195.0 | 3.50 | | | | Average | |
| | | 5 | 221 | 1,151.0 | -188.0 | 3.00 | | | | Average | |
| | | 6 | 222 | 1,125.0 | -175.0 | 3.00 | | | | Average | |
| | | 7 | 223 | 1,100.0 | -153.0 | 3.00 | | | | Average | |
| | | 8 | 224 | 1,081.0 | -130.0 | 3.00 | | | | Average | |
| | | 9 | 225 | 1,069.0 | -108.0 | 3.00 | | | | Average | |
| | | 10 | 226 | 1,060.0 | -83.0 | 3.00 | | | | Average | |
| | | 11 | 227 | 1,055.0 | -63.5 | 4.00 | | | | Average | |
| | | 12 | 228 | 1,053.0 | -39.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 13 | 229 | 1,055.0 | -14.0 | 4.00 | | | | Average | |
| | | 14 | 230 | 1,061.0 | 10.0 | 4.00 | | | | Average | |
| | | 15 | 231 | 1,073.0 | 40.0 | 4.00 | | | | Average | |
| | | 16 | 232 | 1,088.0 | 68.0 | 4.00 | | | | Average | |
| | | 17 | 233 | 1,116.0 | 91.0 | 4.00 | | | | Average | |
| | | 18 | 234 | 1,185.0 | 139.0 | 4.00 | | | | Average | |
| | | 19 | 235 | 1,178.0 | 146.0 | 4.00 | | | | | |
| Montgomery St. from Sherlan to Lincoln | 9.2 | 1 | 236 | 237.0 | -280.0 | 16.00 | | | | Average | |
| | | 2 | 237 | 350.0 | -117.0 | 13.00 | | | | Average | |
| | | 3 | 238 | 396.0 | -124.0 | 13.00 | | | | | |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2030 AM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle to North Tunnel | 1 - North End | 11 | 6340 | 88 | 66 | 88 | 13 | 88 | 66 | 88 | 66 | 88 |
| | 2 - 1+97.539 | 10 | 6340 | 88 | 66 | 88 | 13 | 88 | 66 | 88 | 66 | 88 |
| | 3 - 4+74 | 9 | 4190 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 4 - 5+27 | 8 | 4190 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 5 - 5+27 | 7 | 4190 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 6 - 6+00 | 6 | 4190 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 7 - 8+00 | 5 | 4190 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 8 - 9+57 | 4 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 9 - 11+10 | 3 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 10 - 11+10 | 2 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 11 - 11+53 | 1 | | | | | | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 1 - 13+93 | 18 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 2 - 14+10 | 17 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 3 - 14+60 | 16 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 4 - 15+00 | 15 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 5 - 15+85.44 | 14 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 6 - 17+33.198 | 13 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 7 - 17+80 | 12 | | | | | | | | | | |
| EB Doyle from South Tunnel to Francisco | 1 - 20+95 | 19 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 2 - 21+20 | 20 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 3 - 21+20 | 21 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 22+42.630 | 22 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 5 - 23+00 | 23 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 6 - 23+25 | 24 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 7 - 23+25 | 25 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 8 - 24+20 | 26 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 9 - 24+85.060 | 27 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 10 - 25+17.10 | 28 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 11 - 25+64.74 | 29 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 12 - Gorgas I | 30 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 13 - Francisc | 31 | | | | | | | | | | |
| WB Doyle from Fancisco to South Tunnel | 1 - Francisco | 32 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 2 - 27+20.608 | 33 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 3 - 26+00 | 34 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 4 - 25+40 | 35 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 5 - 24+73 | 36 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 6 - 24+20 | 37 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 7 - 23+75 | 38 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 8 - 23+75 | 39 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 9 - 23+22 | 40 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 10 - 23+22 | 41 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 11 - 22+68 | 42 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 12 - 22+00 | 43 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 13 - 20+85 | 44 | | | | | | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 1 - 18+05 | 45 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 2 - 15+00 | 46 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 3 - 14+10 | 47 | | | | | | | | | | |
| WB Doyle from North Tunnel to North En | 1 - 11+80 | 51 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 2 - 11+00 | 52 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 3 - 11+00 | 53 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 4 - 9+80 | 54 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 5 - 8+73 | 55 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 6 - 7+00 | 56 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 7 - 6+60 | 57 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 8 - 6+60 | 58 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9 - 5+54 | 59 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 10 - 5+54 | 60 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 11 - 5+14 | 61 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 12 - 5+14 | 62 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 13 - 4+00 | 63 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 14 - 3+10 | 64 | 4892 | 88 | 51 | 88 | 66 | 88 | 31 | 88 | 51 | 88 |
| | 15 - 0+00 | 65 | | | | | | | | | | |
| WB Doyle off ramp to SB Park Presidio | 1 - 0+00 | 66 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 2 - 1+30 | 67 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 3 - 1+80 | 68 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 4 - 2+20 | 69 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 5 - 2+20 | 70 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 6 - 2+48 | 71 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 7 - 3+09 | 72 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 8 - 3+40 | 73 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 9 - 3+60 | 74 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 10 - 3+80 | 75 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 11 - 4+00 | 76 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 12 - 4+20 | 77 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 13 - 4+40 | 78 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 14 - 4+59 | 79 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 15 - 4+80 | 80 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 16 - 5+00 | 81 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 17 - 5+20 | 82 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 18 - 5+80 | 83 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 19 - 6+06 | 84 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 20 - 6+31 | 85 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 21 - 6+60 | 86 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 22 - 6+88 | 87 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 23 - 8+23 | 169 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 24 - 5+88.184 | 88 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 - 0+00 | 89 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 2A | 170 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 2 - 3+72.391 | 90 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 - 4+00 | 91 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 4 - 4+40 | 92 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 5 - 4+60 | 93 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 6 - 5+00 | 94 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 7 - 5+20 | 95 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 8 - 5+40 | 96 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 9 - 5+53 | 97 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 10 - 5+53 | 98 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 11 - 5+80 | 99 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 12 - 5+98 | 100 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 13 - 5+98 | 101 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 14 - 6+58.037 | 102 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 15 - 8+04.414 | 103 | | | | | | | | | | |
| NB Park Presidio to EB Doyle Drive | 1 - 0+00 | 104 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 2 - 1+35.965 | 105 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 3 - 1+60 | 106 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 4 - 1+80 | 107 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 5 - 2+00 | 108 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 6 - 2+20 | 109 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 7 - 2+40 | 110 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 8 - 2+60 | 111 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 9 - 2+81.908 | 112 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 10 - 3+09.875 | 113 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 11 - 3+40 | 114 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 12 - 3+60 | 115 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 13 - 3+80 | 116 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 14 - 4+00 | 117 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 15 - 4+20 | 118 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 16 - 4+40 | 119 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 17 - 4+53.16 | 120 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 18 - 5+20 | 121 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 19 - 5+20 | 122 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 20 - 6+00 | 123 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 21 - 6+40 | 124 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 22 - 8+19.142 | 125 | | | | | | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 1 - 0+00 | 128 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 2 - 0+65 | 129 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 3 - 0+65 | 130 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 4 - 2+00 | 131 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 5 - 2+00 | 132 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 6 - 2+40 | 133 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 7 - 2+80 | 134 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 8 - 3+14.595 | 135 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 9 - 5+88.184 | 136 | | | | | | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 1 - 0+00 | 137 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+42 | 138 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+42 | 139 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 1+00 | 140 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 1+50 | 141 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 1+50 | 142 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 2+12.133 | 143 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - EC 0+74.1 | 144 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 145 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 146 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 147 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 148 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 - Intersect | 149 | | | | | | | | | | |
| NB Girard Rd. from Marina to Lincoln | 1 - 0+00 | 150 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+65 | 151 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 2+80 | 152 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 4+09.995 | 153 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+40 | 154 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 4+80 | 155 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 5+20 | 156 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - 7+20 | 157 | | | | | | | | | | |
| SB Girard Rd. from Lincoln to Marina | 1 - 7+20 | 158 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 5+20 | 159 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 4+80 | 160 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 4+40 | 161 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+09.995 | 162 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 2+80 | 163 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 0+65 | 164 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - Palace Dr | 239 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 - Mason/Mc | 165 | | | | | | | | | | |
| Halleck St. from Lincon to Mason | 1 - 3+65 | 166 | 42 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 2+77.948 | 167 | 42 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+00 | 168 | | | | | | | | | | |
| Lincoln from McDowell to Letterman | 1 | 180 | 98 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 181 | 98 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 3 | 182 | 98 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 4 | 183 | 187 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 5 | 184 | 187 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 6 | 185 | 187 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 7 | 186 | 187 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 8 | 187 | 187 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 9 | 188 | 187 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 10 | 189 | 190 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 11 | 190 | 54 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 12 | 191 | 54 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 13 | 192 | 54 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 14 | 193 | 54 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 15 | 194 | 54 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 16 | 195 | 251 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 17 | 196 | 251 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 18 | 197 | 715 | 32 | 7 | 32 | 0 | 0 | 7 | 32 | 7 | 32 |
| | 19 | 198 | 782 | 32 | 8 | 32 | 0 | 0 | 8 | 32 | 8 | 32 |
| | 20 | 199 | | | | | | | | | | |
| Mason St. from Crissy Ave. to Marina | 1 | 200 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 201 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 202 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 203 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 204 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 205 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 206 | 15 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 207 | 15 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 208 | 17 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 209 | 1495 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 210 | 1495 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 211 | | | | | | | | | | |
| Baker St. from Marina to Richardson | 1 | 212 | 83 | 32 | 1 | 32 | 0 | 0 | 0 | 0 | 1 | 32 |
| | 2 | 213 | 3 | 32 | 1 | 32 | 0 | 0 | 0 | 0 | 1 | 32 |
| | 3 | 214 | 8 | 32 | 1 | 32 | 0 | 0 | 0 | 0 | 1 | 32 |
| | 4 | 215 | 8 | 32 | 1 | 32 | 0 | 0 | 0 | 0 | 1 | 32 |
| | 5 | 216 | | | | | | | | | | |
| Palace Drive from Richardson to Marina | 1 | 217 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 218 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 219 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 220 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 221 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 222 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 223 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 224 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 225 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 226 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 227 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 228 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 | 229 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 14 | 230 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 15 | 231 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 16 | 232 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 17 | 233 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 18 | 234 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 19 | 235 | | | | | | | | | | |
| Montgomery St. from Sherlan to Lincoln | 1 | 236 | 110 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 237 | 110 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 3 | 238 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

30 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2030 AM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 1,098.0 | -130.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 1,133.0 | -91.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3 Buildings 1187/1188 | 3 | 0 | 1,148.0 | 150.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4 Building 1182 | 4 | 0 | 1,087.0 | 125.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5 Buildings 1183/1186 | 5 | 0 | 1,020.0 | 116.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6 Buildings 1184/1185 | 6 | 0 | 893.0 | 103.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7 Building 603/Crissy Center | 7 | 0 | 571.0 | 88.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8 PX Building | 8 | 0 | 500.0 | 33.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9 Post Commissary/Sports Basement | 9 | 0 | 240.0 | -54.0 | 4.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 10 Battery Blaney | 10 | 0 | -30.0 | -96.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11 Battery Slaughter | 11 | 0 | -104.0 | -98.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12 Battery Sherwood | 12 | 0 | -223.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13 Battery Baldwin | 13 | 0 | -297.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14 Building 644 | 14 | 0 | -260.0 | 16.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15 Building 649 | 15 | 0 | -364.0 | 4.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16 Building 650/Stilwell Hall | 16 | 0 | -437.0 | 11.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17 1253 Armistead Road | 17 | 1 | -785.0 | 235.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18 Home on Armistead Road | 18 | 1 | -939.0 | 296.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19 Building 969 | 19 | 0 | -887.0 | 410.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20 Building 968 | 20 | 0 | -978.0 | 427.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21 Building 967 | 21 | 0 | -1,040.0 | 427.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22 Building 966 | 22 | 0 | -1,044.0 | 433.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 Building 964 | 23 | 0 | -1,016.0 | 446.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24 Building 963 | 24 | 0 | -1,002.0 | 452.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25 Building 962 | 25 | 0 | -987.0 | 455.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26 Unknown Building | 26 | 0 | -1,153.0 | 421.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27 Building 1299/Log Cabin | 27 | 0 | -1,003.0 | 177.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28 Building 1387 | 28 | 0 | -1,105.0 | 268.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29 Building 1298 Storey Ave. | 29 | 2 | -977.0 | 123.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30 Building 1297 Storey Ave. | 30 | 2 | -950.0 | 123.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31 Building 1295 Storey Ave. | 31 | 2 | -919.0 | 119.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32 Building 1294 Storey Ave. | 32 | 2 | -900.0 | 116.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33 Building 1293 Storey Ave. | 33 | 2 | -865.0 | 102.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34 Building 1291 Storey Ave. | 34 | 2 | -841.0 | 92.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35 Building 1290 Storey Ave. | 35 | 2 | -811.0 | 78.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36 Building 1289 Storey Ave. | 36 | 2 | -804.0 | 63.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37 Building 1263 Storey Ave. | 37 | 2 | -722.0 | -152.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38 Building 682/Cross Cultural Center | 38 | 0 | -650.0 | -254.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | -556.0 | -70.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40 Building 662/Cavalry Stable | 40 | 0 | -508.0 | -97.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41 Building 663/Cavalry Stable | 41 | 0 | -488.0 | -140.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42 Building 667/Cavalry Stable | 42 | 0 | -384.0 | -122.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43 National Cemetery Grave Site | 43 | 0 | -23.0 | -163.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44 Building 129 | 44 | 1 | 104.0 | -168.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45 Building 122 | 45 | 0 | 148.0 | -157.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46 Building 108 | 46 | 0 | 225.0 | -136.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47 Building 107 | 47 | 0 | 230.0 | -120.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48 Building 104 | 48 | 0 | 252.0 | -143.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49 Building 105 | 49 | 0 | 285.0 | -93.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50 Building 106 | 50 | 0 | 328.0 | -78.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51 Building 211 | 51 | 0 | 433.0 | -52.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52 Building 204 | 52 | 0 | 522.0 | -17.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53 Building 210 | 53 | 0 | 320.0 | -97.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54 Building 201 | 54 | 0 | 623.0 | 8.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55 Building 220 | 55 | 0 | 590.0 | -104.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56 Building 231 | 56 | 0 | 650.0 | -5.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57 Building 228 | 57 | 0 | 643.0 | -31.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

**INPUT: RECEIVERS**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 Building 229 | 58 | 0 | 637.0 | -60.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59 Building 223 | 59 | 0 | 636.0 | -108.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60 Building 230 | 60 | 0 | 740.0 | 6.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 706.0 | -77.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 698.0 | -113.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63 Building 1063 | 63 | 0 | 842.0 | -60.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64 Building 1062 | 64 | 0 | 852.0 | -100.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65 Building 1060 | 65 | 0 | 898.0 | -127.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66 Building 1167 | 66 | 0 | 900.0 | -18.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67 Building 1163 | 67 | 0 | 892.0 | -26.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68 Building 1169 | 68 | 0 | 955.0 | -58.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69 Building 1162 | 69 | 0 | 943.0 | -73.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70 Building 1170 | 70 | 0 | 1,035.0 | -132.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71 Building 1161 | 71 | 0 | 1,035.0 | -161.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72 Building 1160 | 72 | 0 | 1,066.0 | -166.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73 Building 1152/YMCA | 73 | 0 | 1,100.0 | -200.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74 Building 1151/YMCA Pool | 74 | 0 | 1,140.0 | -235.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75 Building 1004 | 75 | 0 | 965.0 | -246.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 1,216.0 | -270.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2030 AM
BARRIER DESIGN: INPUT HEIGHTS

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

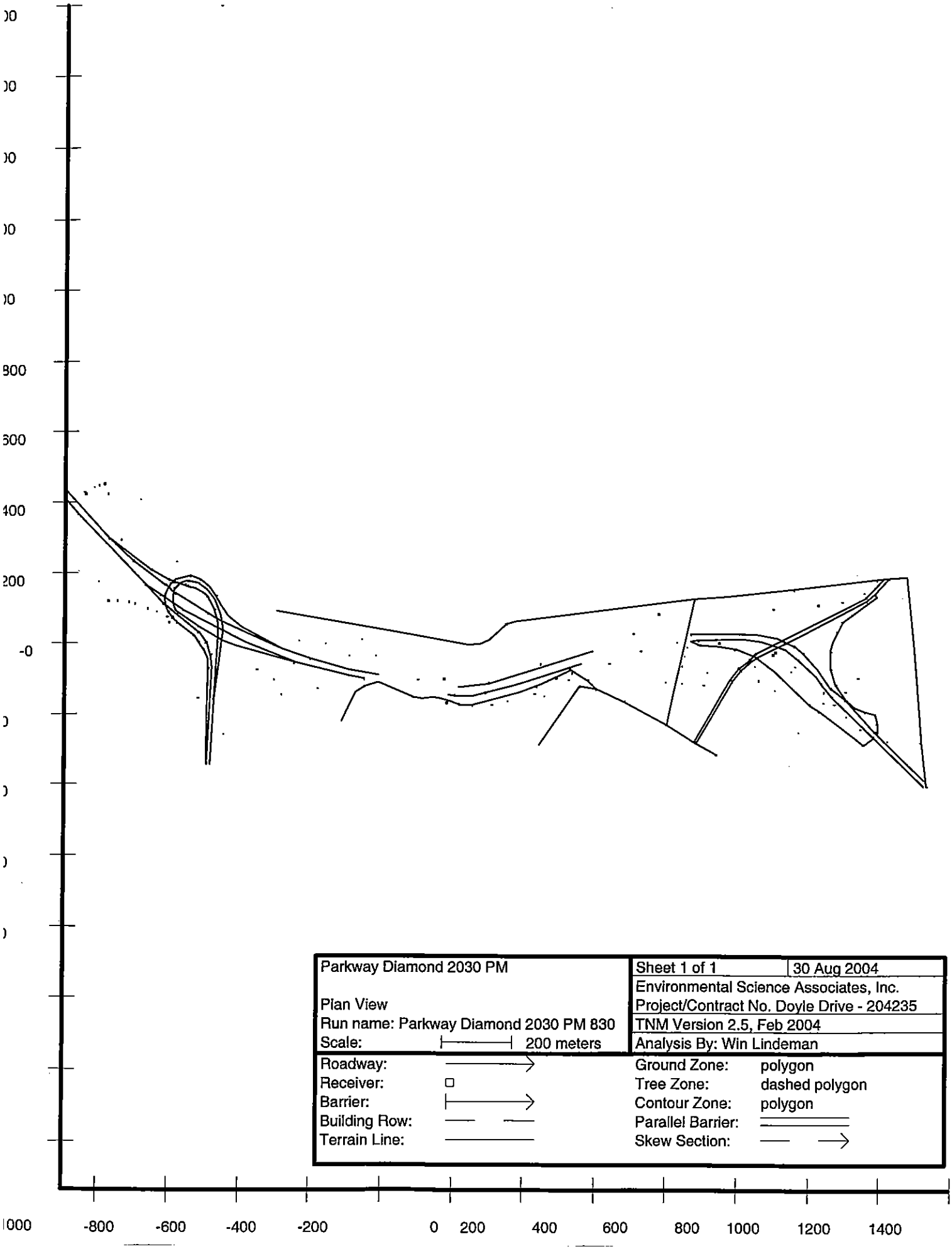
ATMOSPHERICS: 20 deg C, 50% RH

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 69.7 | 66 | 69.7 | 12 | Snd Lvl | 69.7 | 0.0 | 10 | -10.0 |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 62.0 | 66 | 62.0 | 12 | — | 62.0 | 0.0 | 10 | -10.0 |
| 3 Buildings 1187/1188 | 3 | 0 | 81.0 | 57.3 | 71 | -23.7 | 12 | — | 57.3 | 0.0 | 10 | -10.0 |
| 4 Building 1182 | 4 | 0 | 81.0 | 56.1 | 71 | -24.9 | 12 | — | 56.1 | 0.0 | 10 | -10.0 |
| 5 Buildings 1183/1186 | 5 | 0 | 81.0 | 57.0 | 71 | -24.0 | 12 | — | 57.0 | 0.0 | 10 | -10.0 |
| 6 Buildings 1184/1185 | 6 | 0 | 81.0 | 59.5 | 71 | -21.5 | 12 | — | 59.5 | 0.0 | 10 | -10.0 |
| 7 Building 603/Crissy Center | 7 | 0 | 72.0 | 56.3 | 71 | -15.7 | 12 | — | 56.3 | 0.0 | 10 | -10.0 |
| 8 PX Building | 8 | 0 | 0.0 | 59.2 | 71 | 59.2 | 12 | — | 59.2 | 0.0 | 10 | -10.0 |
| 9 Post Commissary/Sports Basement | 9 | 0 | 69.0 | 69.8 | 66 | 0.8 | 12 | Snd Lvl | 69.8 | 0.0 | 10 | -10.0 |
| 10 Battery Blaney | 10 | 0 | 68.0 | 69.4 | 66 | 1.4 | 12 | Snd Lvl | 69.4 | 0.0 | 10 | -10.0 |
| 11 Battery Slaughter | 11 | 0 | 68.0 | 65.4 | 66 | -2.6 | 12 | — | 65.4 | 0.0 | 10 | -10.0 |
| 12 Battery Sherwood | 12 | 0 | 68.0 | 65.0 | 66 | -3.0 | 12 | — | 65.0 | 0.0 | 10 | -10.0 |
| 13 Battery Baldwin | 13 | 0 | 68.0 | 67.6 | 66 | -0.4 | 12 | Snd Lvl | 67.6 | 0.0 | 10 | -10.0 |
| 14 Building 644 | 14 | 0 | 0.0 | 60.1 | 71 | 60.1 | 12 | — | 60.1 | 0.0 | 10 | -10.0 |
| 15 Building 649 | 15 | 0 | 0.0 | 60.7 | 66 | 60.7 | 12 | — | 60.7 | 0.0 | 10 | -10.0 |
| 16 Building 650/Stilwell Hall | 16 | 0 | 70.0 | 59.3 | 66 | -10.7 | 12 | — | 59.3 | 0.0 | 10 | -10.0 |
| 17 1253 Armistead Road | 17 | 1 | 66.0 | 64.8 | 66 | -1.2 | 12 | — | 64.8 | 0.0 | 10 | -10.0 |
| 18 Home on Armistead Road | 18 | 1 | 66.0 | 76.9 | 66 | 10.9 | 12 | Snd Lvl | 76.9 | 0.0 | 10 | -10.0 |
| 19 Building 969 | 19 | 0 | 0.0 | 58.4 | 71 | 58.4 | 12 | — | 58.4 | 0.0 | 10 | -10.0 |
| 20 Building 968 | 20 | 0 | 0.0 | 60.1 | 71 | 60.1 | 12 | — | 60.1 | 0.0 | 10 | -10.0 |
| 21 Building 967 | 21 | 0 | 0.0 | 65.4 | 71 | 65.4 | 12 | — | 65.4 | 0.0 | 10 | -10.0 |
| 22 Building 966 | 22 | 0 | 0.0 | 65.4 | 71 | 65.4 | 12 | — | 65.4 | 0.0 | 10 | -10.0 |
| 23 Building 964 | 23 | 0 | 0.0 | 63.5 | 66 | 63.5 | 12 | — | 63.5 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 Building 963 | 24 | 0 | 0.0 | 62.8 | 66 | 62.8 | 12 | — | 62.8 | 0.0 | 10 | -10.0 |
| 25 Building 962 | 25 | 0 | 0.0 | 62.1 | 66 | 62.1 | 12 | — | 62.1 | 0.0 | 10 | -10.0 |
| 26 Unknown Building | 26 | 0 | 0.0 | 75.0 | 71 | 75.0 | 12 | Snd Lvl | 75.0 | 0.0 | 10 | -10.0 |
| 27 Building 1299/Log Cabin | 27 | 0 | 63.0 | 68.8 | 66 | 5.8 | 12 | Snd Lvl | 68.8 | 0.0 | 10 | -10.0 |
| 28 Building 1387 | 28 | 0 | 0.0 | 67.4 | 71 | 67.4 | 12 | — | 67.4 | 0.0 | 10 | -10.0 |
| 29 Building 1298 Storey Ave. | 29 | 2 | 66.5 | 66.7 | 66 | 0.2 | 12 | Snd Lvl | 66.7 | 0.0 | 10 | -10.0 |
| 30 Building 1297 Storey Ave. | 30 | 2 | 66.5 | 68.6 | 66 | 2.1 | 12 | Snd Lvl | 68.6 | 0.0 | 10 | -10.0 |
| 31 Building 1295 Storey Ave. | 31 | 2 | 66.5 | 70.7 | 66 | 4.2 | 12 | Snd Lvl | 70.7 | 0.0 | 10 | -10.0 |
| 32 Building 1294 Storey Ave. | 32 | 2 | 66.5 | 71.3 | 66 | 4.8 | 12 | Snd Lvl | 71.3 | 0.0 | 10 | -10.0 |
| 33 Building 1293 Storey Ave. | 33 | 2 | 66.5 | 72.4 | 66 | 5.9 | 12 | Snd Lvl | 72.4 | 0.0 | 10 | -10.0 |
| 34 Building 1291 Storey Ave. | 34 | 2 | 66.5 | 73.0 | 66 | 6.5 | 12 | Snd Lvl | 73.0 | 0.0 | 10 | -10.0 |
| 35 Building 1290 Storey Ave. | 35 | 2 | 66.5 | 73.7 | 66 | 7.2 | 12 | Snd Lvl | 73.7 | 0.0 | 10 | -10.0 |
| 36 Building 1289 Storey Ave. | 36 | 2 | 66.5 | 72.8 | 66 | 6.3 | 12 | Snd Lvl | 72.8 | 0.0 | 10 | -10.0 |
| 37 Building 1263 Storey Ave. | 37 | 2 | 0.0 | 69.2 | 66 | 69.2 | 12 | Snd Lvl | 69.2 | 0.0 | 10 | -10.0 |
| 38 Building 682/Cross Cultural Center | 38 | 0 | 65.5 | 65.4 | 66 | -0.1 | 12 | — | 65.4 | 0.0 | 10 | -10.0 |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | 64.0 | 60.3 | 71 | -3.7 | 12 | — | 60.3 | 0.0 | 10 | -10.0 |
| 40 Building 662/Cavalry Stable | 40 | 0 | 64.0 | 62.4 | 71 | -1.6 | 12 | — | 62.4 | 0.0 | 10 | -10.0 |
| 41 Building 663/Cavalry Stable | 41 | 0 | 64.0 | 63.3 | 71 | -0.7 | 12 | — | 63.3 | 0.0 | 10 | -10.0 |
| 42 Building 667/Cavalry Stable | 42 | 0 | 64.0 | 67.1 | 71 | 3.1 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 43 National Cemetery Grave Site | 43 | 0 | 69.0 | 63.1 | 66 | -5.9 | 12 | — | 63.1 | 0.0 | 10 | -10.0 |
| 44 Building 129 | 44 | 1 | 0.0 | 56.9 | 66 | 56.9 | 12 | — | 56.9 | 0.0 | 10 | -10.0 |
| 45 Building 122 | 45 | 0 | 0.0 | 61.9 | 71 | 61.9 | 12 | — | 61.9 | 0.0 | 10 | -10.0 |
| 46 Building 108 | 46 | 0 | 0.0 | 61.9 | 71 | 61.9 | 12 | — | 61.9 | 0.0 | 10 | -10.0 |
| 47 Building 107 | 47 | 0 | 0.0 | 67.1 | 71 | 67.1 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 48 Building 104 | 48 | 0 | 74.0 | 58.4 | 71 | -15.6 | 12 | — | 58.4 | 0.0 | 10 | -10.0 |
| 49 Building 105 | 49 | 0 | 74.0 | 73.1 | 71 | -0.9 | 12 | Snd Lvl | 73.1 | 0.0 | 10 | -10.0 |
| 50 Building 106 | 50 | 0 | 76.0 | 71.7 | 71 | -4.3 | 12 | Snd Lvl | 71.7 | 0.0 | 10 | -10.0 |
| 51 Building 211 | 51 | 0 | 0.0 | 65.4 | 71 | 65.4 | 12 | — | 65.4 | 0.0 | 10 | -10.0 |
| 52 Building 204 | 52 | 0 | 0.0 | 59.1 | 71 | 59.1 | 12 | — | 59.1 | 0.0 | 10 | -10.0 |
| 53 Building 210 | 53 | 0 | 0.0 | 62.3 | 71 | 62.3 | 12 | — | 62.3 | 0.0 | 10 | -10.0 |
| 54 Building 201 | 54 | 0 | 0.0 | 57.6 | 71 | 57.6 | 12 | — | 57.6 | 0.0 | 10 | -10.0 |
| 55 Building 220 | 55 | 0 | 0.0 | 53.5 | 71 | 53.5 | 12 | — | 53.5 | 0.0 | 10 | -10.0 |
| 56 Building 231 | 56 | 0 | 0.0 | 66.0 | 71 | 66.0 | 12 | — | 66.0 | 0.0 | 10 | -10.0 |
| 57 Building 228 | 57 | 0 | 0.0 | 62.2 | 71 | 62.2 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 58 Building 229 | 58 | 0 | 0.0 | 59.3 | 71 | 59.3 | 12 | — | 59.3 | 0.0 | 10 | -10.0 |
| 59 Building 223 | 59 | 0 | 0.0 | 57.3 | 71 | 57.3 | 12 | — | 57.3 | 0.0 | 10 | -10.0 |
| 60 Building 230 | 60 | 0 | 0.0 | 71.9 | 71 | 71.9 | 12 | Snd Lvl | 71.9 | 0.0 | 10 | -10.0 |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 57.0 | 60.1 | 66 | 3.1 | 12 | — | 60.1 | 0.0 | 10 | -10.0 |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 57.0 | 57.6 | 66 | 0.6 | 12 | — | 57.6 | 0.0 | 10 | -10.0 |
| 63 Building 1063 | 63 | 0 | 68.5 | 62.8 | 71 | -5.7 | 12 | — | 62.8 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 Building 1062 | 64 | 0 | 68.5 | 59.6 | 71 | -8.9 | 12 | — | 59.6 | 0.0 | 10 | -10.0 |
| 65 Building 1060 | 65 | 0 | 68.5 | 60.0 | 71 | -8.5 | 12 | — | 60.0 | 0.0 | 10 | -10.0 |
| 66 Building 1167 | 66 | 0 | 68.0 | 65.1 | 71 | -2.9 | 12 | — | 65.1 | 0.0 | 10 | -10.0 |
| 67 Building 1163 | 67 | 0 | 0.0 | 65.2 | 71 | 65.2 | 12 | — | 65.2 | 0.0 | 10 | -10.0 |
| 68 Building 1169 | 68 | 0 | 68.0 | 64.8 | 71 | -3.2 | 12 | — | 64.8 | 0.0 | 10 | -10.0 |
| 69 Building 1162 | 69 | 0 | 0.0 | 63.4 | 71 | 63.4 | 12 | — | 63.4 | 0.0 | 10 | -10.0 |
| 70 Building 1170 | 70 | 0 | 68.0 | 71.8 | 71 | 3.8 | 12 | Snd Lvl | 71.8 | 0.0 | 10 | -10.0 |
| 71 Building 1161 | 71 | 0 | 0.0 | 67.4 | 71 | 67.4 | 12 | — | 67.4 | 0.0 | 10 | -10.0 |
| 72 Building 1160 | 72 | 0 | 0.0 | 71.9 | 71 | 71.9 | 12 | Snd Lvl | 71.9 | 0.0 | 10 | -10.0 |
| 73 Building 1152/YMCA | 73 | 0 | 0.0 | 71.5 | 66 | 71.5 | 12 | Snd Lvl | 71.5 | 0.0 | 10 | -10.0 |
| 74 Building 1151/YMCA Pool | 74 | 0 | 0.0 | 72.9 | 66 | 72.9 | 12 | Snd Lvl | 72.9 | 0.0 | 10 | -10.0 |
| 75 Building 1004 | 75 | 0 | 0.0 | 57.1 | 71 | 57.1 | 12 | — | 57.1 | 0.0 | 10 | -10.0 |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 76.5 | 74.3 | 66 | -2.2 | 12 | Snd Lvl | 74.3 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 229 | 0.0 | 0.0 | 0.0 |
| All Impacted | 27 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |


Parkway Diamond 2030 PM
Plan View
Run name: Parkway Diamond 2030 PM 830
Scale: 200 meters
Sheet 1 of 1
30 Aug 2004
Environmental Science Associates, Inc.
Project/Contract No. Doyle Drive - 204235
TNM Version 2.5, Feb 2004
Analysis By: Win Lindeman
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
-800
-600
-400
-200
0
200
400
600
800
1000
1200
1400

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2030 PM

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

| Roadway | | Points | | | | | Flow Control | | | Segment | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle to North Tunnel | 18.0 | 1 - North | 11 | -1,185.0 | 519.0 | 53.00 | | | | Average | |
| | | 2 - 1+97.5 | 10 | -1,060.0 | 368.0 | 56.00 | | | | Average | |
| | | 3 - 4+74 | 9 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 4 - 5+27 | 8 | -827.0 | 138.0 | 51.50 | | | | Average | |
| | | 5 - 5+27 | 7 | -826.0 | 138.0 | 51.50 | | | | Average | Y |
| | | 6 - 6+00 | 6 | -764.0 | 95.0 | 49.00 | | | | Average | Y |
| | | 7 - 8+00 | 5 | -588.0 | 7.0 | 40.00 | | | | Average | Y |
| | | 8 - 9+57 | 4 | -450.0 | -50.0 | 33.00 | | | | Average | Y |
| | | 9 - 11+10 | 3 | -294.0 | -88.0 | 27.00 | | | | Average | Y |
| | | 10 - 11+10 | 2 | -293.0 | -88.0 | 27.00 | | | | Average | |
| | | 11 - 11+53 | 1 | -253.0 | -96.0 | 26.00 | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 18.0 | 1 - 13+93 | 18 | -17.0 | -142.0 | 16.00 | | | | Average | |
| | | 2 - 14+10 | 17 | 0.0 | -143.0 | 16.00 | | | | Average | |
| | | 3 - 14+60 | 16 | 49.0 | -143.0 | 14.00 | | | | Average | |
| | | 4 - 15+00 | 15 | 88.0 | -135.0 | 12.00 | | | | Average | |
| | | 5 - 15+85. | 14 | 170.0 | -112.0 | 9.00 | | | | Average | |
| | | 6 - 17+33. | 13 | 310.0 | -65.0 | 5.00 | | | | Average | |
| | | 7 - 17+80 | 12 | 354.0 | -52.0 | 4.00 | | | | | |
| EB Doyle from South Tunnel to Francisco | 18.0 | 1 - 20+95 | 19 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 21+20 | 20 | 684.0 | 14.0 | 3.00 | | | | Average | |
| | | 3 - 21+20 | 21 | 685.0 | 14.0 | 3.00 | | | | Average | Y |
| | | 4 - 22+42. | 22 | 807.0 | 18.0 | 5.00 | | | | Average | Y |
| | | 5 - 23+00 | 23 | 859.0 | 12.0 | 6.00 | | | | Average | Y |
| | | 6 - 23+25 | 24 | 925.0 | -10.0 | 6.00 | | | | Average | Y |
| | | 7 - 23+25 | 25 | 926.0 | -10.0 | 6.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 - 24+20 | 26 | 966.0 | -41.0 | 5.00 | | | | Average | |
| | | 9 - 24+85. | 27 | 1,016.0 | -88.0 | 4.00 | | | | Average | |
| | | 10 - 25+17 | 28 | 1,030.0 | -108.0 | 3.50 | | | | Average | |
| | | 11 - 25+64 | 29 | 1,062.0 | -146.0 | 3.00 | | | | Average | |
| | | 12 - Gorg | 30 | 1,178.0 | -259.0 | 4.00 | | | | Average | |
| | | 13 - Franc | 31 | 1,320.0 | -400.0 | 4.00 | | | | | |
| WB Doyle from Fancisco to South Tunnel | 10.8 | 1 - Francis | 32 | 1,320.0 | -380.0 | 4.00 | | | | Average | |
| | | 2 - 27+20. | 33 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 3 - 26+00 | 34 | 1,095.0 | -152.0 | 3.50 | | | | Average | |
| | | 4 - 25+40 | 35 | 1,055.0 | -120.0 | 3.50 | | | | Average | |
| | | 5 - 24+73 | 36 | 1,018.0 | -65.0 | 4.00 | | | | Average | |
| | | 6 - 24+20 | 37 | 977.0 | -21.0 | 5.00 | | | | Average | |
| | | 7 - 23+75 | 38 | 950.0 | 0.0 | 6.00 | | | | Average | |
| | | 8 - 23+75 | 39 | 949.0 | 0.0 | 6.00 | | | | Average | Y |
| | | 9 - 23+22 | 40 | 900.0 | 22.0 | 6.00 | | | | Average | Y |
| | | 10 - 23+22 | 41 | 899.0 | 22.0 | 6.00 | | | | Average | |
| | | 11 - 22+68 | 42 | 843.0 | 34.0 | 6.00 | | | | Average | |
| | | 12 - 22+00 | 43 | 775.0 | 33.0 | 4.00 | | | | Average | |
| | | 13 - 20+85 | 44 | 661.0 | 31.0 | 2.00 | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 10.8 | 1 - 18+05 | 45 | 386.0 | -15.0 | 3.50 | | | | Average | |
| | | 2 - 15+00 | 46 | 96.0 | -107.0 | 10.00 | | | | Average | |
| | | 3 - 14+10 | 47 | 10.0 | -119.0 | 14.00 | | | | | |
| WB Doyle from North Tunnel to North End | 13.2 | 1 - 11+80 | 51 | -216.0 | -85.0 | 24.00 | | | | Average | |
| | | 2 - 11+00 | 52 | -295.0 | -69.0 | 27.00 | | | | Average | |
| | | 3 - 11+00 | 53 | -296.0 | -69.0 | 27.00 | | | | Average | Y |
| | | 4 - 9+80 | 54 | -407.0 | -39.0 | 32.00 | | | | Average | Y |
| | | 5 - 8+73 | 55 | -488.0 | -9.0 | 36.00 | | | | Average | Y |
| | | 6 - 7+00 | 56 | -661.0 | 69.0 | 44.00 | | | | Average | Y |
| | | 7 - 6+60 | 57 | -696.0 | 88.0 | 46.00 | | | | Average | Y |
| | | 8 - 6+60 | 58 | -697.0 | 88.0 | 46.00 | | | | Average | |
| | | 9 - 5+54 | 59 | -789.0 | 145.0 | 50.00 | | | | Average | |
| | | 10 - 5+54 | 60 | -790.0 | 145.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+14 | 61 | -817.0 | 169.0 | 52.00 | | | | Average | Y |
| | | 12 - 5+14 | 62 | -818.0 | 169.0 | 52.00 | | | | Average | |
| | | 13 - 4+00 | 63 | -907.0 | 237.0 | 56.00 | | | | Average | |
| | | 14 - 3+10 | 64 | -975.0 | 300.0 | 56.00 | | | | Average | |
| | | 15 - 0+00 | 65 | -1,170.0 | 522.0 | 53.00 | | | | | |
| WB Doyle off ramp to SB Park Presidio | 7.0 | 1 - 0+00 | 66 | -488.0 | -9.0 | 42.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 - 1+30 | 67 | -600.0 | 52.0 | 42.00 | | | | Average | Y |
| | | 3 - 1+80 | 68 | -639.0 | 82.0 | 42.00 | | | | Average | Y |
| | | 4 - 2+20 | 69 | -661.0 | 114.0 | 42.00 | | | | Average | Y |
| | | 5 - 2+20 | 70 | -662.0 | 114.0 | 42.00 | | | | Average | |
| | | 6 - 2+48 | 71 | -673.0 | 139.0 | 42.00 | | | | Average | |
| | | 7 - 3+09 | 72 | -693.0 | 165.0 | 42.00 | | | | Average | |
| | | 8 - 3+40 | 73 | -718.0 | 184.0 | 42.00 | | | | Average | |
| | | 9 - 3+60 | 74 | -746.0 | 194.0 | 42.00 | | | | Average | |
| | | 10 - 3+80 | 75 | -787.0 | 185.0 | 42.00 | | | | Average | |
| | | 11 - 4+00 | 76 | -803.0 | 171.0 | 42.00 | | | | Average | |
| | | 12 - 4+20 | 77 | -813.0 | 153.0 | 42.00 | | | | Average | |
| | | 13 - 4+40 | 78 | -818.0 | 134.0 | 42.00 | | | | Average | |
| | | 14 - 4+59 | 79 | -815.0 | 112.0 | 42.00 | | | | Average | |
| | | 15 - 4+80 | 80 | -807.0 | 93.0 | 42.00 | | | | Average | |
| | | 16 - 5+00 | 81 | -796.0 | 76.0 | 41.00 | | | | Average | |
| | | 17 - 5+20 | 82 | -782.0 | 61.0 | 40.00 | | | | Average | |
| | | 18 - 5+80 | 83 | -735.0 | 24.0 | 40.00 | | | | Average | |
| | | 19 - 6+06 | 84 | -719.0 | 5.0 | 40.00 | | | | Average | |
| | | 20 - 6+31 | 85 | -706.0 | -15.0 | 40.00 | | | | Average | |
| | | 21 - 6+60 | 86 | -696.0 | -42.0 | 40.00 | | | | Average | |
| | | 22 - 6+88 | 87 | -694.0 | -68.0 | 40.00 | | | | Average | |
| | | 23 - 8+23 | 169 | -699.0 | -203.0 | 40.00 | | | | Average | |
| | | 24 - 5+88. | 88 | -698.0 | -337.0 | 40.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 10.2 | 1 - 0+00 | 89 | -690.0 | -337.0 | 40.00 | | | | Average | |
| | | 2A | 170 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 3+72.3 | 90 | -667.0 | 32.0 | 37.00 | | | | Average | |
| | | 3 - 4+00 | 91 | -667.0 | 61.0 | 38.00 | | | | Average | |
| | | 4 - 4+40 | 92 | -677.0 | 101.0 | 40.00 | | | | Average | |
| | | 5 - 4+60 | 93 | -698.0 | 137.0 | 48.00 | | | | Average | |
| | | 6 - 5+00 | 94 | -715.0 | 150.0 | 48.00 | | | | Average | |
| | | 7 - 5+20 | 95 | -734.0 | 160.0 | 49.00 | | | | Average | |
| | | 8 - 5+40 | 96 | -753.0 | 165.0 | 49.00 | | | | Average | |
| | | 9 - 5+53 | 97 | -760.0 | 168.0 | 50.00 | | | | Average | |
| | | 10 - 5+53 | 98 | -761.0 | 168.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+80 | 99 | -792.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 12 - 5+98 | 100 | -807.0 | 183.0 | 52.00 | | | | Average | Y |
| | | 13 - 5+98 | 101 | -808.0 | 183.0 | 52.00 | | | | Average | |
| | | 14 - 6+58. | 102 | -857.0 | 212.0 | 53.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15 - 8+04. | 103 | -975.0 | 300.0 | 56.00 | | | | | |
| NB Park Presidio to EB Doyle Drive | 7.0 | 1 - 0+00 | 104 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 1+35.9 | 105 | -657.0 | 20.0 | 36.00 | | | | Average | |
| | | 3 - 1+60 | 106 | -654.0 | 44.0 | 40.00 | | | | Average | |
| | | 4 - 1+80 | 107 | -657.0 | 65.0 | 40.00 | | | | Average | |
| | | 5 - 2+00 | 108 | -661.0 | 85.0 | 40.00 | | | | Average | |
| | | 6 - 2+20 | 109 | -667.0 | 104.0 | 42.00 | | | | Average | |
| | | 7 - 2+40 | 110 | -675.0 | 123.0 | 42.00 | | | | Average | |
| | | 8 - 2+60 | 111 | -686.0 | 140.0 | 42.00 | | | | Average | |
| | | 9 - 2+81.9 | 112 | -700.0 | 157.0 | 42.00 | | | | Average | |
| | | 10 - 3+09. | 113 | -723.0 | 175.0 | 42.00 | | | | Average | |
| | | 11 - 3+40 | 114 | -754.0 | 180.0 | 42.00 | | | | Average | |
| | | 12 - 3+60 | 115 | -775.0 | 173.0 | 42.00 | | | | Average | |
| | | 13 - 3+80 | 116 | -790.0 | 158.0 | 42.00 | | | | Average | |
| | | 14 - 4+00 | 117 | -796.0 | 138.0 | 42.00 | | | | Average | |
| | | 15 - 4+20 | 118 | -795.0 | 116.0 | 42.00 | | | | Average | |
| | | 16 - 4+40 | 119 | -788.0 | 97.0 | 42.00 | | | | Average | |
| | | 17 - 4+53. | 120 | -778.0 | 88.0 | 42.00 | | | | Average | |
| | | 18 - 5+20 | 121 | -722.0 | 51.0 | 42.00 | | | | Average | |
| | | 19 - 5+20 | 122 | -721.0 | 51.0 | 42.00 | | | | Average | Y |
| | | 20 - 6+00 | 123 | -652.0 | 11.0 | 42.00 | | | | Average | Y |
| | | 21 - 6+40 | 124 | -614.0 | -3.0 | 42.00 | | | | Average | |
| | | 22 - 8+19. | 125 | -450.0 | -50.0 | 33.00 | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 10.0 | 1 - 0+00 | 128 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 2 - 0+65. | 129 | -823.0 | 116.0 | 52.00 | | | | Average | |
| | | 3 - 0+65 | 130 | -822.0 | 116.0 | 52.00 | | | | Average | Y |
| | | 4 - 2+00 | 131 | -723.0 | 35.0 | 44.00 | | | | Average | Y |
| | | 5 - 2+00 | 132 | -722.0 | 35.0 | 44.00 | | | | Average | |
| | | 6 - 2+40 | 133 | -700.0 | 5.0 | 42.00 | | | | Average | |
| | | 7 - 2+80 | 134 | -687.0 | -30.0 | 40.00 | | | | Average | |
| | | 8 - 3+14.5 | 135 | -685.0 | -63.0 | 37.00 | | | | Average | |
| | | 9 - 5+88.1 | 136 | -698.0 | -337.0 | 40.00 | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 6.0 | 1 - 0+00 | 137 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 0+42 | 138 | 685.0 | 0.0 | 2.00 | | | | Average | |
| | | 3 - 0+42 | 139 | 686.0 | 0.0 | 2.00 | | | | Average | Y |
| | | 4 - 1+00 | 140 | 740.0 | -2.0 | 2.00 | | | | Average | Y |
| | | 5 - 1+50 | 141 | 786.0 | -11.0 | 2.00 | | | | Average | Y |
| | | 6 - 1+50 | 142 | 787.0 | -11.0 | 2.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 - 2+12.1 | 143 | 843.0 | -30.0 | 1.00 | | | | Average | Y |
| | | 8 - EC 0+7 | 144 | 898.0 | -75.0 | 1.50 | | | | Average | |
| | | 9 | 145 | 998.0 | -167.0 | 3.00 | | | | Average | |
| | | 10 | 146 | 1,024.0 | -186.0 | 3.00 | | | | Average | |
| | | 11 | 147 | 1,128.0 | -265.0 | 4.00 | | | | Average | |
| | | 12 | 148 | 1,148.0 | -281.0 | 4.00 | | | | Average | |
| | | 13 - Inters | 149 | 1,178.0 | -259.0 | 4.00 | | | | | |
| NB Girard Rd. from Marina to Lincoln | 3.7 | 1 - 0+00 | 150 | 1,201.0 | 188.0 | 4.00 | | | | Average | |
| | | 2 - 0+65 | 151 | 1,153.0 | 136.0 | 3.60 | | | | Average | |
| | | 3 - 2+80 | 152 | 965.0 | 40.0 | 0.50 | | | | Average | |
| | | 4 - 4+09.9 | 153 | 843.0 | -23.0 | 0.00 | | | | Average | |
| | | 5 - 4+40 | 154 | 828.0 | -40.0 | 1.00 | | | | Average | |
| | | 6 - 4+80 | 155 | 796.0 | -65.0 | 4.70 | | | | Average | |
| | | 7 - 5+20 | 156 | 772.0 | -98.0 | 5.50 | | | | Average | |
| | | 8 - 7+20 | 157 | 673.0 | -273.0 | 11.50 | | | | | |
| SB Girard Rd. from Lincoln to Marina | 3.7 | 1 - 7+20 | 158 | 678.0 | -273.0 | 11.50 | | | | Average | |
| | | 2 - 5+20 | 159 | 779.0 | -102.0 | 5.50 | | | | Average | |
| | | 3 - 4+80 | 160 | 803.0 | -70.0 | 4.70 | | | | Average | |
| | | 4 - 4+40 | 161 | 831.0 | -44.0 | 1.00 | | | | Average | |
| | | 5 - 4+09.9 | 162 | 852.0 | -31.0 | 0.00 | | | | Average | |
| | | 6 - 2+80 | 163 | 965.0 | 27.0 | 0.50 | | | | Average | |
| | | 7 - 0+65 | 164 | 1,156.0 | 127.0 | 3.60 | | | | Average | |
| | | 8 - Palace | 239 | 1,178.0 | 146.0 | 4.00 | | | | Average | |
| | | 9 - Mason | 165 | 1,218.0 | 191.0 | 4.00 | | | | | |
| Halleck St. from Lincon to Mason | 7.2 | 1 - 3+65 | 166 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 2 - 2+77.9 | 167 | 612.0 | -139.0 | 10.00 | | | | Average | |
| | | 3 - 0+00 | 168 | 673.0 | 130.0 | 4.00 | | | | | |
| Lincoln from McDowell to Letterman | 7.3 | 1 | 180 | -316.0 | -214.0 | 33.00 | | | | Average | |
| | | 2 | 181 | -279.0 | -132.0 | 33.00 | | | | Average | |
| | | 3 | 182 | -251.0 | -115.0 | 33.00 | | | | Average | |
| | | 4 | 183 | -216.0 | -104.0 | 32.00 | | | | Average | |
| | | 5 | 184 | -118.0 | -147.0 | 31.00 | | | | Average | |
| | | 6 | 185 | -93.0 | -152.0 | 29.00 | | | | Average | |
| | | 7 | 186 | -59.0 | -148.0 | 29.00 | | | | Average | |
| | | 8 | 187 | -38.0 | -151.0 | 29.00 | | | | Average | |
| | | 9 | 188 | -14.0 | -158.0 | 29.00 | | | | Average | |
| | | 10 | 189 | 13.0 | -167.0 | 27.00 | | | | Average | |
| | | 11 | 190 | 50.0 | -170.0 | 26.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12 | 191 | 182.0 | -134.0 | 19.00 | | | | Average | |
| | | 13 | 192 | 245.0 | -108.0 | 15.00 | | | | Average | |
| | | 14 | 193 | 324.0 | -68.0 | 12.00 | | | | Average | |
| | | 15 | 194 | 376.0 | -100.0 | 13.00 | | | | Average | |
| | | 16 | 195 | 396.0 | -124.0 | 13.00 | | | | Average | |
| | | 17 | 196 | 478.0 | -160.0 | 12.00 | | | | Average | |
| | | 18 | 197 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 19 | 198 | 673.0 | -273.0 | 11.50 | | | | Average | |
| | | 20 | 199 | 735.0 | -310.0 | 12.00 | | | | | |
| Mason St. from Crissy Ave. to Marina | 7.3 | 1 | 200 | -500.0 | 96.0 | 3.00 | | | | Average | |
| | | 2 | 201 | 40.0 | 0.0 | 4.00 | | | | Average | |
| | | 3 | 202 | 72.0 | 4.0 | 4.00 | | | | Average | |
| | | 4 | 203 | 96.0 | 15.0 | 4.00 | | | | Average | |
| | | 5 | 204 | 144.0 | 60.0 | 4.00 | | | | Average | |
| | | 6 | 205 | 174.0 | 68.0 | 4.00 | | | | Average | |
| | | 7 | 206 | 673.0 | 130.0 | 4.00 | | | | Average | |
| | | 8 | 207 | 768.0 | 138.0 | 4.00 | | | | Average | |
| | | 9 | 208 | 952.0 | 159.0 | 4.00 | | | | Average | |
| | | 10 | 209 | 1,185.0 | 187.0 | 4.00 | | | | Average | |
| | | 11 | 210 | 1,218.0 | 191.0 | 4.00 | | | | Average | |
| | | 12 | 211 | 1,270.0 | 196.0 | 4.00 | | | | | |
| Baker St. from Marina to Richardson | 7.3 | 1 | 212 | 1,270.0 | 196.0 | 4.00 | | | | Average | |
| | | 2 | 213 | 1,280.0 | 93.0 | 4.00 | | | | Average | |
| | | 3 | 214 | 1,290.0 | -7.0 | 4.00 | | | | Average | |
| | | 4 | 215 | 1,310.0 | -276.0 | 4.00 | | | | Average | |
| | | 5 | 216 | 1,327.0 | -400.0 | 4.00 | | | | | |
| Palace Drive from Richardson to Marina | 7.3 | 1 | 217 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 2 | 218 | 1,186.0 | -245.0 | 4.00 | | | | Average | |
| | | 3 | 219 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 4 | 220 | 1,180.0 | -195.0 | 3.50 | | | | Average | |
| | | 5 | 221 | 1,151.0 | -188.0 | 3.00 | | | | Average | |
| | | 6 | 222 | 1,125.0 | -175.0 | 3.00 | | | | Average | |
| | | 7 | 223 | 1,100.0 | -153.0 | 3.00 | | | | Average | |
| | | 8 | 224 | 1,081.0 | -130.0 | 3.00 | | | | Average | |
| | | 9 | 225 | 1,069.0 | -108.0 | 3.00 | | | | Average | |
| | | 10 | 226 | 1,060.0 | -83.0 | 3.00 | | | | Average | |
| | | 11 | 227 | 1,055.0 | -63.5 | 4.00 | | | | Average | |
| | | 12 | 228 | 1,053.0 | -39.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 13 | 229 | 1,055.0 | -14.0 | 4.00 | | | | Average | |
| | | 14 | 230 | 1,061.0 | 10.0 | 4.00 | | | | Average | |
| | | 15 | 231 | 1,073.0 | 40.0 | 4.00 | | | | Average | |
| | | 16 | 232 | 1,088.0 | 68.0 | 4.00 | | | | Average | |
| | | 17 | 233 | 1,116.0 | 91.0 | 4.00 | | | | Average | |
| | | 18 | 234 | 1,185.0 | 139.0 | 4.00 | | | | Average | |
| | | 19 | 235 | 1,178.0 | 146.0 | 4.00 | | | | | |
| Montgomery St. from Sherian to Lincoln | 9.2 | 1 | 236 | 237.0 | -280.0 | 16.00 | | | | Average | |
| | | 2 | 237 | 350.0 | -117.0 | 13.00 | | | | Average | |
| | | 3 | 238 | 396.0 | -124.0 | 13.00 | | | | | |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2030 PM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle to North Tunnel | 1 - North End | 11 | 5438 | 88 | 17 | 88 | 73 | 88 | 62 | 88 | 17 | 88 |
| | 2 - 1+97.539 | 10 | 5438 | 88 | 17 | 88 | 73 | 88 | 62 | 88 | 17 | 88 |
| | 3 - 4+74 | 9 | 3091 | 88 | 10 | 88 | 41 | 88 | 35 | 88 | 10 | 88 |
| | 4 - 5+27 | 8 | 3091 | 88 | 10 | 88 | 41 | 88 | 35 | 88 | 10 | 88 |
| | 5 - 5+27 | 7 | 3091 | 88 | 10 | 88 | 41 | 88 | 35 | 88 | 10 | 88 |
| | 6 - 6+00 | 6 | 3091 | 88 | 10 | 88 | 41 | 88 | 35 | 88 | 10 | 88 |
| | 7 - 8+00 | 5 | 3091 | 88 | 10 | 88 | 9 | 88 | 41 | 88 | 10 | 88 |
| | 8 - 9+57 | 4 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 9 - 11+10 | 3 | 4732 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 10 - 11+10 | 2 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 11 - 11+53 | 1 | | | | | | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 1 - 13+93 | 18 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 2 - 14+10 | 17 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 3 - 14+60 | 16 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 4 - 15+00 | 15 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 5 - 15+85.44 | 14 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 6 - 17+33.198 | 13 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 7 - 17+80 | 12 | | | | | | | | | | |
| EB Doyle from South Tunnel to Francisco | 1 - 20+95 | 19 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 2 - 21+20 | 20 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 3 - 21+20 | 21 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 22+42.630 | 22 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 5 - 23+00 | 23 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 6 - 23+25 | 24 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 7 - 23+25 | 25 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 8 - 24+20 | 26 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 9 - 24+85.060 | 27 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 10 - 25+17.10 | 28 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 11 - 25+64.74 | 29 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 12 - Gorgas I | 30 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 13 - Francisc | 31 | | | | | | | | | | |
| WB Doyle from Fancisco to South Tunnel | 1 - Francisco | 32 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 2 - 27+20.608 | 33 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 3 - 26+00 | 34 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 4 - 25+40 | 35 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 5 - 24+73 | 36 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 6 - 24+20 | 37 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 7 - 23+75 | 38 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 8 - 23+75 | 39 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 9 - 23+22 | 40 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 10 - 23+22 | 41 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 11 - 22+68 | 42 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 12 - 22+00 | 43 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 13 - 20+85 | 44 | | | | | | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 1 - 18+05 | 45 | 4732 | 88 | 0 | 0 | 10 | 88 | 133 | 88 | 49 | 88 |
| | 2 - 15+00 | 46 | 4732 | 88 | 0 | 0 | 10 | 88 | 133 | 88 | 49 | 88 |
| | 3 - 14+10 | 47 | | | | | | | | | | |
| WB Doyle from North Tunnel to North End | 1 - 11+80 | 51 | 4732 | 88 | 0 | 0 | 10 | 88 | 133 | 88 | 49 | 88 |
| | 2 - 11+00 | 52 | 4732 | 88 | 0 | 0 | 10 | 88 | 133 | 88 | 49 | 88 |
| | 3 - 11+00 | 53 | 4732 | 88 | 0 | 0 | 10 | 88 | 133 | 88 | 49 | 88 |
| | 4 - 9+80 | 54 | 4732 | 88 | 0 | 0 | 10 | 88 | 133 | 88 | 49 | 88 |
| | 5 - 8+73 | 55 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 6 - 7+00 | 56 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 7 - 6+60 | 57 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 8 - 6+60 | 58 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9 - 5+54 | 59 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 10 - 5+54 | 60 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 11 - 5+14 | 61 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 12 - 5+14 | 62 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 13 - 4+00 | 63 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 14 - 3+10 | 64 | 6197 | 88 | 0 | 0 | 13 | 88 | 174 | 88 | 64 | 88 |
| | 15 - 0+00 | 65 | | | | | | | | | | |
| WB Doyle off ramp to SB Park Presidio | 1 - 0+00 | 66 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 2 - 1+30 | 67 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 3 - 1+80 | 68 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 4 - 2+20 | 69 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 5 - 2+20 | 70 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 6 - 2+48 | 71 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 7 - 3+09 | 72 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 8 - 3+40 | 73 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 9 - 3+60 | 74 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 10 - 3+80 | 75 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 11 - 4+00 | 76 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 12 - 4+20 | 77 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 13 - 4+40 | 78 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 14 - 4+59 | 79 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 15 - 4+80 | 80 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 16 - 5+00 | 81 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 17 - 5+20 | 82 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 18 - 5+80 | 83 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 19 - 6+06 | 84 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 20 - 6+31 | 85 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 21 - 6+60 | 86 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 22 - 6+88 | 87 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 23 - 8+23 | 169 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 24 - 5+88.184 | 88 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 - 0+00 | 89 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 2A | 170 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 2 - 3+72.391 | 90 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 - 4+00 | 91 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 4 - 4+40 | 92 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 5 - 4+60 | 93 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 6 - 5+00 | 94 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 7 - 5+20 | 95 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 8 - 5+40 | 96 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 9 - 5+53 | 97 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 10 - 5+53 | 98 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 11 - 5+80 | 99 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 12 - 5+98 | 100 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 13 - 5+98 | 101 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 14 - 6+58.037 | 102 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 15 - 8+04.414 | 103 | | | | | | | | | | |
| NB Park Presidio to EB Doyle Drive | 1 - 0+00 | 104 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 2 - 1+35.965 | 105 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 3 - 1+60 | 106 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 4 - 1+80 | 107 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 5 - 2+00 | 108 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 6 - 2+20 | 109 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 7 - 2+40 | 110 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 8 - 2+60 | 111 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 9 - 2+81.908 | 112 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 10 - 3+09.875 | 113 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 11 - 3+40 | 114 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 12 - 3+60 | 115 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 13 - 3+80 | 116 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 14 - 4+00 | 117 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 15 - 4+20 | 118 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 16 - 4+40 | 119 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 17 - 4+53.16 | 120 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 18 - 5+20 | 121 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 19 - 5+20 | 122 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 20 - 6+00 | 123 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 21 - 6+40 | 124 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 22 - 8+19.142 | 125 | | | | | | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 1 - 0+00 | 128 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 2 - 0+65 | 129 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 3 - 0+65 | 130 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 4 - 2+00 | 131 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 5 - 2+00 | 132 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 6 - 2+40 | 133 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 7 - 2+80 | 134 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 8 - 3+14.595 | 135 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 9 - 5+88.184 | 136 | | | | | | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 1 - 0+00 | 137 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+42 | 138 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+42 | 139 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 1+00 | 140 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 1+50 | 141 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 1+50 | 142 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 2+12.133 | 143 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - EC 0+74.1 | 144 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 145 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 146 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 147 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 148 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 - Intersect | 149 | | | | | | | | | | |
| NB Girard Rd. from Marina to Lincoln | 1 - 0+00 | 150 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+65 | 151 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 2+80 | 152 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 4+09.995 | 153 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+40 | 154 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 4+80 | 155 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 5+20 | 156 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - 7+20 | 157 | | | | | | | | | | |
| SB Girard Rd. from Lincoln to Marina | 1 - 7+20 | 158 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 5+20 | 159 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 4+80 | 160 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 4+40 | 161 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+09.995 | 162 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 2+80 | 163 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 0+65 | 164 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - Palace Dr | 239 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 - Mason/Mc | 165 | | | | | | | | | | |
| Halleck St. from Lincon to Mason | 1 - 3+65 | 166 | 57 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 2+77.948 | 167 | 57 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+00 | 168 | | | | | | | | | | |
| Lincoln from McDowell to Letterman | 1 | 180 | 259 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 181 | 259 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 3 | 182 | 259 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 4 | 183 | 265 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 5 | 184 | 265 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 6 | 185 | 265 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 7 | 186 | 265 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 8 | 187 | 265 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 9 | 188 | 265 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 10 | 189 | 275 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 11 | 190 | 128 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 12 | 191 | 128 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 13 | 192 | 128 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 14 | 193 | 128 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 15 | 194 | 128 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 16 | 195 | 365 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 17 | 196 | 363 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 18 | 197 | 430 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 5 | 32 |
| | 19 | 198 | 919 | 32 | 9 | 32 | 0 | 0 | 9 | 32 | 9 | 32 |
| | 20 | 199 | | | | | | | | | | |
| Mason St. from Crissy Ave. to Marina | 1 | 200 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 201 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 202 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 203 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 204 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 205 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 206 | 39 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 8 | 207 | 39 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 9 | 208 | 44 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 10 | 209 | 2188 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 210 | 2188 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 211 | | | | | | | | | | |
| Baker St. from Marina to Richardson | 1 | 212 | 38 | 32 | 1 | 32 | 0 | 0 | 0 | 0 | 1 | 32 |
| | 2 | 213 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 214 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 215 | 9 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 216 | | | | | | | | | | |
| Palace Drive from Richardson to Marina | 1 | 217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 218 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 219 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 220 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 221 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 222 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 223 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 224 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 225 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 226 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 228 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 14 | 230 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 15 | 231 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 16 | 232 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 17 | 233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 18 | 234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 19 | 235 | | | | | | | | | | |
| Montgomery St. from Sherian to Lincoln | 1 | 236 | 113 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 237 | 113 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 3 | 238 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

30 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2030 PM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 1,098.0 | -130.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 1,133.0 | -91.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3 Buildings 1187/1188 | 3 | 0 | 1,148.0 | 150.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4 Building 1182 | 4 | 0 | 1,087.0 | 125.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5 Buildings 1183/1186 | 5 | 0 | 1,020.0 | 116.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6 Buildings 1184/1185 | 6 | 0 | 893.0 | 103.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7 Building 603/Crissy Center | 7 | 0 | 571.0 | 88.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8 PX Building | 8 | 0 | 500.0 | 33.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9 Post Commissary/Sports Basement | 9 | 0 | 240.0 | -54.0 | 4.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 10 Battery Blaney | 10 | 0 | -30.0 | -96.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11 Battery Slaughter | 11 | 0 | -104.0 | -98.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12 Battery Sherwood | 12 | 0 | -223.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13 Battery Baldwin | 13 | 0 | -297.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14 Building 644 | 14 | 0 | -260.0 | 16.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15 Building 649 | 15 | 0 | -364.0 | 4.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16 Building 650/Stilwell Hall | 16 | 0 | -437.0 | 11.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17 1253 Armistead Road | 17 | 1 | -785.0 | 235.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18 Home on Armistead Road | 18 | 1 | -939.0 | 296.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19 Building 969 | 19 | 0 | -887.0 | 410.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20 Building 968 | 20 | 0 | -978.0 | 427.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21 Building 967 | 21 | 0 | -1,040.0 | 427.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22 Building 966 | 22 | 0 | -1,044.0 | 433.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 Building 964 | 23 | 0 | -1,016.0 | 446.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24 Building 963 | 24 | 0 | -1,002.0 | 452.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25 Building 962 | 25 | 0 | -987.0 | 455.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26 Unknown Building | 26 | 0 | -1,153.0 | 421.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27 Building 1299/Log Cabin | 27 | 0 | -1,003.0 | 177.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28 Building 1387 | 28 | 0 | -1,105.0 | 268.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29 Building 1298 Storey Ave. | 29 | 2 | -977.0 | 123.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30 Building 1297 Storey Ave. | 30 | 2 | -950.0 | 123.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31 Building 1295 Storey Ave. | 31 | 2 | -919.0 | 119.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32 Building 1294 Storey Ave. | 32 | 2 | -900.0 | 116.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33 Building 1293 Storey Ave. | 33 | 2 | -865.0 | 102.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34 Building 1291 Storey Ave. | 34 | 2 | -841.0 | 92.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35 Building 1290 Storey Ave. | 35 | 2 | -811.0 | 78.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36 Building 1289 Storey Ave. | 36 | 2 | -804.0 | 63.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37 Building 1263 Storey Ave. | 37 | 2 | -722.0 | -152.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38 Building 682/Cross Cultural Center | 38 | 0 | -650.0 | -254.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | -556.0 | -70.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40 Building 662/Cavalry Stable | 40 | 0 | -508.0 | -97.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41 Building 663/Cavalry Stable | 41 | 0 | -488.0 | -140.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42 Building 667/Cavalry Stable | 42 | 0 | -384.0 | -122.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43 National Cemetery Grave Site | 43 | 0 | -23.0 | -163.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44 Building 129 | 44 | 1 | 104.0 | -168.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45 Building 122 | 45 | 0 | 148.0 | -157.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46 Building 108 | 46 | 0 | 225.0 | -136.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47 Building 107 | 47 | 0 | 230.0 | -120.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48 Building 104 | 48 | 0 | 252.0 | -143.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49 Building 105 | 49 | 0 | 285.0 | -93.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50 Building 106 | 50 | 0 | 328.0 | -78.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51 Building 211 | 51 | 0 | 433.0 | -52.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52 Building 204 | 52 | 0 | 522.0 | -17.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53 Building 210 | 53 | 0 | 320.0 | -97.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54 Building 201 | 54 | 0 | 623.0 | 8.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55 Building 220 | 55 | 0 | 590.0 | -104.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56 Building 231 | 56 | 0 | 650.0 | -5.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57 Building 228 | 57 | 0 | 643.0 | -31.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 Building 229 | 58 | 0 | 637.0 | -60.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59 Building 223 | 59 | 0 | 636.0 | -108.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60 Building 230 | 60 | 0 | 740.0 | 6.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 706.0 | -77.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 698.0 | -113.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63 Building 1063 | 63 | 0 | 842.0 | -60.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64 Building 1062 | 64 | 0 | 852.0 | -100.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65 Building 1060 | 65 | 0 | 898.0 | -127.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66 Building 1167 | 66 | 0 | 900.0 | -18.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67 Building 1163 | 67 | 0 | 892.0 | -26.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68 Building 1169 | 68 | 0 | 955.0 | -58.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69 Building 1162 | 69 | 0 | 943.0 | -73.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70 Building 1170 | 70 | 0 | 1,035.0 | -132.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71 Building 1161 | 71 | 0 | 1,035.0 | -161.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72 Building 1160 | 72 | 0 | 1,066.0 | -166.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73 Building 1152/YMCA | 73 | 0 | 1,100.0 | -200.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74 Building 1151/YMCA Pool | 74 | 0 | 1,140.0 | -235.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75 Building 1004 | 75 | 0 | 965.0 | -246.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 1,216.0 | -270.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Diamond 2030 PM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

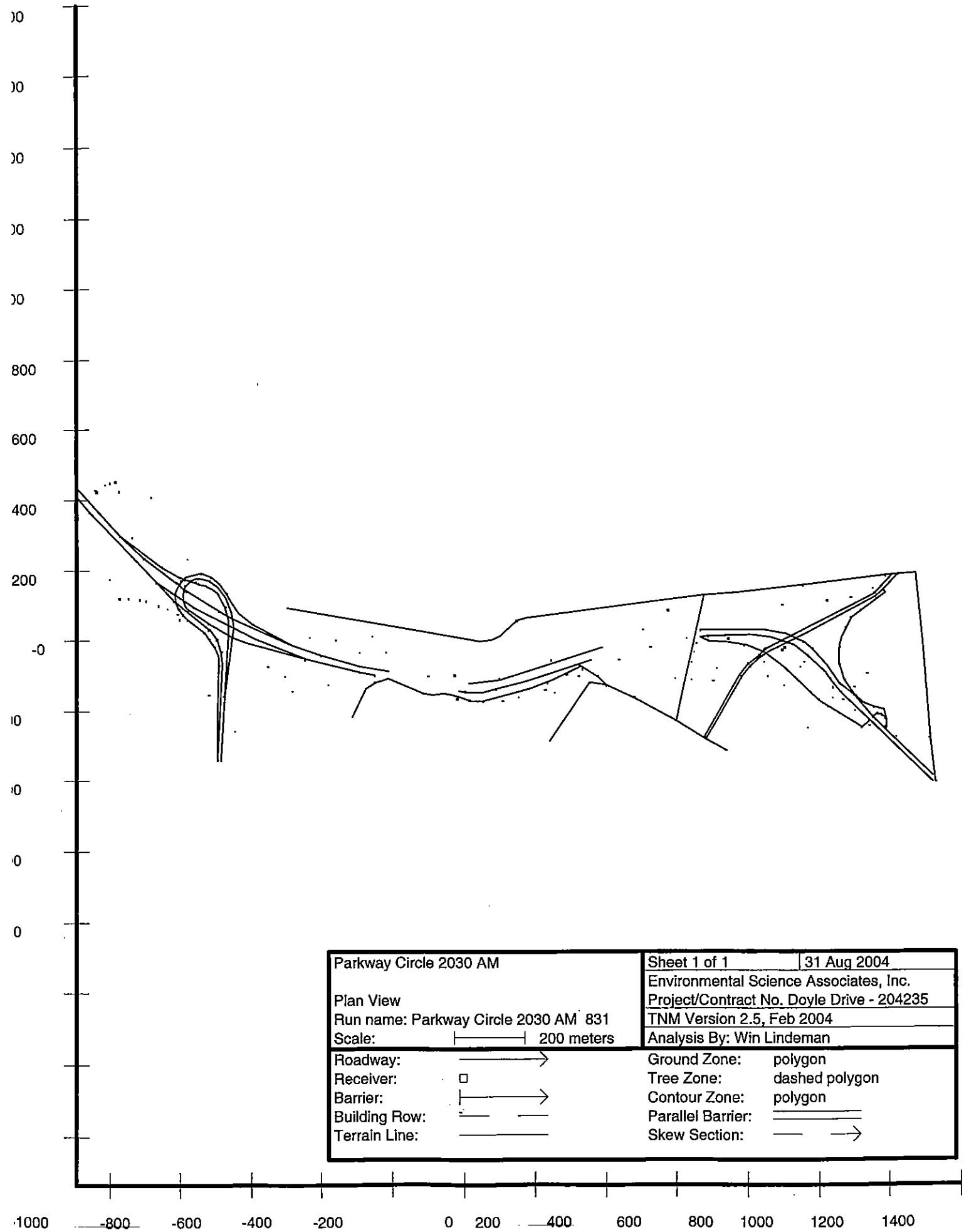
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 69.9 | 66 | 69.9 | 12 | Snd Lvl | 69.9 | 0.0 | 10 | -10.0 |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 61.8 | 66 | 61.8 | 12 | — | 61.8 | 0.0 | 10 | -10.0 |
| 3 Buildings 1187/1188 | 3 | 0 | 81.0 | 57.3 | 71 | -23.7 | 12 | — | 57.3 | 0.0 | 10 | -10.0 |
| 4 Building 1182 | 4 | 0 | 81.0 | 56.1 | 71 | -24.9 | 12 | — | 56.1 | 0.0 | 10 | -10.0 |
| 5 Buildings 1183/1186 | 5 | 0 | 81.0 | 57.2 | 71 | -23.8 | 12 | — | 57.2 | 0.0 | 10 | -10.0 |
| 6 Buildings 1184/1185 | 6 | 0 | 81.0 | 59.6 | 71 | -21.4 | 12 | — | 59.6 | 0.0 | 10 | -10.0 |
| 7 Building 603/Crissy Center | 7 | 0 | 72.0 | 56.8 | 71 | -15.2 | 12 | — | 56.8 | 0.0 | 10 | -10.0 |
| 8 PX Building | 8 | 0 | 0.0 | 60.0 | 71 | 60.0 | 12 | — | 60.0 | 0.0 | 10 | -10.0 |
| 9 Post Commissary/Sports Basement | 9 | 0 | 69.0 | 70.9 | 66 | 1.9 | 12 | Snd Lvl | 70.9 | 0.0 | 10 | -10.0 |
| 10 Battery Blaney | 10 | 0 | 68.0 | 69.6 | 66 | 1.6 | 12 | Snd Lvl | 69.6 | 0.0 | 10 | -10.0 |
| 11 Battery Slaughter | 11 | 0 | 68.0 | 65.7 | 66 | -2.3 | 12 | — | 65.7 | 0.0 | 10 | -10.0 |
| 12 Battery Sherwood | 12 | 0 | 68.0 | 65.8 | 66 | -2.2 | 12 | — | 65.8 | 0.0 | 10 | -10.0 |
| 13 Battery Baldwin | 13 | 0 | 68.0 | 68.1 | 66 | 0.1 | 12 | Snd Lvl | 68.1 | 0.0 | 10 | -10.0 |
| 14 Building 644 | 14 | 0 | 0.0 | 60.6 | 71 | 60.6 | 12 | — | 60.6 | 0.0 | 10 | -10.0 |
| 15 Building 649 | 15 | 0 | 0.0 | 60.8 | 66 | 60.8 | 12 | — | 60.8 | 0.0 | 10 | -10.0 |
| 16 Building 650/Stilwell Hall | 16 | 0 | 70.0 | 59.4 | 66 | -10.6 | 12 | — | 59.4 | 0.0 | 10 | -10.0 |
| 17 1253 Armistead Road | 17 | 1 | 66.0 | 64.9 | 66 | -1.1 | 12 | — | 64.9 | 0.0 | 10 | -10.0 |
| 18 Home on Armistead Road | 18 | 1 | 66.0 | 77.2 | 66 | 11.2 | 12 | Snd Lvl | 77.2 | 0.0 | 10 | -10.0 |
| 19 Building 969 | 19 | 0 | 0.0 | 58.6 | 71 | 58.6 | 12 | — | 58.6 | 0.0 | 10 | -10.0 |
| 20 Building 968 | 20 | 0 | 0.0 | 60.1 | 71 | 60.1 | 12 | — | 60.1 | 0.0 | 10 | -10.0 |
| 21 Building 967 | 21 | 0 | 0.0 | 65.4 | 71 | 65.4 | 12 | — | 65.4 | 0.0 | 10 | -10.0 |
| 22 Building 966 | 22 | 0 | 0.0 | 65.5 | 71 | 65.5 | 12 | — | 65.5 | 0.0 | 10 | -10.0 |
| 23 Building 964 | 23 | 0 | 0.0 | 63.9 | 66 | 63.9 | 12 | — | 63.9 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 Building 963 | 24 | 0 | 0.0 | 63.2 | 66 | 63.2 | 12 | — | 63.2 | 0.0 | 10 | -10.0 |
| 25 Building 962 | 25 | 0 | 0.0 | 62.4 | 66 | 62.4 | 12 | — | 62.4 | 0.0 | 10 | -10.0 |
| 26 Unknown Building | 26 | 0 | 0.0 | 75.0 | 71 | 75.0 | 12 | Snd Lvl | 75.0 | 0.0 | 10 | -10.0 |
| 27 Building 1299/Log Cabin | 27 | 0 | 63.0 | 68.9 | 66 | 5.9 | 12 | Snd Lvl | 68.9 | 0.0 | 10 | -10.0 |
| 28 Building 1387 | 28 | 0 | 0.0 | 67.4 | 71 | 67.4 | 12 | — | 67.4 | 0.0 | 10 | -10.0 |
| 29 Building 1298 Storey Ave. | 29 | 2 | 66.5 | 66.7 | 66 | 0.2 | 12 | Snd Lvl | 66.7 | 0.0 | 10 | -10.0 |
| 30 Building 1297 Storey Ave. | 30 | 2 | 66.5 | 68.6 | 66 | 2.1 | 12 | Snd Lvl | 68.6 | 0.0 | 10 | -10.0 |
| 31 Building 1295 Storey Ave. | 31 | 2 | 66.5 | 70.6 | 66 | 4.1 | 12 | Snd Lvl | 70.6 | 0.0 | 10 | -10.0 |
| 32 Building 1294 Storey Ave. | 32 | 2 | 66.5 | 71.2 | 66 | 4.7 | 12 | Snd Lvl | 71.2 | 0.0 | 10 | -10.0 |
| 33 Building 1293 Storey Ave. | 33 | 2 | 66.5 | 72.2 | 66 | 5.7 | 12 | Snd Lvl | 72.2 | 0.0 | 10 | -10.0 |
| 34 Building 1291 Storey Ave. | 34 | 2 | 66.5 | 72.8 | 66 | 6.3 | 12 | Snd Lvl | 72.8 | 0.0 | 10 | -10.0 |
| 35 Building 1290 Storey Ave. | 35 | 2 | 66.5 | 73.7 | 66 | 7.2 | 12 | Snd Lvl | 73.7 | 0.0 | 10 | -10.0 |
| 36 Building 1289 Storey Ave. | 36 | 2 | 66.5 | 72.7 | 66 | 6.2 | 12 | Snd Lvl | 72.7 | 0.0 | 10 | -10.0 |
| 37 Building 1263 Storey Ave. | 37 | 2 | 0.0 | 69.3 | 66 | 69.3 | 12 | Snd Lvl | 69.3 | 0.0 | 10 | -10.0 |
| 38 Building 682/Cross Cultural Center | 38 | 0 | 65.5 | 65.1 | 66 | -0.4 | 12 | — | 65.1 | 0.0 | 10 | -10.0 |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | 64.0 | 60.2 | 71 | -3.8 | 12 | — | 60.2 | 0.0 | 10 | -10.0 |
| 40 Building 662/Cavalry Stable | 40 | 0 | 64.0 | 62.6 | 71 | -1.4 | 12 | — | 62.6 | 0.0 | 10 | -10.0 |
| 41 Building 663/Cavalry Stable | 41 | 0 | 64.0 | 63.3 | 71 | -0.7 | 12 | — | 63.3 | 0.0 | 10 | -10.0 |
| 42 Building 667/Cavalry Stable | 42 | 0 | 64.0 | 67.4 | 71 | 3.4 | 12 | — | 67.4 | 0.0 | 10 | -10.0 |
| 43 National Cemetery Grave Site | 43 | 0 | 69.0 | 64.2 | 66 | -4.8 | 12 | — | 64.2 | 0.0 | 10 | -10.0 |
| 44 Building 129 | 44 | 1 | 0.0 | 57.2 | 66 | 57.2 | 12 | — | 57.2 | 0.0 | 10 | -10.0 |
| 45 Building 122 | 45 | 0 | 0.0 | 62.3 | 71 | 62.3 | 12 | — | 62.3 | 0.0 | 10 | -10.0 |
| 46 Building 108 | 46 | 0 | 0.0 | 62.5 | 71 | 62.5 | 12 | — | 62.5 | 0.0 | 10 | -10.0 |
| 47 Building 107 | 47 | 0 | 0.0 | 67.6 | 71 | 67.6 | 12 | — | 67.6 | 0.0 | 10 | -10.0 |
| 48 Building 104 | 48 | 0 | 74.0 | 58.7 | 71 | -15.3 | 12 | — | 58.7 | 0.0 | 10 | -10.0 |
| 49 Building 105 | 49 | 0 | 74.0 | 73.5 | 71 | -0.5 | 12 | Snd Lvl | 73.5 | 0.0 | 10 | -10.0 |
| 50 Building 106 | 50 | 0 | 76.0 | 72.5 | 71 | -3.5 | 12 | Snd Lvl | 72.5 | 0.0 | 10 | -10.0 |
| 51 Building 211 | 51 | 0 | 0.0 | 66.2 | 71 | 66.2 | 12 | — | 66.2 | 0.0 | 10 | -10.0 |
| 52 Building 204 | 52 | 0 | 0.0 | 59.6 | 71 | 59.6 | 12 | — | 59.6 | 0.0 | 10 | -10.0 |
| 53 Building 210 | 53 | 0 | 0.0 | 62.8 | 71 | 62.8 | 12 | — | 62.8 | 0.0 | 10 | -10.0 |
| 54 Building 201 | 54 | 0 | 0.0 | 57.8 | 71 | 57.8 | 12 | — | 57.8 | 0.0 | 10 | -10.0 |
| 55 Building 220 | 55 | 0 | 0.0 | 53.8 | 71 | 53.8 | 12 | — | 53.8 | 0.0 | 10 | -10.0 |
| 56 Building 231 | 56 | 0 | 0.0 | 65.9 | 71 | 65.9 | 12 | — | 65.9 | 0.0 | 10 | -10.0 |
| 57 Building 228 | 57 | 0 | 0.0 | 62.2 | 71 | 62.2 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 58 Building 229 | 58 | 0 | 0.0 | 59.3 | 71 | 59.3 | 12 | — | 59.3 | 0.0 | 10 | -10.0 |
| 59 Building 223 | 59 | 0 | 0.0 | 57.4 | 71 | 57.4 | 12 | — | 57.4 | 0.0 | 10 | -10.0 |
| 60 Building 230 | 60 | 0 | 0.0 | 71.9 | 71 | 71.9 | 12 | Snd Lvl | 71.9 | 0.0 | 10 | -10.0 |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 57.0 | 59.9 | 66 | 2.9 | 12 | — | 59.9 | 0.0 | 10 | -10.0 |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 57.0 | 57.3 | 66 | 0.3 | 12 | — | 57.3 | 0.0 | 10 | -10.0 |
| 63 Building 1063 | 63 | 0 | 68.5 | 62.3 | 71 | -6.2 | 12 | — | 62.3 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 Building 1062 | 64 | 0 | 68.5 | 59.2 | 71 | -9.3 | 12 | --- | 59.2 | 0.0 | 10 | -10.0 |
| 65 Building 1060 | 65 | 0 | 68.5 | 59.5 | 71 | -9.0 | 12 | --- | 59.5 | 0.0 | 10 | -10.0 |
| 66 Building 1167 | 66 | 0 | 68.0 | 65.4 | 71 | -2.6 | 12 | --- | 65.4 | 0.0 | 10 | -10.0 |
| 67 Building 1163 | 67 | 0 | 0.0 | 65.0 | 71 | 65.0 | 12 | --- | 65.0 | 0.0 | 10 | -10.0 |
| 68 Building 1169 | 68 | 0 | 68.0 | 64.3 | 71 | -3.7 | 12 | --- | 64.3 | 0.0 | 10 | -10.0 |
| 69 Building 1162 | 69 | 0 | 0.0 | 62.9 | 71 | 62.9 | 12 | --- | 62.9 | 0.0 | 10 | -10.0 |
| 70 Building 1170 | 70 | 0 | 68.0 | 71.4 | 71 | 3.4 | 12 | Snd Lvl | 71.4 | 0.0 | 10 | -10.0 |
| 71 Building 1161 | 71 | 0 | 0.0 | 67.0 | 71 | 67.0 | 12 | --- | 67.0 | 0.0 | 10 | -10.0 |
| 72 Building 1160 | 72 | 0 | 0.0 | 71.5 | 71 | 71.5 | 12 | Snd Lvl | 71.5 | 0.0 | 10 | -10.0 |
| 73 Building 1152/YMCA | 73 | 0 | 0.0 | 71.0 | 66 | 71.0 | 12 | Snd Lvl | 71.0 | 0.0 | 10 | -10.0 |
| 74 Building 1151/YMCA Pool | 74 | 0 | 0.0 | 72.6 | 66 | 72.6 | 12 | Snd Lvl | 72.6 | 0.0 | 10 | -10.0 |
| 75 Building 1004 | 75 | 0 | 0.0 | 57.0 | 71 | 57.0 | 12 | --- | 57.0 | 0.0 | 10 | -10.0 |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 76.5 | 74.6 | 66 | -1.9 | 12 | Snd Lvl | 74.6 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 229 | 0.0 | 0.0 | 0.0 |
| All Impacted | 27 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |




| | |
|---|---|
| Parkway Circle 2030 AM | Sheet 1 of 1 \| 31 Aug 2004 |
| | Environmental Science Associates, Inc. |
| Plan View | Project/Contract No. Doyle Drive - 204235 |
| Run name: Parkway Circle 2030 AM 831 | TNM Version 2.5, Feb 2004 |
| Scale: 200 meters | Analysis By: Win Lindeman |

| | | | |
|---|---|---|---|
| Roadway: | | Ground Zone: | polygon |
| Receiver: | | Tree Zone: | dashed polygon |
| Barrier: | | Contour Zone: | polygon |
| Building Row: | | Parallel Barrier: | |
| Terrain Line: | | Skew Section: | |

Environmental Science Associates, Inc.
Win Lindeman

31 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2030 AM

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

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle to North Tunnel | 18.0 | 1 - North E | 11 | -1,185.0 | 519.0 | 53.00 | | | | Average | |
| | | 2 - 1+97.5 | 10 | -1,060.0 | 368.0 | 56.00 | | | | Average | |
| | | 3 - 4+74 | 9 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 4 - 5+27 | 8 | -827.0 | 138.0 | 51.50 | | | | Average | |
| | | 5 - 5+27 | 7 | -826.0 | 138.0 | 51.50 | | | | Average | Y |
| | | 6 - 6+00 | 6 | -764.0 | 95.0 | 49.00 | | | | Average | Y |
| | | 7 - 8+00 | 5 | -588.0 | 7.0 | 40.00 | | | | Average | Y |
| | | 8 - 9+57 | 4 | -450.0 | -50.0 | 33.00 | | | | Average | Y |
| | | 9 - 11+10 | 3 | -294.0 | -88.0 | 27.00 | | | | Average | Y |
| | | 10 - 11+10 | 2 | -293.0 | -88.0 | 27.00 | | | | Average | |
| | | 11 - 11+53 | 1 | -253.0 | -96.0 | 26.00 | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 18.0 | 1 - 13+93 | 18 | -17.0 | -142.0 | 16.00 | | | | Average | |
| | | 2 - 14+10 | 17 | 0.0 | -143.0 | 16.00 | | | | Average | |
| | | 3 - 14+60 | 16 | 49.0 | -143.0 | 14.00 | | | | Average | |
| | | 4 - 15+00 | 15 | 88.0 | -135.0 | 12.00 | | | | Average | |
| | | 5 - 15+85. | 14 | 170.0 | -112.0 | 9.00 | | | | Average | |
| | | 6 - 17+33. | 13 | 310.0 | -65.0 | 5.00 | | | | Average | |
| | | 7 - 17+80 | 12 | 354.0 | -52.0 | 4.00 | | | | | |
| EB Doyle from South Tunnel to Francisco | 18.0 | 1 - 20+95 | 19 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 21+20 | 20 | 684.0 | 14.0 | 3.00 | | | | Average | |
| | | 3 - 21+20 | 21 | 685.0 | 14.0 | 3.00 | | | | Average | Y |
| | | 4 - 22+42. | 22 | 807.0 | 18.0 | 5.00 | | | | Average | Y |
| | | 5 - 23+00 | 23 | 859.0 | 12.0 | 6.00 | | | | Average | Y |
| | | 6 - 23+25 | 24 | 925.0 | -10.0 | 6.00 | | | | Average | Y |
| | | 7 - 23+25 | 25 | 926.0 | -10.0 | 6.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 - 24+20 | 26 | 966.0 | -41.0 | 5.00 | | | | Average | |
| | | 9 - 24+85. | 27 | 1,016.0 | -88.0 | 4.00 | | | | Average | |
| | | 10 - 25+17 | 28 | 1,030.0 | -108.0 | 3.50 | | | | Average | |
| | | 11 - 25+64 | 29 | 1,062.0 | -146.0 | 3.00 | | | | Average | |
| | | 12 - Gorg | 30 | 1,140.0 | -224.0 | 4.00 | | | | Average | |
| | | 13 - Franc | 31 | 1,320.0 | -400.0 | 4.00 | | | | | |
| WB/NB Richardson-Francisco to Tunnel | 10.8 | 1 - Francis | 32 | 1,320.0 | -380.0 | 4.00 | | | | Average | |
| | | 2 - 27+20. | 33 | 1,148.0 | -216.0 | 4.00 | | | | Average | |
| | | 3 - 26+00 | 34 | 1,095.0 | -152.0 | 3.50 | | | | Average | |
| | | 4 - 25+40 | 35 | 1,055.0 | -120.0 | 3.50 | | | | Average | |
| | | 5 - 24+73 | 36 | 1,018.0 | -65.0 | 4.00 | | | | Average | |
| | | 6 - 24+20 | 37 | 977.0 | -21.0 | 5.00 | | | | Average | |
| | | 7 - 23+75 | 38 | 950.0 | 0.0 | 6.00 | | | | Average | |
| | | 8 - 23+75 | 39 | 949.0 | 0.0 | 6.00 | | | | Average | Y |
| | | 9 - 23+22 | 40 | 900.0 | 22.0 | 6.00 | | | | Average | Y |
| | | 10 - 23+22 | 41 | 899.0 | 22.0 | 6.00 | | | | Average | |
| | | 11 - 22+68 | 42 | 843.0 | 34.0 | 6.00 | | | | Average | |
| | | 12 - 22+00 | 43 | 775.0 | 33.0 | 4.00 | | | | Average | |
| | | 13 - 20+85 | 44 | 661.0 | 31.0 | 2.00 | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 10.8 | 1 - 18+05 | 45 | 386.0 | -15.0 | 3.50 | | | | Average | |
| | | 2 - 15+00 | 46 | 96.0 | -107.0 | 10.00 | | | | Average | |
| | | 3 - 14+10 | 47 | 10.0 | -119.0 | 14.00 | | | | | |
| WB Doyle from North Tunnel to North End | 13.2 | 1 - 11+80 | 51 | -216.0 | -85.0 | 24.00 | | | | Average | |
| | | 2 - 11+00 | 52 | -295.0 | -69.0 | 27.00 | | | | Average | |
| | | 3 - 11+00 | 53 | -296.0 | -69.0 | 27.00 | | | | Average | Y |
| | | 4 - 9+80 | 54 | -407.0 | -39.0 | 32.00 | | | | Average | Y |
| | | 5 - 8+73 | 55 | -488.0 | -9.0 | 36.00 | | | | Average | Y |
| | | 6 - 7+00 | 56 | -661.0 | 69.0 | 44.00 | | | | Average | Y |
| | | 7 - 6+60 | 57 | -696.0 | 88.0 | 46.00 | | | | Average | Y |
| | | 8 - 6+60 | 58 | -697.0 | 88.0 | 46.00 | | | | Average | |
| | | 9 - 5+54 | 59 | -789.0 | 145.0 | 50.00 | | | | Average | |
| | | 10 - 5+54 | 60 | -790.0 | 145.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+14 | 61 | -817.0 | 169.0 | 52.00 | | | | Average | Y |
| | | 12 - 5+14 | 62 | -818.0 | 169.0 | 52.00 | | | | Average | |
| | | 13 - 4+00 | 63 | -907.0 | 237.0 | 56.00 | | | | Average | |
| | | 14 - 3+10 | 64 | -975.0 | 300.0 | 56.00 | | | | Average | |
| | | 15 - 0+00 | 65 | -1,170.0 | 522.0 | 53.00 | | | | | |
| WB Doyle off ramp to SB Park Presidio | 7.0 | 1 - 0+00 | 66 | -488.0 | -9.0 | 42.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 - 1+30 | 67 | -600.0 | 52.0 | 42.00 | | | | Average | Y |
| | | 3 - 1+80 | 68 | -639.0 | 82.0 | 42.00 | | | | Average | Y |
| | | 4 - 2+20 | 69 | -661.0 | 114.0 | 42.00 | | | | Average | Y |
| | | 5 - 2+20 | 70 | -662.0 | 114.0 | 42.00 | | | | Average | |
| | | 6 - 2+48 | 71 | -673.0 | 139.0 | 42.00 | | | | Average | |
| | | 7 - 3+09 | 72 | -693.0 | 165.0 | 42.00 | | | | Average | |
| | | 8 - 3+40 | 73 | -718.0 | 184.0 | 42.00 | | | | Average | |
| | | 9 - 3+60 | 74 | -746.0 | 194.0 | 42.00 | | | | Average | |
| | | 10 - 3+80 | 75 | -787.0 | 185.0 | 42.00 | | | | Average | |
| | | 11 - 4+00 | 76 | -803.0 | 171.0 | 42.00 | | | | Average | |
| | | 12 - 4+20 | 77 | -813.0 | 153.0 | 42.00 | | | | Average | |
| | | 13 - 4+40 | 78 | -818.0 | 134.0 | 42.00 | | | | Average | |
| | | 14 - 4+59 | 79 | -815.0 | 112.0 | 42.00 | | | | Average | |
| | | 15 - 4+80 | 80 | -807.0 | 93.0 | 42.00 | | | | Average | |
| | | 16 - 5+00 | 81 | -796.0 | 76.0 | 41.00 | | | | Average | |
| | | 17 - 5+20 | 82 | -782.0 | 61.0 | 40.00 | | | | Average | |
| | | 18 - 5+80 | 83 | -735.0 | 24.0 | 40.00 | | | | Average | |
| | | 19 - 6+06 | 84 | -719.0 | 5.0 | 40.00 | | | | Average | |
| | | 20 - 6+31 | 85 | -706.0 | -15.0 | 40.00 | | | | Average | |
| | | 21 - 6+60 | 86 | -696.0 | -42.0 | 40.00 | | | | Average | |
| | | 22 - 6+88 | 87 | -694.0 | -68.0 | 40.00 | | | | Average | |
| | | 23 - 8+23 | 169 | -699.0 | -203.0 | 40.00 | | | | Average | |
| | | 24 - 5+88. | 88 | -698.0 | -337.0 | 40.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 10.2 | 1 - 0+00 | 89 | -690.0 | -337.0 | 40.00 | | | | Average | |
| | | 2A | 170 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 3+72.3 | 90 | -667.0 | 32.0 | 37.00 | | | | Average | |
| | | 3 - 4+00 | 91 | -667.0 | 61.0 | 38.00 | | | | Average | |
| | | 4 - 4+40 | 92 | -677.0 | 101.0 | 40.00 | | | | Average | |
| | | 5 - 4+60 | 93 | -698.0 | 137.0 | 48.00 | | | | Average | |
| | | 6 - 5+00 | 94 | -715.0 | 150.0 | 48.00 | | | | Average | |
| | | 7 - 5+20 | 95 | -734.0 | 160.0 | 49.00 | | | | Average | |
| | | 8 - 5+40 | 96 | -753.0 | 165.0 | 49.00 | | | | Average | |
| | | 9 - 5+53 | 97 | -760.0 | 168.0 | 50.00 | | | | Average | |
| | | 10 - 5+53 | 98 | -761.0 | 168.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+80 | 99 | -792.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 12 - 5+98 | 100 | -807.0 | 183.0 | 52.00 | | | | Average | Y |
| | | 13 - 5+98 | 101 | -808.0 | 183.0 | 52.00 | | | | Average | |
| | | 14 - 6+58. | 102 | -857.0 | 212.0 | 53.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15 - 8+04. | 103 | -975.0 | 300.0 | 56.00 | | | | | |
| NB Park Presidio to EB Doyle Drive | 7.0 | 1 - 0+00 | 104 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 1+35.9 | 105 | -657.0 | 20.0 | 36.00 | | | | Average | |
| | | 3 - 1+60 | 106 | -654.0 | 44.0 | 40.00 | | | | Average | |
| | | 4 - 1+80 | 107 | -657.0 | 65.0 | 40.00 | | | | Average | |
| | | 5 - 2+00 | 108 | -661.0 | 85.0 | 40.00 | | | | Average | |
| | | 6 - 2+20 | 109 | -667.0 | 104.0 | 42.00 | | | | Average | |
| | | 7 - 2+40 | 110 | -675.0 | 123.0 | 42.00 | | | | Average | |
| | | 8 - 2+60 | 111 | -686.0 | 140.0 | 42.00 | | | | Average | |
| | | 9 - 2+81.9 | 112 | -700.0 | 157.0 | 42.00 | | | | Average | |
| | | 10 - 3+09. | 113 | -723.0 | 175.0 | 42.00 | | | | Average | |
| | | 11 - 3+40 | 114 | -754.0 | 180.0 | 42.00 | | | | Average | |
| | | 12 - 3+60 | 115 | -775.0 | 173.0 | 42.00 | | | | Average | |
| | | 13 - 3+80 | 116 | -790.0 | 158.0 | 42.00 | | | | Average | |
| | | 14 - 4+00 | 117 | -796.0 | 138.0 | 42.00 | | | | Average | |
| | | 15 - 4+20 | 118 | -795.0 | 116.0 | 42.00 | | | | Average | |
| | | 16 - 4+40 | 119 | -788.0 | 97.0 | 42.00 | | | | Average | |
| | | 17 - 4+53. | 120 | -778.0 | 88.0 | 42.00 | | | | Average | |
| | | 18 - 5+20 | 121 | -722.0 | 51.0 | 42.00 | | | | Average | |
| | | 19 - 5+20 | 122 | -721.0 | 51.0 | 42.00 | | | | Average | Y |
| | | 20 - 6+00 | 123 | -652.0 | 11.0 | 42.00 | | | | Average | Y |
| | | 21 - 6+40 | 124 | -614.0 | -3.0 | 42.00 | | | | Average | |
| | | 22 - 8+19. | 125 | -450.0 | -50.0 | 33.00 | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 10.0 | 1 - 0+00 | 128 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 2 - 0+65 | 129 | -823.0 | 116.0 | 52.00 | | | | Average | |
| | | 3 - 0+65 | 130 | -822.0 | 116.0 | 52.00 | | | | Average | Y |
| | | 4 - 2+00 | 131 | -723.0 | 35.0 | 44.00 | | | | Average | Y |
| | | 5 - 2+00 | 132 | -722.0 | 35.0 | 44.00 | | | | Average | |
| | | 6 - 2+40 | 133 | -700.0 | 5.0 | 42.00 | | | | Average | |
| | | 7 - 2+80 | 134 | -687.0 | -30.0 | 40.00 | | | | Average | |
| | | 8 - 3+14.5 | 135 | -685.0 | -63.0 | 37.00 | | | | Average | |
| | | 9 - 5+88.1 | 136 | -698.0 | -337.0 | 40.00 | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 6.0 | 1 - 0+00 | 137 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 0+42 | 138 | 685.0 | 0.0 | 2.00 | | | | Average | |
| | | 3 - 0+42 | 139 | 686.0 | 0.0 | 2.00 | | | | Average | Y |
| | | 4 - 1+00 | 140 | 740.0 | -2.0 | 2.00 | | | | Average | Y |
| | | 5 - 1+50 | 141 | 786.0 | -11.0 | 2.00 | | | | Average | Y |
| | | 6 - 1+50 | 142 | 787.0 | -11.0 | 2.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 - 2+12.1 | 143 | 843.0 | -30.0 | 1.00 | | | | Average | Y |
| | | 8 - EC 0+7 | 144 | 898.0 | -75.0 | 1.50 | | | | Average | |
| | | 9 | 145 | 998.0 | -167.0 | 3.00 | | | | Average | |
| | | 10 | 146 | 1,024.0 | -186.0 | 3.00 | | | | Average | |
| | | 11 | 147 | 1,118.0 | -243.0 | 4.00 | | | | Average | |
| | | 12 | 148 | 1,118.0 | -245.0 | 4.00 | | | | Average | |
| | | 13 - Inters | 149 | 1,140.0 | -224.0 | 4.00 | | | | | |
| NB Girard Rd. from Marina to Lincoln | 3.7 | 1 - 0+00 | 150 | 1,201.0 | 188.0 | 4.00 | | | | Average | |
| | | 2 - 0+65 | 151 | 1,153.0 | 136.0 | 3.60 | | | | Average | |
| | | 3 - 2+80 | 152 | 965.0 | 40.0 | 0.50 | | | | Average | |
| | | 4 - 4+09.9 | 153 | 843.0 | -23.0 | 0.00 | | | | Average | |
| | | 5 - 4+40 | 154 | 828.0 | -40.0 | 1.00 | | | | Average | |
| | | 6 - 4+80 | 155 | 796.0 | -65.0 | 4.70 | | | | Average | |
| | | 7 - 5+20 | 156 | 772.0 | -98.0 | 5.50 | | | | Average | |
| | | 8 - 7+20 | 157 | 673.0 | -273.0 | 11.50 | | | | | |
| SB Girard Rd. from Lincoln to Marina | 3.7 | 1 - 7+20 | 158 | 678.0 | -273.0 | 11.50 | | | | Average | |
| | | 2 - 5+20 | 159 | 779.0 | -102.0 | 5.50 | | | | Average | |
| | | 3 - 4+80 | 160 | 803.0 | -70.0 | 4.70 | | | | Average | |
| | | 4 - 4+40 | 161 | 831.0 | -44.0 | 1.00 | | | | Average | |
| | | 5 - 4+09.9 | 162 | 852.0 | -31.0 | 0.00 | | | | Average | |
| | | 6 - 2+80 | 163 | 965.0 | 27.0 | 0.50 | | | | Average | |
| | | 7 - 0+65 | 164 | 1,156.0 | 127.0 | 3.60 | | | | Average | |
| | | 8 - Palace | 239 | 1,178.0 | 146.0 | 4.00 | | | | Average | |
| | | 9 - Mason | 165 | 1,218.0 | 191.0 | 4.00 | | | | | |
| Halleck St. from Lincon to Mason | 7.2 | 1 - 3+65 | 166 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 2 - 2+77.9 | 167 | 612.0 | -139.0 | 10.00 | | | | Average | |
| | | 3 - 0+00 | 168 | 673.0 | 130.0 | 4.00 | | | | | |
| Lincoln from McDowell to Letterman | 7.3 | 1 | 180 | -316.0 | -214.0 | 33.00 | | | | Average | |
| | | 2 | 181 | -279.0 | -132.0 | 33.00 | | | | Average | |
| | | 3 | 182 | -251.0 | -115.0 | 33.00 | | | | Average | |
| | | 4 | 183 | -216.0 | -104.0 | 32.00 | | | | Average | |
| | | 5 | 184 | -118.0 | -147.0 | 31.00 | | | | Average | |
| | | 6 | 185 | -93.0 | -152.0 | 29.00 | | | | Average | |
| | | 7 | 186 | -59.0 | -148.0 | 29.00 | | | | Average | |
| | | 8 | 187 | -38.0 | -151.0 | 29.00 | | | | Average | |
| | | 9 | 188 | -14.0 | -158.0 | 29.00 | | | | Average | |
| | | 10 | 189 | 13.0 | -167.0 | 27.00 | | | | Average | |
| | | 11 | 190 | 50.0 | -170.0 | 26.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12 | 191 | 182.0 | -134.0 | 19.00 | | | | Average | |
| | | 13 | 192 | 245.0 | -108.0 | 15.00 | | | | Average | |
| | | 14 | 193 | 324.0 | -68.0 | 12.00 | | | | Average | |
| | | 15 | 194 | 376.0 | -100.0 | 13.00 | | | | Average | |
| | | 16 | 195 | 396.0 | -124.0 | 13.00 | | | | Average | |
| | | 17 | 196 | 478.0 | -160.0 | 12.00 | | | | Average | |
| | | 18 | 197 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 19 | 198 | 673.0 | -273.0 | 11.50 | | | | Average | |
| | | 20 | 199 | 735.0 | -310.0 | 12.00 | | | | | |
| Mason St. from Crissy Ave. to Marina | 7.3 | 1 | 200 | -500.0 | 96.0 | 3.00 | | | | Average | |
| | | 2 | 201 | 40.0 | 0.0 | 4.00 | | | | Average | |
| | | 3 | 202 | 72.0 | 4.0 | 4.00 | | | | Average | |
| | | 4 | 203 | 96.0 | 15.0 | 4.00 | | | | Average | |
| | | 5 | 204 | 144.0 | 60.0 | 4.00 | | | | Average | |
| | | 6 | 205 | 174.0 | 68.0 | 4.00 | | | | Average | |
| | | 7 | 206 | 673.0 | 130.0 | 4.00 | | | | Average | |
| | | 8 | 207 | 768.0 | 138.0 | 4.00 | | | | Average | |
| | | 9 | 208 | 952.0 | 159.0 | 4.00 | | | | Average | |
| | | 10 | 209 | 1,185.0 | 187.0 | 4.00 | | | | Average | |
| | | 11 | 210 | 1,218.0 | 191.0 | 4.00 | | | | Average | |
| | | 12 | 211 | 1,270.0 | 196.0 | 4.00 | | | | | |
| Baker St. from Marina to Richardson | 7.3 | 1 | 212 | 1,270.0 | 196.0 | 4.00 | | | | Average | |
| | | 2 | 213 | 1,280.0 | 93.0 | 4.00 | | | | Average | |
| | | 3 | 214 | 1,290.0 | -7.0 | 4.00 | | | | Average | |
| | | 4 | 215 | 1,310.0 | -276.0 | 4.00 | | | | Average | |
| | | 5 | 216 | 1,327.0 | -400.0 | 4.00 | | | | | |
| Palace Drive from Richardson to Marina | 7.3 | 1 | 217 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 2 | 218 | 1,186.0 | -245.0 | 4.00 | | | | Average | |
| | | 3 | 219 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 4 | 220 | 1,180.0 | -195.0 | 3.50 | | | | Average | |
| | | 5 | 221 | 1,151.0 | -188.0 | 3.00 | | | | Average | |
| | | 6 | 222 | 1,125.0 | -175.0 | 3.00 | | | | Average | |
| | | 7 | 223 | 1,100.0 | -153.0 | 3.00 | | | | Average | |
| | | 8 | 224 | 1,081.0 | -130.0 | 3.00 | | | | Average | |
| | | 9 | 225 | 1,069.0 | -108.0 | 3.00 | | | | Average | |
| | | 10 | 226 | 1,060.0 | -83.0 | 3.00 | | | | Average | |
| | | 11 | 227 | 1,055.0 | -63.5 | 4.00 | | | | Average | |
| | | 12 | 228 | 1,053.0 | -39.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 13 | 229 | 1,055.0 | -14.0 | 4.00 | | | | Average | |
| | | 14 | 230 | 1,061.0 | 10.0 | 4.00 | | | | Average | |
| | | 15 | 231 | 1,073.0 | 40.0 | 4.00 | | | | Average | |
| | | 16 | 232 | 1,088.0 | 68.0 | 4.00 | | | | Average | |
| | | 17 | 233 | 1,116.0 | 91.0 | 4.00 | | | | Average | |
| | | 18 | 234 | 1,185.0 | 139.0 | 4.00 | | | | Average | |
| | | 19 | 235 | 1,178.0 | 146.0 | 4.00 | | | | | |
| Montgomery St. from Sherian to Lincoln | 9.2 | 1 | 236 | 237.0 | -280.0 | 16.00 | | | | Average | |
| | | 2 | 237 | 350.0 | -117.0 | 13.00 | | | | Average | |
| | | 3 | 238 | 396.0 | -124.0 | 13.00 | | | | | |
| Palace Drive Connector to Gorgas | 7.3 | 1 | 240 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 2 | 241 | 1,180.0 | -214.0 | 4.00 | | | | Average | |
| | | 3 | 242 | 1,172.0 | -208.0 | 4.00 | | | | Average | |
| | | 4 | 243 | 1,160.0 | -206.0 | 4.00 | | | | Average | |
| | | 5 | 244 | 1,148.0 | -216.0 | 4.00 | | | | | |

Environmental Science Associates, Inc.
Win Lindeman

31 August 2004
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2030 AM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle to North Tunnel | 1 - North End | 11 | 6345 | 88 | 66 | 88 | 13 | 88 | 66 | 88 | 66 | 88 |
| | 2 - 1+97.539 | 10 | 6345 | 88 | 66 | 88 | 13 | 88 | 66 | 88 | 66 | 88 |
| | 3 - 4+74 | 9 | 4158 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 4 - 5+27 | 8 | 4158 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 5 - 5+27 | 7 | 4158 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 6 - 6+00 | 6 | 4158 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 7 - 8+00 | 5 | 4158 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 8 - 9+57 | 4 | 4732 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 9 - 11+10 | 3 | 4732 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 10 - 11+10 | 2 | 4732 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 11 - 11+53 | 1 | | | | | | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 1 - 13+93 | 18 | 4732 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 2 - 14+10 | 17 | 4732 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 3 - 14+60 | 16 | 4732 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 4 - 15+00 | 15 | 4732 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 5 - 15+85.44 | 14 | 4732 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 6 - 17+33.198 | 13 | 4732 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 7 - 17+80 | 12 | | | | | | | | | | |
| EB Doyle from South Tunnel to Francisco | 1 - 20+95 | 19 | 3038 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 2 - 21+20 | 20 | 3038 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 3 - 21+20 | 21 | 3038 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 22+42.630 | 22 | 3038 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 5 - 23+00 | 23 | 3038 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 6 - 23+25 | 24 | 3038 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 7 - 23+25 | 25 | 3038 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 8 - 24+20 | 26 | 3038 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 9 - 24+85.060 | 27 | 3038 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 10 - 25+17.10 | 28 | 3038 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 11 - 25+64.74 | 29 | 3038 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 12 - Gorgas I | 30 | 3038 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 13 - Francisc | 31 | | | | | | | | | | |
| WB/NB Richardson-Francisco to Tunnel | 1 - Francisco | 32 | 2103 | 56 | 22 | 56 | 28 | 56 | 13 | 56 | 22 | 56 |
| | 2 - 27+20.608 | 33 | 2103 | 56 | 22 | 56 | 28 | 56 | 13 | 56 | 22 | 56 |
| | 3 - 26+00 | 34 | 2103 | 56 | 22 | 56 | 28 | 56 | 13 | 56 | 22 | 56 |
| | 4 - 25+40 | 35 | 2103 | 56 | 22 | 56 | 28 | 56 | 13 | 56 | 22 | 56 |
| | 5 - 24+73 | 36 | 2103 | 56 | 22 | 56 | 28 | 56 | 13 | 56 | 22 | 56 |
| | 6 - 24+20 | 37 | 2103 | 56 | 22 | 56 | 28 | 56 | 13 | 56 | 22 | 56 |
| | 7 - 23+75 | 38 | 2103 | 56 | 22 | 56 | 28 | 56 | 13 | 56 | 22 | 56 |
| | 8 - 23+75 | 39 | 2103 | 56 | 22 | 56 | 28 | 56 | 13 | 56 | 22 | 56 |
| | 9 - 23+22 | 40 | 2103 | 56 | 22 | 56 | 28 | 56 | 13 | 56 | 22 | 56 |
| | 10 - 23+22 | 41 | 2103 | 56 | 22 | 56 | 28 | 56 | 13 | 56 | 22 | 56 |
| | 11 - 22+68 | 42 | 2103 | 56 | 22 | 56 | 28 | 56 | 13 | 56 | 22 | 56 |
| | 12 - 22+00 | 43 | 2103 | 56 | 22 | 56 | 28 | 56 | 13 | 56 | 22 | 56 |
| | 13 - 20+85 | 44 | | | | | | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 1 - 18+05 | 45 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 2 - 15+00 | 46 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 3 - 14+10 | 47 | | | | | | | | | | |
| WB Doyle from North Tunnel to North End | 1 - 11+80 | 51 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 2 - 11+00 | 52 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 3 - 11+00 | 53 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 4 - 9+80 | 54 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 5 - 8+73 | 55 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 6 - 7+00 | 56 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 7 - 6+60 | 57 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 8 - 6+60 | 58 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9 - 5+54 | 59 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 10 - 5+54 | 60 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 11 - 5+14 | 61 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 12 - 5+14 | 62 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 13 - 4+00 | 63 | 2833 | 88 | 29 | 88 | 38 | 88 | 18 | 88 | 29 | 88 |
| | 14 - 3+10 | 64 | 4897 | 88 | 51 | 88 | 66 | 88 | 31 | 88 | 51 | 88 |
| | 15 - 0+00 | 65 | | | | | | | | | | |
| WB Doyle off ramp to SB Park Presidio | 1 - 0+00 | 66 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 2 - 1+30 | 67 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 3 - 1+80 | 68 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 4 - 2+20 | 69 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 5 - 2+20 | 70 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 6 - 2+48 | 71 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 7 - 3+09 | 72 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 8 - 3+40 | 73 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 9 - 3+60 | 74 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 10 - 3+80 | 75 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 11 - 4+00 | 76 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 12 - 4+20 | 77 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 13 - 4+40 | 78 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 14 - 4+59 | 79 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 15 - 4+80 | 80 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 16 - 5+00 | 81 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 17 - 5+20 | 82 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 18 - 5+80 | 83 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 19 - 6+06 | 84 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 20 - 6+31 | 85 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 21 - 6+60 | 86 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 22 - 6+88 | 87 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 23 - 8+23 | 169 | 318 | 56 | 3 | 56 | 4 | 56 | 2 | 56 | 3 | 56 |
| | 24 - 5+88.184 | 88 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 - 0+00 | 89 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 2A | 170 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 2 - 3+72.391 | 90 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 - 4+00 | 91 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 4 - 4+40 | 92 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 5 - 4+60 | 93 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 6 - 5+00 | 94 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 7 - 5+20 | 95 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 8 - 5+40 | 96 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 9 - 5+53 | 97 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 10 - 5+53 | 98 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 11 - 5+80 | 99 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 12 - 5+98 | 100 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 13 - 5+98 | 101 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 14 - 6+58.037 | 102 | 2412 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 15 - 8+04.414 | 103 | | | | | | | | | | |
| NB Park Presidio to EB Doyle Drive | 1 - 0+00 | 104 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 2 - 1+35.965 | 105 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 3 - 1+60 | 106 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 4 - 1+80 | 107 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 5 - 2+00 | 108 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 6 - 2+20 | 109 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 7 - 2+40 | 110 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 8 - 2+60 | 111 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 9 - 2+81.908 | 112 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 10 - 3+09.875 | 113 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 11 - 3+40 | 114 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 12 - 3+60 | 115 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 13 - 3+80 | 116 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 14 - 4+00 | 117 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 15 - 4+20 | 118 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 16 - 4+40 | 119 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 17 - 4+53.16 | 120 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 18 - 5+20 | 121 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 19 - 5+20 | 122 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 20 - 6+00 | 123 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 21 - 6+40 | 124 | 573 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 22 - 8+19.142 | 125 | | | | | | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 1 - 0+00 | 128 | 2400 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 2 - 0+65 | 129 | 2400 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 3 - 0+65 | 130 | 2400 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 4 - 2+00 | 131 | 2400 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 5 - 2+00 | 132 | 2400 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 6 - 2+40 | 133 | 2400 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 7 - 2+80 | 134 | 2400 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 8 - 3+14.595 | 135 | 2400 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 9 - 5+88.184 | 136 | | | | | | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 1 - 0+00 | 137 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+42 | 138 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+42 | 139 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 1+00 | 140 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 1+50 | 141 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 1+50 | 142 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 2+12.133 | 143 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - EC 0+74.1 | 144 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 145 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 146 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 147 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 148 | 268 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 - Intersect | 149 | | | | | | | | | | |
| NB Girard Rd. from Marina to Lincoln | 1 - 0+00 | 150 | 95 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+65 | 151 | 95 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 2+80 | 152 | 95 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 4+09.995 | 153 | 95 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+40 | 154 | 95 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 4+80 | 155 | 95 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 5+20 | 156 | 95 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - 7+20 | 157 | | | | | | | | | | |
| SB Girard Rd. from Lincoln to Marina | 1 - 7+20 | 158 | 438 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 5+20 | 159 | 438 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 4+80 | 160 | 438 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 4+40 | 161 | 438 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+09.995 | 162 | 438 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 2+80 | 163 | 438 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 0+65 | 164 | 438 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - Palace Dr | 239 | 438 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 - Mason/Mc | 165 | | | | | | | | | | |
| Halleck St. from Lincon to Mason | 1 - 3+65 | 166 | 43 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 2+77.948 | 167 | 43 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+00 | 168 | | | | | | | | | | |
| Lincoln from McDowell to Letterman | 1 | 180 | 102 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 2 | 181 | 102 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 3 | 182 | 102 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 4 | 183 | 192 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 5 | 184 | 192 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 6 | 185 | 192 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 7 | 186 | 192 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 8 | 187 | 192 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 9 | 188 | 192 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 10 | 189 | 201 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 11 | 190 | 58 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 12 | 191 | 58 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 13 | 192 | 58 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 14 | 193 | 58 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 15 | 194 | 58 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 0 | 0 |
| | 16 | 195 | 169 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 17 | 196 | 225 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 0 | 0 |
| | 18 | 197 | 666 | 32 | 7 | 32 | 0 | 0 | 7 | 32 | 0 | 0 |
| | 19 | 198 | 750 | 32 | 7 | 32 | 0 | 0 | 7 | 32 | 0 | 0 |
| | 20 | 199 | | | | | | | | | | |
| Mason St. from Crissy Ave. to Marina | 1 | 200 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 201 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 202 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 203 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 204 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 205 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 206 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 207 | 16 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 208 | 16 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 209 | 19 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 210 | 1400 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 211 | | | | | | | | | | |
| Baker St. from Marina to Richardson | 1 | 212 | 40 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 213 | 2 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 214 | 6 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 215 | 6 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 216 | | | | | | | | | | |
| Palace Drive from Richardson to Marina | 1 | 217 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 218 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 219 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 220 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 221 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 222 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 223 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 224 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 225 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 226 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 227 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 228 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 | 229 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 14 | 230 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 15 | 231 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 16 | 232 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 17 | 233 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 18 | 234 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 19 | 235 | | | | | | | | | | |
| Montgomery St. from Sherian to Lincoln | 1 | 236 | 115 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 237 | 115 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 238 | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Palace Drive Connector to Gorgas | 1 | 240 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 241 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 242 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 243 | 30 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 244 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

31 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2030 AM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 1,098.0 | -130.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 1,133.0 | -91.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3 Buildings 1187/1188 | 3 | 0 | 1,148.0 | 150.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4 Building 1182 | 4 | 0 | 1,087.0 | 125.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5 Buildings 1183/1186 | 5 | 0 | 1,020.0 | 116.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6 Buildings 1184/1185 | 6 | 0 | 893.0 | 103.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7 Building 603/Crissy Center | 7 | 0 | 571.0 | 88.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8 PX Building | 8 | 0 | 500.0 | 33.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9 Post Commissary/Sports Basement | 9 | 0 | 240.0 | -54.0 | 4.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 10 Battery Blaney | 10 | 0 | -30.0 | -96.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11 Battery Slaughter | 11 | 0 | -104.0 | -98.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12 Battery Sherwood | 12 | 0 | -223.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13 Battery Baldwin | 13 | 0 | -297.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14 Building 644 | 14 | 0 | -260.0 | 16.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15 Building 649 | 15 | 0 | -364.0 | 4.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16 Building 650/Stilwell Hall | 16 | 0 | -437.0 | 11.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17 1253 Armistead Road | 17 | 1 | -785.0 | 235.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18 Home on Armistead Road | 18 | 1 | -939.0 | 296.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19 Building 969 | 19 | 0 | -887.0 | 410.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20 Building 968 | 20 | 0 | -978.0 | 427.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21 Building 967 | 21 | 0 | -1,040.0 | 427.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22 Building 966 | 22 | 0 | -1,044.0 | 433.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 Building 964 | 23 | 0 | -1,016.0 | 446.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24 Building 963 | 24 | 0 | -1,002.0 | 452.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25 Building 962 | 25 | 0 | -987.0 | 455.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26 Unknown Building | 26 | 0 | -1,153.0 | 421.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27 Building 1299/Log Cabin | 27 | 0 | -1,003.0 | 177.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28 Building 1387 | 28 | 0 | -1,105.0 | 268.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29 Building 1298 Storey Ave. | 29 | 2 | -977.0 | 123.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30 Building 1297 Storey Ave. | 30 | 2 | -950.0 | 123.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31 Building 1295 Storey Ave. | 31 | 2 | -919.0 | 119.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32 Building 1294 Storey Ave. | 32 | 2 | -900.0 | 116.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33 Building 1293 Storey Ave. | 33 | 2 | -865.0 | 102.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34 Building 1291 Storey Ave. | 34 | 2 | -841.0 | 92.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35 Building 1290 Storey Ave. | 35 | 2 | -811.0 | 78.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36 Building 1289 Storey Ave. | 36 | 2 | -804.0 | 63.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37 Building 1263 Storey Ave. | 37 | 2 | -722.0 | -152.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38 Building 682/Cross Cultural Center | 38 | 0 | -650.0 | -254.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | -556.0 | -70.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40 Building 662/Cavalry Stable | 40 | 0 | -508.0 | -97.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41 Building 663/Cavalry Stable | 41 | 0 | -488.0 | -140.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42 Building 667/Cavalry Stable | 42 | 0 | -384.0 | -122.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43 National Cemetery Grave Site | 43 | 0 | -23.0 | -163.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44 Building 129 | 44 | 1 | 104.0 | -168.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45 Building 122 | 45 | 0 | 148.0 | -157.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46 Building 108 | 46 | 0 | 225.0 | -136.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47 Building 107 | 47 | 0 | 230.0 | -120.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48 Building 104 | 48 | 0 | 252.0 | -143.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49 Building 105 | 49 | 0 | 285.0 | -93.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50 Building 106 | 50 | 0 | 328.0 | -78.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51 Building 211 | 51 | 0 | 433.0 | -52.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52 Building 204 | 52 | 0 | 522.0 | -17.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53 Building 210 | 53 | 0 | 320.0 | -97.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54 Building 201 | 54 | 0 | 623.0 | 8.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55 Building 220 | 55 | 0 | 590.0 | -104.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56 Building 231 | 56 | 0 | 650.0 | -5.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57 Building 228 | 57 | 0 | 643.0 | -31.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 Building 229 | 58 | 0 | 637.0 | -60.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59 Building 223 | 59 | 0 | 636.0 | -108.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60 Building 230 | 60 | 0 | 740.0 | 6.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 706.0 | -77.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 698.0 | -113.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63 Building 1063 | 63 | 0 | 842.0 | -60.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64 Building 1062 | 64 | 0 | 852.0 | -100.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65 Building 1060 | 65 | 0 | 898.0 | -127.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66 Building 1167 | 66 | 0 | 900.0 | -18.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67 Building 1163 | 67 | 0 | 892.0 | -26.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68 Building 1169 | 68 | 0 | 955.0 | -58.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69 Building 1162 | 69 | 0 | 943.0 | -73.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70 Building 1170 | 70 | 0 | 1,035.0 | -132.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71 Building 1161 | 71 | 0 | 1,035.0 | -161.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72 Building 1160 | 72 | 0 | 1,066.0 | -166.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73 Building 1152/YMCA | 73 | 0 | 1,100.0 | -198.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74 Building 1151/YMCA Pool | 74 | 0 | 1,140.0 | -240.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75 Building 1004 | 75 | 0 | 965.0 | -246.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 1,216.0 | -270.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

31 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2030 AM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

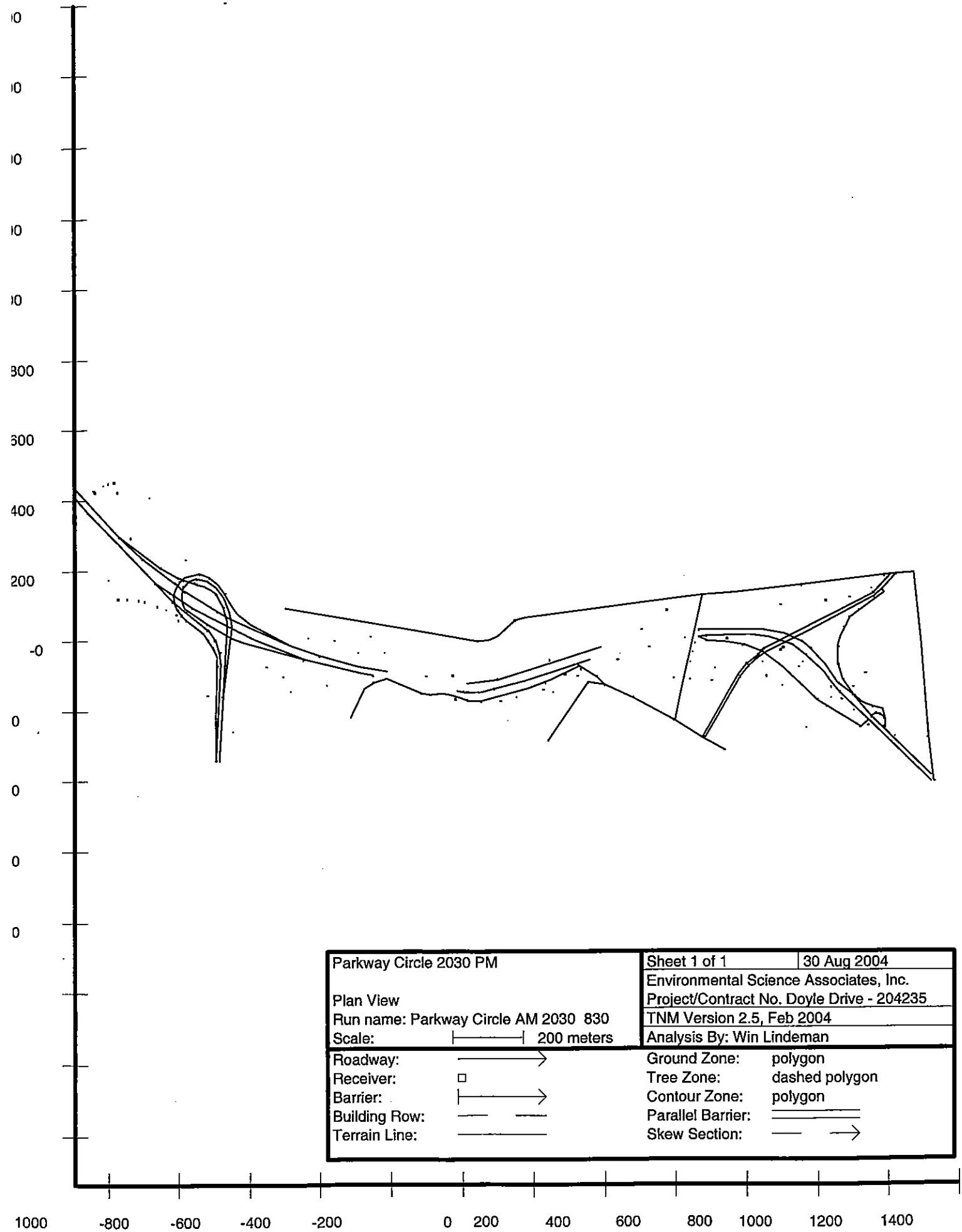
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 69.0 | 66 | 69.0 | 12 | Snd Lvl | 69.0 | 0.0 | 10 | -10.0 |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 61.5 | 66 | 61.5 | 12 | --- | 61.5 | 0.0 | 10 | -10.0 |
| 3 Buildings 1187/1188 | 3 | 0 | 81.0 | 58.4 | 71 | -22.6 | 12 | --- | 58.4 | 0.0 | 10 | -10.0 |
| 4 Building 1182 | 4 | 0 | 81.0 | 57.1 | 71 | -23.9 | 12 | --- | 57.1 | 0.0 | 10 | -10.0 |
| 5 Buildings 1183/1186 | 5 | 0 | 81.0 | 56.8 | 71 | -24.2 | 12 | --- | 56.8 | 0.0 | 10 | -10.0 |
| 6 Buildings 1184/1185 | 6 | 0 | 81.0 | 59.0 | 71 | -22.0 | 12 | --- | 59.0 | 0.0 | 10 | -10.0 |
| 7 Building 603/Crissy Center | 7 | 0 | 72.0 | 56.1 | 71 | -15.9 | 12 | --- | 56.1 | 0.0 | 10 | -10.0 |
| 8 PX Building | 8 | 0 | 0.0 | 59.1 | 71 | 59.1 | 12 | --- | 59.1 | 0.0 | 10 | -10.0 |
| 9 Post Commissary/Sports Basement | 9 | 0 | 69.0 | 69.7 | 66 | 0.7 | 12 | Snd Lvl | 69.7 | 0.0 | 10 | -10.0 |
| 10 Battery Blaney | 10 | 0 | 68.0 | 69.3 | 66 | 1.3 | 12 | Snd Lvl | 69.3 | 0.0 | 10 | -10.0 |
| 11 Battery Slaughter | 11 | 0 | 68.0 | 65.3 | 66 | -2.7 | 12 | --- | 65.3 | 0.0 | 10 | -10.0 |
| 12 Battery Sherwood | 12 | 0 | 68.0 | 65.0 | 66 | -3.0 | 12 | --- | 65.0 | 0.0 | 10 | -10.0 |
| 13 Battery Baldwin | 13 | 0 | 68.0 | 67.5 | 66 | -0.5 | 12 | Snd Lvl | 67.5 | 0.0 | 10 | -10.0 |
| 14 Building 644 | 14 | 0 | 0.0 | 60.1 | 71 | 60.1 | 12 | --- | 60.1 | 0.0 | 10 | -10.0 |
| 15 Building 649 | 15 | 0 | 0.0 | 60.7 | 66 | 60.7 | 12 | --- | 60.7 | 0.0 | 10 | -10.0 |
| 16 Building 650/Stilwell Hall | 16 | 0 | 70.0 | 59.2 | 66 | -10.8 | 12 | --- | 59.2 | 0.0 | 10 | -10.0 |
| 17 1253 Armistead Road | 17 | 1 | 66.0 | 64.7 | 66 | -1.3 | 12 | --- | 64.7 | 0.0 | 10 | -10.0 |
| 18 Home on Armistead Road | 18 | 1 | 66.0 | 76.8 | 66 | 10.8 | 12 | Snd Lvl | 76.8 | 0.0 | 10 | -10.0 |
| 19 Building 969 | 19 | 0 | 0.0 | 58.4 | 71 | 58.4 | 12 | --- | 58.4 | 0.0 | 10 | -10.0 |
| 20 Building 968 | 20 | 0 | 0.0 | 60.1 | 71 | 60.1 | 12 | --- | 60.1 | 0.0 | 10 | -10.0 |
| 21 Building 967 | 21 | 0 | 0.0 | 65.4 | 71 | 65.4 | 12 | --- | 65.4 | 0.0 | 10 | -10.0 |
| 22 Building 966 | 22 | 0 | 0.0 | 65.4 | 71 | 65.4 | 12 | --- | 65.4 | 0.0 | 10 | -10.0 |
| 23 Building 964 | 23 | 0 | 0.0 | 63.5 | 66 | 63.5 | 12 | --- | 63.5 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 Building 963 | 24 | 0 | 0.0 | 62.8 | 66 | 62.8 | 12 | — | 62.8 | 0.0 | 10 | -10.0 |
| 25 Building 962 | 25 | 0 | 0.0 | 62.1 | 66 | 62.1 | 12 | — | 62.1 | 0.0 | 10 | -10.0 |
| 26 Unknown Building | 26 | 0 | 0.0 | 75.0 | 71 | 75.0 | 12 | Snd Lvl | 75.0 | 0.0 | 10 | -10.0 |
| 27 Building 1299/Log Cabin | 27 | 0 | 63.0 | 68.8 | 66 | 5.8 | 12 | Snd Lvl | 68.8 | 0.0 | 10 | -10.0 |
| 28 Building 1387 | 28 | 0 | 0.0 | 67.4 | 71 | 67.4 | 12 | — | 67.4 | 0.0 | 10 | -10.0 |
| 29 Building 1298 Storey Ave. | 29 | 2 | 66.5 | 66.7 | 66 | 0.2 | 12 | Snd Lvl | 66.7 | 0.0 | 10 | -10.0 |
| 30 Building 1297 Storey Ave. | 30 | 2 | 66.5 | 68.6 | 66 | 2.1 | 12 | Snd Lvl | 68.6 | 0.0 | 10 | -10.0 |
| 31 Building 1295 Storey Ave. | 31 | 2 | 66.5 | 70.7 | 66 | 4.2 | 12 | Snd Lvl | 70.7 | 0.0 | 10 | -10.0 |
| 32 Building 1294 Storey Ave. | 32 | 2 | 66.5 | 71.3 | 66 | 4.8 | 12 | Snd Lvl | 71.3 | 0.0 | 10 | -10.0 |
| 33 Building 1293 Storey Ave. | 33 | 2 | 66.5 | 72.4 | 66 | 5.9 | 12 | Snd Lvl | 72.4 | 0.0 | 10 | -10.0 |
| 34 Building 1291 Storey Ave. | 34 | 2 | 66.5 | 73.0 | 66 | 6.5 | 12 | Snd Lvl | 73.0 | 0.0 | 10 | -10.0 |
| 35 Building 1290 Storey Ave. | 35 | 2 | 66.5 | 73.7 | 66 | 7.2 | 12 | Snd Lvl | 73.7 | 0.0 | 10 | -10.0 |
| 36 Building 1289 Storey Ave. | 36 | 2 | 66.5 | 72.7 | 66 | 6.2 | 12 | Snd Lvl | 72.7 | 0.0 | 10 | -10.0 |
| 37 Building 1263 Storey Ave. | 37 | 2 | 0.0 | 69.2 | 66 | 69.2 | 12 | Snd Lvl | 69.2 | 0.0 | 10 | -10.0 |
| 38 Building 682/Cross Cultural Center | 38 | 0 | 65.5 | 65.3 | 66 | -0.2 | 12 | — | 65.3 | 0.0 | 10 | -10.0 |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | 64.0 | 60.2 | 71 | -3.8 | 12 | — | 60.2 | 0.0 | 10 | -10.0 |
| 40 Building 662/Cavalry Stable | 40 | 0 | 64.0 | 62.3 | 71 | -1.7 | 12 | — | 62.3 | 0.0 | 10 | -10.0 |
| 41 Building 663/Cavalry Stable | 41 | 0 | 64.0 | 63.3 | 71 | -0.7 | 12 | — | 63.3 | 0.0 | 10 | -10.0 |
| 42 Building 667/Cavalry Stable | 42 | 0 | 64.0 | 67.1 | 71 | 3.1 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 43 National Cemetery Grave Site | 43 | 0 | 69.0 | 63.0 | 66 | -6.0 | 12 | — | 63.0 | 0.0 | 10 | -10.0 |
| 44 Building 129 | 44 | 1 | 0.0 | 56.8 | 66 | 56.8 | 12 | — | 56.8 | 0.0 | 10 | -10.0 |
| 45 Building 122 | 45 | 0 | 0.0 | 61.8 | 71 | 61.8 | 12 | — | 61.8 | 0.0 | 10 | -10.0 |
| 46 Building 108 | 46 | 0 | 0.0 | 61.9 | 71 | 61.9 | 12 | — | 61.9 | 0.0 | 10 | -10.0 |
| 47 Building 107 | 47 | 0 | 0.0 | 67.0 | 71 | 67.0 | 12 | — | 67.0 | 0.0 | 10 | -10.0 |
| 48 Building 104 | 48 | 0 | 74.0 | 58.3 | 71 | -15.7 | 12 | — | 58.3 | 0.0 | 10 | -10.0 |
| 49 Building 105 | 49 | 0 | 74.0 | 73.0 | 71 | -1.0 | 12 | Snd Lvl | 73.0 | 0.0 | 10 | -10.0 |
| 50 Building 106 | 50 | 0 | 76.0 | 71.7 | 71 | -4.3 | 12 | Snd Lvl | 71.7 | 0.0 | 10 | -10.0 |
| 51 Building 211 | 51 | 0 | 0.0 | 65.3 | 71 | 65.3 | 12 | — | 65.3 | 0.0 | 10 | -10.0 |
| 52 Building 204 | 52 | 0 | 0.0 | 59.0 | 71 | 59.0 | 12 | — | 59.0 | 0.0 | 10 | -10.0 |
| 53 Building 210 | 53 | 0 | 0.0 | 62.2 | 71 | 62.2 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 54 Building 201 | 54 | 0 | 0.0 | 55.5 | 71 | 55.5 | 12 | — | 55.5 | 0.0 | 10 | -10.0 |
| 55 Building 220 | 55 | 0 | 0.0 | 53.3 | 71 | 53.3 | 12 | — | 53.3 | 0.0 | 10 | -10.0 |
| 56 Building 231 | 56 | 0 | 0.0 | 65.5 | 71 | 65.5 | 12 | — | 65.5 | 0.0 | 10 | -10.0 |
| 57 Building 228 | 57 | 0 | 0.0 | 61.7 | 71 | 61.7 | 12 | — | 61.7 | 0.0 | 10 | -10.0 |
| 58 Building 229 | 58 | 0 | 0.0 | 59.0 | 71 | 59.0 | 12 | — | 59.0 | 0.0 | 10 | -10.0 |
| 59 Building 223 | 59 | 0 | 0.0 | 57.1 | 71 | 57.1 | 12 | — | 57.1 | 0.0 | 10 | -10.0 |
| 60 Building 230 | 60 | 0 | 0.0 | 71.5 | 71 | 71.5 | 12 | Snd Lvl | 71.5 | 0.0 | 10 | -10.0 |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 57.0 | 60.0 | 66 | 3.0 | 12 | — | 60.0 | 0.0 | 10 | -10.0 |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 57.0 | 57.7 | 66 | 0.7 | 12 | — | 57.7 | 0.0 | 10 | -10.0 |
| 63 Building 1063 | 63 | 0 | 68.5 | 62.5 | 71 | -6.0 | 12 | — | 62.5 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 Building 1062 | 64 | 0 | 68.5 | 58.9 | 71 | -9.6 | 12 | — | 58.9 | 0.0 | 10 | -10.0 |
| 65 Building 1060 | 65 | 0 | 68.5 | 59.0 | 71 | -9.5 | 12 | — | 59.0 | 0.0 | 10 | -10.0 |
| 66 Building 1167 | 66 | 0 | 68.0 | 65.9 | 71 | -2.1 | 12 | — | 65.9 | 0.0 | 10 | -10.0 |
| 67 Building 1163 | 67 | 0 | 0.0 | 65.6 | 71 | 65.6 | 12 | — | 65.6 | 0.0 | 10 | -10.0 |
| 68 Building 1169 | 68 | 0 | 68.0 | 64.4 | 71 | -3.6 | 12 | — | 64.4 | 0.0 | 10 | -10.0 |
| 69 Building 1162 | 69 | 0 | 0.0 | 62.6 | 71 | 62.6 | 12 | — | 62.6 | 0.0 | 10 | -10.0 |
| 70 Building 1170 | 70 | 0 | 68.0 | 71.5 | 71 | 3.5 | 12 | Snd Lvl | 71.5 | 0.0 | 10 | -10.0 |
| 71 Building 1161 | 71 | 0 | 0.0 | 66.8 | 71 | 66.8 | 12 | — | 66.8 | 0.0 | 10 | -10.0 |
| 72 Building 1160 | 72 | 0 | 0.0 | 71.6 | 71 | 71.6 | 12 | Snd Lvl | 71.6 | 0.0 | 10 | -10.0 |
| 73 Building 1152/YMCA | 73 | 0 | 0.0 | 69.9 | 66 | 69.9 | 12 | Snd Lvl | 69.9 | 0.0 | 10 | -10.0 |
| 74 Building 1151/YMCA Pool | 74 | 0 | 0.0 | 71.9 | 66 | 71.9 | 12 | Snd Lvl | 71.9 | 0.0 | 10 | -10.0 |
| 75 Building 1004 | 75 | 0 | 0.0 | 56.4 | 71 | 56.4 | 12 | — | 56.4 | 0.0 | 10 | -10.0 |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 76.5 | 72.7 | 66 | -3.8 | 12 | Snd Lvl | 72.7 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 229 | 0.0 | 0.0 | 0.0 |
| All Impacted | 27 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |


Parkway Circle 2030 PM
Plan View
Run name: Parkway Circle AM 2030 830
Scale: 200 meters
Sheet 1 of 1
30 Aug 2004
Environmental Science Associates, Inc.
Project/Contract No. Doyle Drive - 204235
TNM Version 2.5, Feb 2004
Analysis By: Win Lindeman
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
-800
-600
-400
-200
0
200
400
600
800
1000
1200
1400

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2030 PM

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

| Roadway | | Points | | | | | Flow Control | | | Segment | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | | | | | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle to North Tunnel | 18.0 | 1 - North E | 11 | -1,185.0 | 519.0 | 53.00 | | | | Average | |
| | | 2 - 1+97.5 | 10 | -1,060.0 | 368.0 | 56.00 | | | | Average | |
| | | 3 - 4+74 | 9 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 4 - 5+27 | 8 | -827.0 | 138.0 | 51.50 | | | | Average | |
| | | 5 - 5+27 | 7 | -826.0 | 138.0 | 51.50 | | | | Average | Y |
| | | 6 - 6+00 | 6 | -764.0 | 95.0 | 49.00 | | | | Average | Y |
| | | 7 - 8+00 | 5 | -588.0 | 7.0 | 40.00 | | | | Average | Y |
| | | 8 - 9+57 | 4 | -450.0 | -50.0 | 33.00 | | | | Average | Y |
| | | 9 - 11+10 | 3 | -294.0 | -88.0 | 27.00 | | | | Average | Y |
| | | 10 - 11+10 | 2 | -293.0 | -88.0 | 27.00 | | | | Average | |
| | | 11 - 11+53 | 1 | -253.0 | -96.0 | 26.00 | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 18.0 | 1 - 13+93 | 18 | -17.0 | -142.0 | 16.00 | | | | Average | |
| | | 2 - 14+10 | 17 | 0.0 | -143.0 | 16.00 | | | | Average | |
| | | 3 - 14+60 | 16 | 49.0 | -143.0 | 14.00 | | | | Average | |
| | | 4 - 15+00 | 15 | 88.0 | -135.0 | 12.00 | | | | Average | |
| | | 5 - 15+85. | 14 | 170.0 | -112.0 | 9.00 | | | | Average | |
| | | 6 - 17+33. | 13 | 310.0 | -65.0 | 5.00 | | | | Average | |
| | | 7 - 17+80 | 12 | 354.0 | -52.0 | 4.00 | | | | | |
| EB Doyle from South Tunnel to Francisco | 18.0 | 1 - 20+95 | 19 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 21+20 | 20 | 684.0 | 14.0 | 3.00 | | | | Average | |
| | | 3 - 21+20 | 21 | 685.0 | 14.0 | 3.00 | | | | Average | Y |
| | | 4 - 22+42. | 22 | 807.0 | 18.0 | 5.00 | | | | Average | Y |
| | | 5 - 23+00 | 23 | 859.0 | 12.0 | 6.00 | | | | Average | Y |
| | | 6 - 23+25 | 24 | 925.0 | -10.0 | 6.00 | | | | Average | Y |
| | | 7 - 23+25 | 25 | 926.0 | -10.0 | 6.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 - 24+20 | 26 | 966.0 | -41.0 | 5.00 | | | | Average | |
| | | 9 - 24+85. | 27 | 1,016.0 | -88.0 | 4.00 | | | | Average | |
| | | 10 - 25+17 | 28 | 1,030.0 | -108.0 | 3.50 | | | | Average | |
| | | 11 - 25+64 | 29 | 1,062.0 | -146.0 | 3.00 | | | | Average | |
| | | 12 - Gorg | 30 | 1,140.0 | -224.0 | 4.00 | | | | Average | |
| | | 13 - Franc | 31 | 1,320.0 | -400.0 | 4.00 | | | | | |
| WB Doyle from Fancisco to South Tunnel | 10.8 | 1 - Francis | 32 | 1,320.0 | -380.0 | 4.00 | | | | Average | |
| | | 2 - 27+20. | 33 | 1,148.0 | -216.0 | 4.00 | | | | Average | |
| | | 3 - 26+00 | 34 | 1,095.0 | -152.0 | 3.50 | | | | Average | |
| | | 4 - 25+40 | 35 | 1,055.0 | -120.0 | 3.50 | | | | Average | |
| | | 5 - 24+73 | 36 | 1,018.0 | -65.0 | 4.00 | | | | Average | |
| | | 6 - 24+20 | 37 | 977.0 | -21.0 | 5.00 | | | | Average | |
| | | 7 - 23+75 | 38 | 950.0 | 0.0 | 6.00 | | | | Average | |
| | | 8 - 23+75 | 39 | 949.0 | 0.0 | 6.00 | | | | Average | Y |
| | | 9 - 23+22 | 40 | 900.0 | 22.0 | 6.00 | | | | Average | Y |
| | | 10 - 23+22 | 41 | 899.0 | 22.0 | 6.00 | | | | Average | |
| | | 11 - 22+68 | 42 | 843.0 | 34.0 | 6.00 | | | | Average | |
| | | 12 - 22+00 | 43 | 775.0 | 33.0 | 4.00 | | | | Average | |
| | | 13 - 20+85 | 44 | 661.0 | 31.0 | 2.00 | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 10.8 | 1 - 18+05 | 45 | 386.0 | -15.0 | 3.50 | | | | Average | |
| | | 2 - 15+00 | 46 | 96.0 | -107.0 | 10.00 | | | | Average | |
| | | 3 - 14+10 | 47 | 10.0 | -119.0 | 14.00 | | | | | |
| WB Doyle from North Tunnel to North End | 13.2 | 1 - 11+80 | 51 | -216.0 | -85.0 | 24.00 | | | | Average | |
| | | 2 - 11+00 | 52 | -295.0 | -69.0 | 27.00 | | | | Average | |
| | | 3 - 11+00 | 53 | -296.0 | -69.0 | 27.00 | | | | Average | Y |
| | | 4 - 9+80 | 54 | -407.0 | -39.0 | 32.00 | | | | Average | Y |
| | | 5 - 8+73 | 55 | -488.0 | -9.0 | 36.00 | | | | Average | Y |
| | | 6 - 7+00 | 56 | -661.0 | 69.0 | 44.00 | | | | Average | Y |
| | | 7 - 6+60 | 57 | -696.0 | 88.0 | 46.00 | | | | Average | Y |
| | | 8 - 6+60 | 58 | -697.0 | 88.0 | 46.00 | | | | Average | |
| | | 9 - 5+54 | 59 | -789.0 | 145.0 | 50.00 | | | | Average | |
| | | 10 - 5+54 | 60 | -790.0 | 145.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+14 | 61 | -817.0 | 169.0 | 52.00 | | | | Average | Y |
| | | 12 - 5+14 | 62 | -818.0 | 169.0 | 52.00 | | | | Average | |
| | | 13 - 4+00 | 63 | -907.0 | 237.0 | 56.00 | | | | Average | |
| | | 14 - 3+10 | 64 | -975.0 | 300.0 | 56.00 | | | | Average | |
| | | 15 - 0+00 | 65 | -1,170.0 | 522.0 | 53.00 | | | | | |
| WB Doyle off ramp to SB Park Presidio | 7.0 | 1 - 0+00 | 66 | -488.0 | -9.0 | 42.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 - 1+30 | 67 | -600.0 | 52.0 | 42.00 | | | | Average | Y |
| | | 3 - 1+80 | 68 | -639.0 | 82.0 | 42.00 | | | | Average | Y |
| | | 4 - 2+20 | 69 | -661.0 | 114.0 | 42.00 | | | | Average | Y |
| | | 5 - 2+20 | 70 | -662.0 | 114.0 | 42.00 | | | | Average | |
| | | 6 - 2+48 | 71 | -673.0 | 139.0 | 42.00 | | | | Average | |
| | | 7 - 3+09 | 72 | -693.0 | 165.0 | 42.00 | | | | Average | |
| | | 8 - 3+40 | 73 | -718.0 | 184.0 | 42.00 | | | | Average | |
| | | 9 - 3+60 | 74 | -746.0 | 194.0 | 42.00 | | | | Average | |
| | | 10 - 3+80 | 75 | -787.0 | 185.0 | 42.00 | | | | Average | |
| | | 11 - 4+00 | 76 | -803.0 | 171.0 | 42.00 | | | | Average | |
| | | 12 - 4+20 | 77 | -813.0 | 153.0 | 42.00 | | | | Average | |
| | | 13 - 4+40 | 78 | -818.0 | 134.0 | 42.00 | | | | Average | |
| | | 14 - 4+59 | 79 | -815.0 | 112.0 | 42.00 | | | | Average | |
| | | 15 - 4+80 | 80 | -807.0 | 93.0 | 42.00 | | | | Average | |
| | | 16 - 5+00 | 81 | -796.0 | 76.0 | 41.00 | | | | Average | |
| | | 17 - 5+20 | 82 | -782.0 | 61.0 | 40.00 | | | | Average | |
| | | 18 - 5+80 | 83 | -735.0 | 24.0 | 40.00 | | | | Average | |
| | | 19 - 6+06 | 84 | -719.0 | 5.0 | 40.00 | | | | Average | |
| | | 20 - 6+31 | 85 | -706.0 | -15.0 | 40.00 | | | | Average | |
| | | 21 - 6+60 | 86 | -696.0 | -42.0 | 40.00 | | | | Average | |
| | | 22 - 6+88 | 87 | -694.0 | -68.0 | 40.00 | | | | Average | |
| | | 23 - 8+23 | 169 | -699.0 | -203.0 | 40.00 | | | | Average | |
| | | 24 - 5+88. | 88 | -698.0 | -337.0 | 40.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 10.2 | 1 - 0+00 | 89 | -690.0 | -337.0 | 40.00 | | | | Average | |
| | | 2A | 170 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 3+72.3 | 90 | -667.0 | 32.0 | 37.00 | | | | Average | |
| | | 3 - 4+00 | 91 | -667.0 | 61.0 | 38.00 | | | | Average | |
| | | 4 - 4+40 | 92 | -677.0 | 101.0 | 40.00 | | | | Average | |
| | | 5 - 4+60 | 93 | -698.0 | 137.0 | 48.00 | | | | Average | |
| | | 6 - 5+00 | 94 | -715.0 | 150.0 | 48.00 | | | | Average | |
| | | 7 - 5+20 | 95 | -734.0 | 160.0 | 49.00 | | | | Average | |
| | | 8 - 5+40 | 96 | -753.0 | 165.0 | 49.00 | | | | Average | |
| | | 9 - 5+53 | 97 | -760.0 | 168.0 | 50.00 | | | | Average | |
| | | 10 - 5+53 | 98 | -761.0 | 168.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+80 | 99 | -792.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 12 - 5+98 | 100 | -807.0 | 183.0 | 52.00 | | | | Average | Y |
| | | 13 - 5+98 | 101 | -808.0 | 183.0 | 52.00 | | | | Average | |
| | | 14 - 6+58. | 102 | -857.0 | 212.0 | 53.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15 - 8+04. | 103 | -975.0 | 300.0 | 56.00 | | | | | |
| NB Park Presidio to EB Doyle Drive | 7.0 | 1 - 0+00 | 104 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 1+35.9 | 105 | -657.0 | 20.0 | 36.00 | | | | Average | |
| | | 3 - 1+60 | 106 | -654.0 | 44.0 | 40.00 | | | | Average | |
| | | 4 - 1+80 | 107 | -657.0 | 65.0 | 40.00 | | | | Average | |
| | | 5 - 2+00 | 108 | -661.0 | 85.0 | 40.00 | | | | Average | |
| | | 6 - 2+20 | 109 | -667.0 | 104.0 | 42.00 | | | | Average | |
| | | 7 - 2+40 | 110 | -675.0 | 123.0 | 42.00 | | | | Average | |
| | | 8 - 2+60 | 111 | -686.0 | 140.0 | 42.00 | | | | Average | |
| | | 9 - 2+81.9 | 112 | -700.0 | 157.0 | 42.00 | | | | Average | |
| | | 10 - 3+09. | 113 | -723.0 | 175.0 | 42.00 | | | | Average | |
| | | 11 - 3+40 | 114 | -754.0 | 180.0 | 42.00 | | | | Average | |
| | | 12 - 3+60 | 115 | -775.0 | 173.0 | 42.00 | | | | Average | |
| | | 13 - 3+80 | 116 | -790.0 | 158.0 | 42.00 | | | | Average | |
| | | 14 - 4+00 | 117 | -796.0 | 138.0 | 42.00 | | | | Average | |
| | | 15 - 4+20 | 118 | -795.0 | 116.0 | 42.00 | | | | Average | |
| | | 16 - 4+40 | 119 | -788.0 | 97.0 | 42.00 | | | | Average | |
| | | 17 - 4+53. | 120 | -778.0 | 88.0 | 42.00 | | | | Average | |
| | | 18 - 5+20 | 121 | -722.0 | 51.0 | 42.00 | | | | Average | |
| | | 19 - 5+20 | 122 | -721.0 | 51.0 | 42.00 | | | | Average | Y |
| | | 20 - 6+00 | 123 | -652.0 | 11.0 | 42.00 | | | | Average | Y |
| | | 21 - 6+40 | 124 | -614.0 | -3.0 | 42.00 | | | | Average | |
| | | 22 - 8+19. | 125 | -450.0 | -50.0 | 33.00 | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 10.0 | 1 - 0+00 | 128 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 2 - 0+65 | 129 | -823.0 | 116.0 | 52.00 | | | | Average | |
| | | 3 - 0+65 | 130 | -822.0 | 116.0 | 52.00 | | | | Average | Y |
| | | 4 - 2+00 | 131 | -723.0 | 35.0 | 44.00 | | | | Average | Y |
| | | 5 - 2+00 | 132 | -722.0 | 35.0 | 44.00 | | | | Average | |
| | | 6 - 2+40 | 133 | -700.0 | 5.0 | 42.00 | | | | Average | |
| | | 7 - 2+80 | 134 | -687.0 | -30.0 | 40.00 | | | | Average | |
| | | 8 - 3+14.5 | 135 | -685.0 | -63.0 | 37.00 | | | | Average | |
| | | 9 - 5+88.1 | 136 | -698.0 | -337.0 | 40.00 | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 6.0 | 1 - 0+00 | 137 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 0+42 | 138 | 685.0 | 0.0 | 2.00 | | | | Average | |
| | | 3 - 0+42 | 139 | 686.0 | 0.0 | 2.00 | | | | Average | Y |
| | | 4 - 1+00 | 140 | 740.0 | -2.0 | 2.00 | | | | Average | Y |
| | | 5 - 1+50 | 141 | 786.0 | -11.0 | 2.00 | | | | Average | Y |
| | | 6 - 1+50 | 142 | 787.0 | -11.0 | 2.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 - 2+12.1 | 143 | 843.0 | -30.0 | 1.00 | | | | Average | Y |
| | | 8 - EC 0+7 | 144 | 898.0 | -75.0 | 1.50 | | | | Average | |
| | | 9 | 145 | 998.0 | -167.0 | 3.00 | | | | Average | |
| | | 10 | 146 | 1,024.0 | -186.0 | 3.00 | | | | Average | |
| | | 11 | 147 | 1,118.0 | -243.0 | 4.00 | | | | Average | |
| | | 12 | 148 | 1,118.0 | -245.0 | 4.00 | | | | Average | |
| | | 13 - Inters | 149 | 1,140.0 | -224.0 | 4.00 | | | | | |
| NB Girard Rd. from Marina to Lincoln | 3.7 | 1 - 0+00 | 150 | 1,201.0 | 188.0 | 4.00 | | | | Average | |
| | | 2 - 0+65 | 151 | 1,153.0 | 136.0 | 3.60 | | | | Average | |
| | | 3 - 2+80 | 152 | 965.0 | 40.0 | 0.50 | | | | Average | |
| | | 4 - 4+09.9 | 153 | 843.0 | -23.0 | 0.00 | | | | Average | |
| | | 5 - 4+40 | 154 | 828.0 | -40.0 | 1.00 | | | | Average | |
| | | 6 - 4+80 | 155 | 796.0 | -65.0 | 4.70 | | | | Average | |
| | | 7 - 5+20 | 156 | 772.0 | -98.0 | 5.50 | | | | Average | |
| | | 8 - 7+20 | 157 | 673.0 | -273.0 | 11.50 | | | | | |
| SB Girard Rd. from Lincoln to Marina | 3.7 | 1 - 7+20 | 158 | 678.0 | -273.0 | 11.50 | | | | Average | |
| | | 2 - 5+20 | 159 | 779.0 | -102.0 | 5.50 | | | | Average | |
| | | 3 - 4+80 | 160 | 803.0 | -70.0 | 4.70 | | | | Average | |
| | | 4 - 4+40 | 161 | 831.0 | -44.0 | 1.00 | | | | Average | |
| | | 5 - 4+09.9 | 162 | 852.0 | -31.0 | 0.00 | | | | Average | |
| | | 6 - 2+80 | 163 | 965.0 | 27.0 | 0.50 | | | | Average | |
| | | 7 - 0+65 | 164 | 1,156.0 | 127.0 | 3.60 | | | | Average | |
| | | 8 - Palace | 239 | 1,178.0 | 146.0 | 4.00 | | | | Average | |
| | | 9 - Mason | 165 | 1,218.0 | 191.0 | 4.00 | | | | | |
| Halleck St. from Lincon to Mason | 7.2 | 1 - 3+65 | 166 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 2 - 2+77.9 | 167 | 612.0 | -139.0 | 10.00 | | | | Average | |
| | | 3 - 0+00 | 168 | 673.0 | 130.0 | 4.00 | | | | | |
| Lincoln from McDowell to Letterman | 7.3 | 1 | 180 | -316.0 | -214.0 | 33.00 | | | | Average | |
| | | 2 | 181 | -279.0 | -132.0 | 33.00 | | | | Average | |
| | | 3 | 182 | -251.0 | -115.0 | 33.00 | | | | Average | |
| | | 4 | 183 | -216.0 | -104.0 | 32.00 | | | | Average | |
| | | 5 | 184 | -118.0 | -147.0 | 31.00 | | | | Average | |
| | | 6 | 185 | -93.0 | -152.0 | 29.00 | | | | Average | |
| | | 7 | 186 | -59.0 | -148.0 | 29.00 | | | | Average | |
| | | 8 | 187 | -38.0 | -151.0 | 29.00 | | | | Average | |
| | | 9 | 188 | -14.0 | -158.0 | 29.00 | | | | Average | |
| | | 10 | 189 | 13.0 | -167.0 | 27.00 | | | | Average | |
| | | 11 | 190 | 50.0 | -170.0 | 26.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12 | 191 | 182.0 | -134.0 | 19.00 | | | | Average | |
| | | 13 | 192 | 245.0 | -108.0 | 15.00 | | | | Average | |
| | | 14 | 193 | 324.0 | -68.0 | 12.00 | | | | Average | |
| | | 15 | 194 | 376.0 | -100.0 | 13.00 | | | | Average | |
| | | 16 | 195 | 396.0 | -124.0 | 13.00 | | | | Average | |
| | | 17 | 196 | 478.0 | -160.0 | 12.00 | | | | Average | |
| | | 18 | 197 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 19 | 198 | 673.0 | -273.0 | 11.50 | | | | Average | |
| | | 20 | 199 | 735.0 | -310.0 | 12.00 | | | | | |
| Mason St. from Crissy Ave. to Marina | 7.3 | 1 | 200 | -500.0 | 96.0 | 3.00 | | | | Average | |
| | | 2 | 201 | 40.0 | 0.0 | 4.00 | | | | Average | |
| | | 3 | 202 | 72.0 | 4.0 | 4.00 | | | | Average | |
| | | 4 | 203 | 96.0 | 15.0 | 4.00 | | | | Average | |
| | | 5 | 204 | 144.0 | 60.0 | 4.00 | | | | Average | |
| | | 6 | 205 | 174.0 | 68.0 | 4.00 | | | | Average | |
| | | 7 | 206 | 673.0 | 130.0 | 4.00 | | | | Average | |
| | | 8 | 207 | 768.0 | 138.0 | 4.00 | | | | Average | |
| | | 9 | 208 | 952.0 | 159.0 | 4.00 | | | | Average | |
| | | 10 | 209 | 1,185.0 | 187.0 | 4.00 | | | | Average | |
| | | 11 | 210 | 1,218.0 | 191.0 | 4.00 | | | | Average | |
| | | 12 | 211 | 1,270.0 | 196.0 | 4.00 | | | | | |
| Baker St. from Marina to Richardson | 7.3 | 1 | 212 | 1,270.0 | 196.0 | 4.00 | | | | Average | |
| | | 2 | 213 | 1,280.0 | 93.0 | 4.00 | | | | Average | |
| | | 3 | 214 | 1,290.0 | -7.0 | 4.00 | | | | Average | |
| | | 4 | 215 | 1,310.0 | -276.0 | 4.00 | | | | Average | |
| | | 5 | 216 | 1,327.0 | -400.0 | 4.00 | | | | | |
| Palace Drive from Richardson to Marina | 7.3 | 1 | 217 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 2 | 218 | 1,186.0 | -245.0 | 4.00 | | | | Average | |
| | | 3 | 219 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 4 | 220 | 1,180.0 | -195.0 | 3.50 | | | | Average | |
| | | 5 | 221 | 1,151.0 | -188.0 | 3.00 | | | | Average | |
| | | 6 | 222 | 1,125.0 | -175.0 | 3.00 | | | | Average | |
| | | 7 | 223 | 1,100.0 | -153.0 | 3.00 | | | | Average | |
| | | 8 | 224 | 1,081.0 | -130.0 | 3.00 | | | | Average | |
| | | 9 | 225 | 1,069.0 | -108.0 | 3.00 | | | | Average | |
| | | 10 | 226 | 1,060.0 | -83.0 | 3.00 | | | | Average | |
| | | 11 | 227 | 1,055.0 | -63.5 | 4.00 | | | | Average | |
| | | 12 | 228 | 1,053.0 | -39.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 13 | 229 | 1,055.0 | -14.0 | 4.00 | | | | Average | |
| | | 14 | 230 | 1,061.0 | 10.0 | 4.00 | | | | Average | |
| | | 15 | 231 | 1,073.0 | 40.0 | 4.00 | | | | Average | |
| | | 16 | 232 | 1,088.0 | 68.0 | 4.00 | | | | Average | |
| | | 17 | 233 | 1,116.0 | 91.0 | 4.00 | | | | Average | |
| | | 18 | 234 | 1,185.0 | 139.0 | 4.00 | | | | Average | |
| | | 19 | 235 | 1,178.0 | 146.0 | 4.00 | | | | | |
| Montgomery St. from Sherlan to Lincoln | 9.2 | 1 | 236 | 237.0 | -280.0 | 16.00 | | | | Average | |
| | | 2 | 237 | 350.0 | -117.0 | 13.00 | | | | Average | |
| | | 3 | 238 | 396.0 | -124.0 | 13.00 | | | | | |
| Palace Drive Connector to Gorgas | 7.3 | 1 | 240 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 2 | 241 | 1,180.0 | -214.0 | 4.00 | | | | Average | |
| | | 3 | 242 | 1,172.0 | -208.0 | 4.00 | | | | Average | |
| | | 4 | 243 | 1,160.0 | -206.0 | 4.00 | | | | Average | |
| | | 5 | 244 | 1,148.0 | -216.0 | 4.00 | | | | | |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2030 PM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle to North Tunnel | 1 - North End | 11 | 5268 | 88 | 16 | 88 | 71 | 88 | 60 | 88 | 16 | 88 |
| | 2 - 1+97.539 | 10 | 5268 | 88 | 16 | 88 | 71 | 88 | 60 | 88 | 16 | 88 |
| | 3 - 4+74 | 9 | 3081 | 88 | 10 | 88 | 41 | 88 | 35 | 88 | 10 | 88 |
| | 4 - 5+27 | 8 | 3081 | 88 | 10 | 88 | 41 | 88 | 35 | 88 | 10 | 88 |
| | 5 - 5+27 | 7 | 3081 | 88 | 10 | 88 | 41 | 88 | 35 | 88 | 10 | 88 |
| | 6 - 6+00 | 6 | 3081 | 88 | 10 | 88 | 41 | 88 | 35 | 88 | 10 | 88 |
| | 7 - 8+00 | 5 | 3081 | 88 | 10 | 88 | 41 | 88 | 35 | 88 | 10 | 88 |
| | 8 - 9+57 | 4 | 3719 | 88 | 12 | 88 | 50 | 88 | 42 | 88 | 12 | 88 |
| | 9 - 11+10 | 3 | 3719 | 88 | 12 | 88 | 50 | 88 | 42 | 88 | 12 | 88 |
| | 10 - 11+10 | 2 | 3719 | 88 | 12 | 88 | 50 | 88 | 42 | 88 | 12 | 88 |
| | 11 - 11+53 | 1 | | | | | | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 1 - 13+93 | 18 | 3719 | 88 | 12 | 88 | 50 | 88 | 42 | 88 | 12 | 88 |
| | 2 - 14+10 | 17 | 3719 | 88 | 12 | 88 | 50 | 88 | 42 | 88 | 12 | 88 |
| | 3 - 14+60 | 16 | 3719 | 88 | 12 | 88 | 50 | 88 | 42 | 88 | 12 | 88 |
| | 4 - 15+00 | 15 | 3719 | 88 | 12 | 88 | 50 | 88 | 42 | 88 | 12 | 88 |
| | 5 - 15+85.44 | 14 | 3719 | 88 | 12 | 88 | 50 | 88 | 42 | 88 | 12 | 88 |
| | 6 - 17+33.198 | 13 | 3719 | 88 | 12 | 88 | 50 | 88 | 42 | 88 | 12 | 88 |
| | 7 - 17+80 | 12 | | | | | | | | | | |
| EB Doyle from South Tunnel to Francisco | 1 - 20+95 | 19 | 2530 | 56 | 8 | 56 | 34 | 56 | 29 | 56 | 8 | 56 |
| | 2 - 21+20 | 20 | 2530 | 56 | 8 | 56 | 34 | 56 | 29 | 56 | 8 | 56 |
| | 3 - 21+20 | 21 | 2530 | 56 | 8 | 56 | 34 | 56 | 29 | 56 | 8 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 22+42.630 | 22 | 2530 | 56 | 8 | 56 | 34 | 56 | 29 | 56 | 8 | 56 |
| | 5 - 23+00 | 23 | 2530 | 56 | 8 | 56 | 34 | 56 | 29 | 56 | 8 | 56 |
| | 6 - 23+25 | 24 | 2530 | 56 | 8 | 56 | 34 | 56 | 29 | 56 | 8 | 56 |
| | 7 - 23+25 | 25 | 2530 | 56 | 8 | 56 | 34 | 56 | 29 | 56 | 8 | 56 |
| | 8 - 24+20 | 26 | 2530 | 56 | 8 | 56 | 34 | 56 | 29 | 56 | 8 | 56 |
| | 9 - 24+85.060 | 27 | 2530 | 56 | 8 | 56 | 34 | 56 | 29 | 56 | 8 | 56 |
| | 10 - 25+17.10 | 28 | 2530 | 56 | 8 | 56 | 34 | 56 | 29 | 56 | 8 | 56 |
| | 11 - 25+64.74 | 29 | 2530 | 56 | 8 | 56 | 34 | 56 | 29 | 56 | 8 | 56 |
| | 12 - Gorgas Ir | 30 | 2530 | 56 | 8 | 56 | 34 | 56 | 29 | 56 | 8 | 56 |
| | 13 - Francisco | 31 | | | | | | | | | | |
| WB Doyle from Fancisco to South Tunnel | 1 - Francisco | 32 | 2372 | 56 | 0 | 0 | 5 | 56 | 87 | 56 | 25 | 56 |
| | 2 - 27+20.608 | 33 | 2372 | 56 | 0 | 0 | 5 | 56 | 87 | 56 | 25 | 56 |
| | 3 - 26+00 | 34 | 2372 | 56 | 0 | 0 | 5 | 56 | 87 | 56 | 25 | 56 |
| | 4 - 25+40 | 35 | 2372 | 56 | 0 | 0 | 5 | 56 | 87 | 56 | 25 | 56 |
| | 5 - 24+73 | 36 | 2372 | 56 | 0 | 0 | 5 | 56 | 87 | 56 | 25 | 56 |
| | 6 - 24+20 | 37 | 2372 | 56 | 0 | 0 | 5 | 56 | 87 | 56 | 25 | 56 |
| | 7 - 23+75 | 38 | 2372 | 56 | 0 | 0 | 5 | 56 | 87 | 56 | 25 | 56 |
| | 8 - 23+75 | 39 | 2372 | 56 | 0 | 0 | 5 | 56 | 87 | 56 | 25 | 56 |
| | 9 - 23+22 | 40 | 2372 | 56 | 0 | 0 | 5 | 56 | 87 | 56 | 25 | 56 |
| | 10 - 23+22 | 41 | 2372 | 56 | 0 | 0 | 5 | 56 | 87 | 56 | 25 | 56 |
| | 11 - 22+68 | 42 | 2372 | 56 | 0 | 0 | 5 | 56 | 87 | 56 | 25 | 56 |
| | 12 - 22+00 | 43 | 2372 | 56 | 0 | 0 | 5 | 56 | 87 | 56 | 25 | 56 |
| | 13 - 20+85 | 44 | | | | | | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 1 - 18+05 | 45 | 4608 | 88 | 0 | 0 | 10 | 88 | 129 | 88 | 48 | 88 |
| | 2 - 15+00 | 46 | 4608 | 88 | 0 | 0 | 10 | 88 | 129 | 88 | 48 | 88 |
| | 3 - 14+10 | 47 | | | | | | | | | | |
| WB Doyle from North Tunnel to North End | 1 - 11+80 | 51 | 4608 | 88 | 0 | 0 | 10 | 88 | 129 | 88 | 48 | 88 |
| | 2 - 11+00 | 52 | 4608 | 88 | 0 | 0 | 10 | 88 | 129 | 88 | 48 | 88 |
| | 3 - 11+00 | 53 | 4608 | 88 | 0 | 0 | 10 | 88 | 129 | 88 | 48 | 88 |
| | 4 - 9+80 | 54 | 4608 | 88 | 0 | 0 | 10 | 88 | 129 | 88 | 48 | 88 |
| | 5 - 8+73 | 55 | 3909 | 88 | 0 | 0 | 8 | 88 | 110 | 88 | 41 | 88 |
| | 6 - 7+00 | 56 | 3909 | 88 | 0 | 0 | 8 | 88 | 110 | 88 | 41 | 88 |
| | 7 - 6+60 | 57 | 3909 | 88 | 0 | 0 | 8 | 88 | 110 | 88 | 41 | 88 |
| | 8 - 6+60 | 58 | 3909 | 88 | 0 | 0 | 8 | 88 | 110 | 88 | 41 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9 - 5+54 | 59 | 3909 | 88 | 0 | 0 | 8 | 88 | 110 | 88 | 41 | 88 |
| | 10 - 5+54 | 60 | 3909 | 88 | 0 | 0 | 8 | 88 | 110 | 88 | 41 | 88 |
| | 11 - 5+14 | 61 | 3909 | 88 | 0 | 0 | 8 | 88 | 110 | 88 | 41 | 88 |
| | 12 - 5+14 | 62 | 3909 | 88 | 0 | 0 | 8 | 88 | 110 | 88 | 41 | 88 |
| | 13 - 4+00 | 63 | 3909 | 88 | 0 | 0 | 8 | 88 | 110 | 88 | 41 | 88 |
| | 14 - 3+10 | 64 | 6019 | 88 | 0 | 0 | 13 | 88 | 169 | 88 | 63 | 88 |
| | 15 - 0+00 | 65 | | | | | | | | | | |
| WB Doyle off ramp to SB Park Presidio | 1 - 0+00 | 66 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 2 - 1+30 | 67 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 3 - 1+80 | 68 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 4 - 2+20 | 69 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 5 - 2+20 | 70 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 6 - 2+48 | 71 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 7 - 3+09 | 72 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 8 - 3+40 | 73 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 9 - 3+60 | 74 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 10 - 3+80 | 75 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 11 - 4+00 | 76 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 12 - 4+20 | 77 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 13 - 4+40 | 78 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 14 - 4+59 | 79 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 15 - 4+80 | 80 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 16 - 5+00 | 81 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 17 - 5+20 | 82 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 18 - 5+80 | 83 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 19 - 6+06 | 84 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 20 - 6+31 | 85 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 21 - 6+60 | 86 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 22 - 6+88 | 87 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 23 - 8+23 | 169 | 703 | 56 | 2 | 56 | 9 | 56 | 8 | 56 | 2 | 56 |
| | 24 - 5+88.184 | 88 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 - 0+00 | 89 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 2A | 170 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 2 - 3+72.391 | 90 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 - 4+00 | 91 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 4 - 4+40 | 92 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 5 - 4+60 | 93 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 6 - 5+00 | 94 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 7 - 5+20 | 95 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 8 - 5+40 | 96 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 9 - 5+53 | 97 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 10 - 5+53 | 98 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 11 - 5+80 | 99 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 12 - 5+98 | 100 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 13 - 5+98 | 101 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 14 - 6+58.037 | 102 | 2139 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 15 - 8+04.414 | 103 | | | | | | | | | | |
| NB Park Presidio to EB Doyle Drive | 1 - 0+00 | 104 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 2 - 1+35.965 | 105 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 3 - 1+60 | 106 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 4 - 1+80 | 107 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 5 - 2+00 | 108 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 6 - 2+20 | 109 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 7 - 2+40 | 110 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 8 - 2+60 | 111 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 9 - 2+81.908 | 112 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 10 - 3+09.875 | 113 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 11 - 3+40 | 114 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 12 - 3+60 | 115 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 13 - 3+80 | 116 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 14 - 4+00 | 117 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 15 - 4+20 | 118 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 16 - 4+40 | 119 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 17 - 4+53.16 | 120 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 18 - 5+20 | 121 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 19 - 5+20 | 122 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 20 - 6+00 | 123 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |
| | 21 - 6+40 | 124 | 642 | 56 | 3 | 56 | 3 | 56 | 4 | 56 | 7 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 22 - 8+19.142 | 125 | | | | | | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 1 - 0+00 | 128 | 2170 | 56 | 0 | 0 | 5 | 56 | 61 | 56 | 23 | 56 |
| | 2 - 0+65 | 129 | 2170 | 56 | 0 | 0 | 5 | 56 | 61 | 56 | 23 | 56 |
| | 3 - 0+65 | 130 | 2170 | 56 | 0 | 0 | 5 | 56 | 61 | 56 | 23 | 56 |
| | 4 - 2+00 | 131 | 2170 | 56 | 0 | 0 | 5 | 56 | 61 | 56 | 23 | 56 |
| | 5 - 2+00 | 132 | 2170 | 56 | 0 | 0 | 5 | 56 | 61 | 56 | 23 | 56 |
| | 6 - 2+40 | 133 | 2170 | 56 | 0 | 0 | 5 | 56 | 61 | 56 | 23 | 56 |
| | 7 - 2+80 | 134 | 2170 | 56 | 0 | 0 | 5 | 56 | 61 | 56 | 23 | 56 |
| | 8 - 3+14.595 | 135 | 2170 | 56 | 0 | 0 | 5 | 56 | 61 | 56 | 23 | 56 |
| | 9 - 5+88.184 | 136 | | | | | | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 1 - 0+00 | 137 | 524 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+42 | 138 | 524 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+42 | 139 | 524 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 1+00 | 140 | 524 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 1+50 | 141 | 524 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 1+50 | 142 | 524 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 2+12.133 | 143 | 524 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - EC 0+74.1 | 144 | 524 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 145 | 524 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 146 | 524 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 147 | 524 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 148 | 524 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 - Intersect | 149 | | | | | | | | | | |
| NB Girard Rd. from Marina to Lincoln | 1 - 0+00 | 150 | 93 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+65 | 151 | 93 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 2+80 | 152 | 93 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 4+09.995 | 153 | 93 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+40 | 154 | 93 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 4+80 | 155 | 93 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 5+20 | 156 | 93 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - 7+20 | 157 | | | | | | | | | | |
| SB Girard Rd. from Lincoln to Marina | 1 - 7+20 | 158 | 100 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 5+20 | 159 | 100 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 4+80 | 160 | 100 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 4+40 | 161 | 100 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+09.995 | 162 | 100 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 2+80 | 163 | 100 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 0+65 | 164 | 100 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - Palace Dr | 239 | 100 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 - Mason/Mc | 165 | | | | | | | | | | |
| Halleck St. from Lincon to Mason | 1 - 3+65 | 166 | 155 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 2+77.948 | 167 | 64 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+00 | 168 | | | | | | | | | | |
| Lincoln from McDowell to Letterman | 1 | 180 | 260 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 181 | 260 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 3 | 182 | 260 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 4 | 183 | 433 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 5 | 184 | 433 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 6 | 185 | 433 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 7 | 186 | 433 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 8 | 187 | 433 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 9 | 188 | 433 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 10 | 189 | 442 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 5 | 32 |
| | 11 | 190 | 234 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 12 | 191 | 234 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 13 | 192 | 234 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 14 | 193 | 234 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 15 | 194 | 234 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 16 | 195 | 474 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 17 | 196 | 474 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 18 | 197 | 572 | 32 | 6 | 32 | 0 | 0 | 6 | 32 | 6 | 32 |
| | 19 | 198 | 683 | 32 | 7 | 32 | 0 | 0 | 7 | 32 | 7 | 32 |
| | 20 | 199 | | | | | | | | | | |
| Mason St. from Crissy Ave. to Marina | 1 | 200 | 23 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 201 | 23 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 202 | 23 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 203 | 23 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 204 | 23 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 205 | 23 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 206 | 39 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 8 | 207 | 70 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 9 | 208 | 70 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 10 | 209 | 74 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 11 | 210 | 2913 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 211 | | | | | | | | | | |
| Baker St. from Marina to Richardson | 1 | 212 | 538 | 32 | 6 | 32 | 0 | 0 | 0 | 0 | 6 | 32 |
| | 2 | 213 | 114 | 32 | 1 | 32 | 0 | 0 | 0 | 0 | 1 | 32 |
| | 3 | 214 | 131 | 32 | 1 | 32 | 0 | 0 | 0 | 0 | 1 | 32 |
| | 4 | 215 | 131 | 32 | 1 | 32 | 0 | 0 | 0 | 0 | 1 | 32 |
| | 5 | 216 | | | | | | | | | | |
| Palace Drive from Richardson to Marina | 1 | 217 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 218 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 219 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 220 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 221 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 222 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 223 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 224 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 225 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 226 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 227 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 228 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 | 229 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 14 | 230 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 15 | 231 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 16 | 232 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 17 | 233 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 18 | 234 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 19 | 235 | | | | | | | | | | |
| Montgomery St. from Sherian to Lincoln | 1 | 236 | 151 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 2 | 237 | 151 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 3 | 238 | | | | | | | | | | |

**INPUT: TRAFFIC FOR LAeq1h Volumes** **Doyle Drive - 204235**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Palace Drive Connector to Gorgas | 1 | 240 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 241 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 242 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 243 | 34 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 244 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

30 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2030 PM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 1,098.0 | -130.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 1,133.0 | -91.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3 Buildings 1187/1188 | 3 | 0 | 1,148.0 | 150.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4 Building 1182 | 4 | 0 | 1,087.0 | 125.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5 Buildings 1183/1186 | 5 | 0 | 1,020.0 | 116.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6 Buildings 1184/1185 | 6 | 0 | 893.0 | 103.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7 Building 603/Crissy Center | 7 | 0 | 571.0 | 88.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8 PX Building | 8 | 0 | 500.0 | 33.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9 Post Commissary/Sports Basement | 9 | 0 | 240.0 | -54.0 | 4.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 10 Battery Blaney | 10 | 0 | -30.0 | -96.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11 Battery Slaughter | 11 | 0 | -104.0 | -98.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12 Battery Sherwood | 12 | 0 | -223.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13 Battery Baldwin | 13 | 0 | -297.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14 Building 644 | 14 | 0 | -260.0 | 16.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15 Building 649 | 15 | 0 | -364.0 | 4.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16 Building 650/Stilwell Hall | 16 | 0 | -437.0 | 11.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17 1253 Armistead Road | 17 | 1 | -785.0 | 235.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18 Home on Armistead Road | 18 | 1 | -939.0 | 296.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19 Building 969 | 19 | 0 | -887.0 | 410.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20 Building 968 | 20 | 0 | -978.0 | 427.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21 Building 967 | 21 | 0 | -1,040.0 | 427.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22 Building 966 | 22 | 0 | -1,044.0 | 433.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 Building 964 | 23 | 0 | -1,016.0 | 446.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24 Building 963 | 24 | 0 | -1,002.0 | 452.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25 Building 962 | 25 | 0 | -987.0 | 455.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26 Unknown Building | 26 | 0 | -1,153.0 | 421.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27 Building 1299/Log Cabin | 27 | 0 | -1,003.0 | 177.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28 Building 1387 | 28 | 0 | -1,105.0 | 268.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29 Building 1298 Storey Ave. | 29 | 2 | -977.0 | 123.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30 Building 1297 Storey Ave. | 30 | 2 | -950.0 | 123.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31 Building 1295 Storey Ave. | 31 | 2 | -919.0 | 119.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32 Building 1294 Storey Ave. | 32 | 2 | -900.0 | 116.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33 Building 1293 Storey Ave. | 33 | 2 | -865.0 | 102.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34 Building 1291 Storey Ave. | 34 | 2 | -841.0 | 92.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35 Building 1290 Storey Ave. | 35 | 2 | -811.0 | 78.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36 Building 1289 Storey Ave. | 36 | 2 | -804.0 | 63.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37 Building 1263 Storey Ave. | 37 | 2 | -722.0 | -152.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38 Building 682/Cross Cultural Center | 38 | 0 | -650.0 | -254.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | -556.0 | -70.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40 Building 662/Cavalry Stable | 40 | 0 | -508.0 | -97.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41 Building 663/Cavalry Stable | 41 | 0 | -488.0 | -140.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42 Building 667/Cavalry Stable | 42 | 0 | -384.0 | -122.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43 National Cemetery Grave Site | 43 | 0 | -23.0 | -163.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44 Building 129 | 44 | 1 | 104.0 | -168.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45 Building 122 | 45 | 0 | 148.0 | -157.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46 Building 108 | 46 | 0 | 225.0 | -136.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47 Building 107 | 47 | 0 | 230.0 | -120.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48 Building 104 | 48 | 0 | 252.0 | -143.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49 Building 105 | 49 | 0 | 285.0 | -93.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50 Building 106 | 50 | 0 | 328.0 | -78.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51 Building 211 | 51 | 0 | 433.0 | -52.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52 Building 204 | 52 | 0 | 522.0 | -17.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53 Building 210 | 53 | 0 | 320.0 | -97.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54 Building 201 | 54 | 0 | 623.0 | 8.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55 Building 220 | 55 | 0 | 590.0 | -104.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56 Building 231 | 56 | 0 | 650.0 | -5.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57 Building 228 | 57 | 0 | 643.0 | -31.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 Building 229 | 58 | 0 | 637.0 | -60.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59 Building 223 | 59 | 0 | 636.0 | -108.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60 Building 230 | 60 | 0 | 740.0 | 6.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 706.0 | -77.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 698.0 | -113.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63 Building 1063 | 63 | 0 | 842.0 | -60.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64 Building 1062 | 64 | 0 | 852.0 | -100.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65 Building 1060 | 65 | 0 | 898.0 | -127.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66 Building 1167 | 66 | 0 | 900.0 | -18.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67 Building 1163 | 67 | 0 | 892.0 | -26.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68 Building 1169 | 68 | 0 | 955.0 | -58.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69 Building 1162 | 69 | 0 | 943.0 | -73.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70 Building 1170 | 70 | 0 | 1,035.0 | -132.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71 Building 1161 | 71 | 0 | 1,035.0 | -161.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72 Building 1160 | 72 | 0 | 1,066.0 | -166.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73 Building 1152/YMCA | 73 | 0 | 1,100.0 | -198.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74 Building 1151/YMCA Pool | 74 | 0 | 1,140.0 | -240.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75 Building 1004 | 75 | 0 | 965.0 | -246.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 1,216.0 | -270.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Parkway Circle 2030 PM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

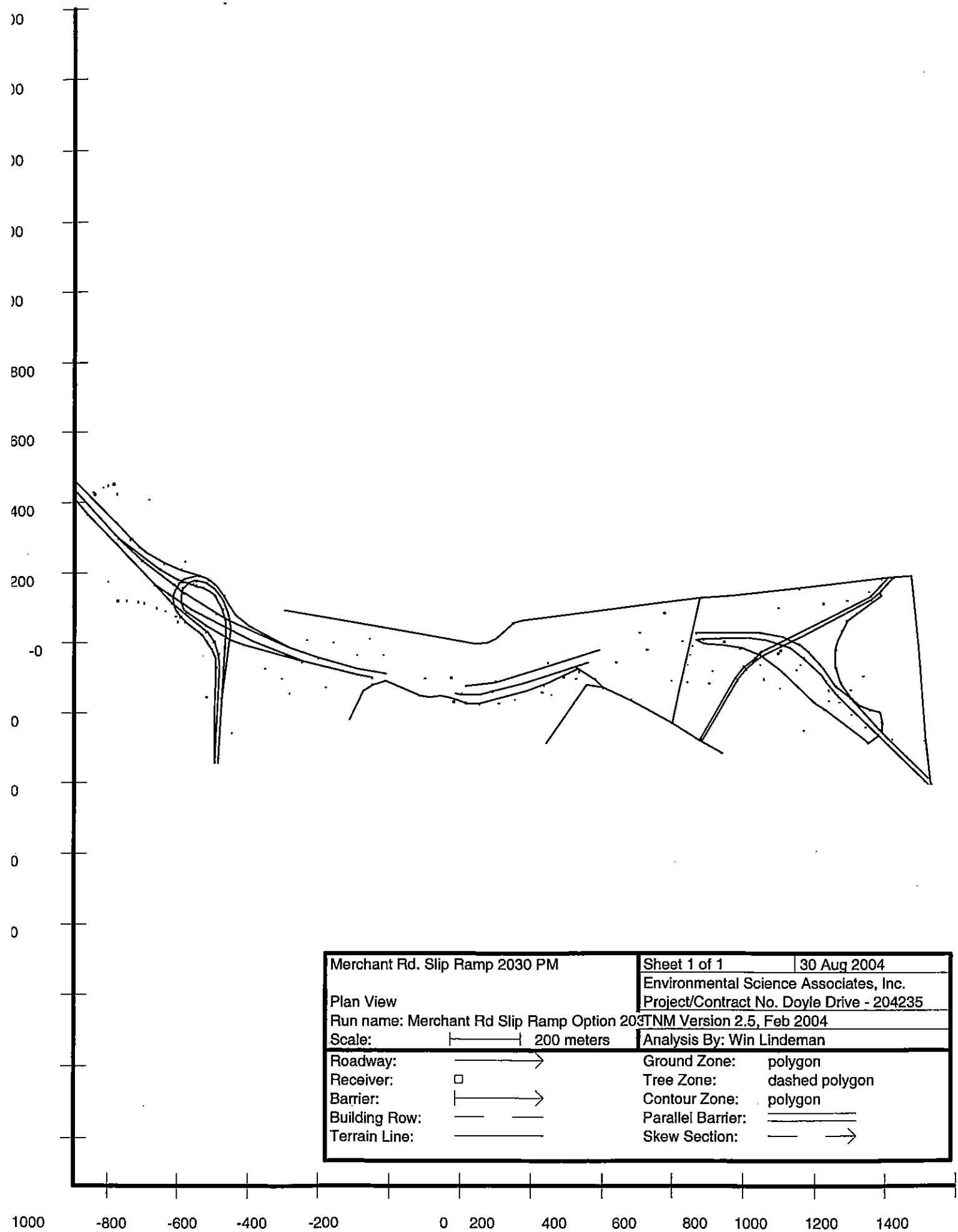
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 69.2 | 66 | 69.2 | 12 | Snd Lvl | 69.2 | 0.0 | 10 | -10.0 |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 61.5 | 66 | 61.5 | 12 | --- | 61.5 | 0.0 | 10 | -10.0 |
| 3 Buildings 1187/1188 | 3 | 0 | 81.0 | 57.1 | 71 | -23.9 | 12 | --- | 57.1 | 0.0 | 10 | -10.0 |
| 4 Building 1182 | 4 | 0 | 81.0 | 56.0 | 71 | -25.0 | 12 | --- | 56.0 | 0.0 | 10 | -10.0 |
| 5 Buildings 1183/1186 | 5 | 0 | 81.0 | 56.7 | 71 | -24.3 | 12 | --- | 56.7 | 0.0 | 10 | -10.0 |
| 6 Buildings 1184/1185 | 6 | 0 | 81.0 | 59.2 | 71 | -21.8 | 12 | --- | 59.2 | 0.0 | 10 | -10.0 |
| 7 Building 603/Crissy Center | 7 | 0 | 72.0 | 56.8 | 71 | -15.2 | 12 | --- | 56.8 | 0.0 | 10 | -10.0 |
| 8 PX Building | 8 | 0 | 0.0 | 59.9 | 71 | 59.9 | 12 | --- | 59.9 | 0.0 | 10 | -10.0 |
| 9 Post Commissary/Sports Basement | 9 | 0 | 69.0 | 70.8 | 66 | 1.8 | 12 | Snd Lvl | 70.8 | 0.0 | 10 | -10.0 |
| 10 Battery Blaney | 10 | 0 | 68.0 | 69.6 | 66 | 1.6 | 12 | Snd Lvl | 69.6 | 0.0 | 10 | -10.0 |
| 11 Battery Slaughter | 11 | 0 | 68.0 | 65.6 | 66 | -2.4 | 12 | --- | 65.6 | 0.0 | 10 | -10.0 |
| 12 Battery Sherwood | 12 | 0 | 68.0 | 65.7 | 66 | -2.3 | 12 | --- | 65.7 | 0.0 | 10 | -10.0 |
| 13 Battery Baldwin | 13 | 0 | 68.0 | 68.1 | 66 | 0.1 | 12 | Snd Lvl | 68.1 | 0.0 | 10 | -10.0 |
| 14 Building 644 | 14 | 0 | 0.0 | 60.6 | 71 | 60.6 | 12 | --- | 60.6 | 0.0 | 10 | -10.0 |
| 15 Building 649 | 15 | 0 | 0.0 | 60.8 | 66 | 60.8 | 12 | --- | 60.8 | 0.0 | 10 | -10.0 |
| 16 Building 650/Stilwell Hall | 16 | 0 | 70.0 | 59.5 | 66 | -10.5 | 12 | --- | 59.5 | 0.0 | 10 | -10.0 |
| 17 1253 Armistead Road | 17 | 1 | 66.0 | 64.9 | 66 | -1.1 | 12 | --- | 64.9 | 0.0 | 10 | -10.0 |
| 18 Home on Armistead Road | 18 | 1 | 66.0 | 77.1 | 66 | 11.1 | 12 | Snd Lvl | 77.1 | 0.0 | 10 | -10.0 |
| 19 Building 969 | 19 | 0 | 0.0 | 58.5 | 71 | 58.5 | 12 | --- | 58.5 | 0.0 | 10 | -10.0 |
| 20 Building 968 | 20 | 0 | 0.0 | 60.0 | 71 | 60.0 | 12 | --- | 60.0 | 0.0 | 10 | -10.0 |
| 21 Building 967 | 21 | 0 | 0.0 | 65.3 | 71 | 65.3 | 12 | --- | 65.3 | 0.0 | 10 | -10.0 |
| 22 Building 966 | 22 | 0 | 0.0 | 65.4 | 71 | 65.4 | 12 | --- | 65.4 | 0.0 | 10 | -10.0 |
| 23 Building 964 | 23 | 0 | 0.0 | 63.8 | 66 | 63.8 | 12 | --- | 63.8 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 Building 963 | 24 | 0 | 0.0 | 63.0 | 66 | 63.0 | 12 | — | 63.0 | 0.0 | 10 | -10.0 |
| 25 Building 962 | 25 | 0 | 0.0 | 62.3 | 66 | 62.3 | 12 | — | 62.3 | 0.0 | 10 | -10.0 |
| 26 Unknown Building | 26 | 0 | 0.0 | 74.9 | 71 | 74.9 | 12 | Snd Lvl | 74.9 | 0.0 | 10 | -10.0 |
| 27 Building 1299/Log Cabin | 27 | 0 | 63.0 | 68.7 | 66 | 5.7 | 12 | Snd Lvl | 68.7 | 0.0 | 10 | -10.0 |
| 28 Building 1387 | 28 | 0 | 0.0 | 67.3 | 71 | 67.3 | 12 | — | 67.3 | 0.0 | 10 | -10.0 |
| 29 Building 1298 Storey Ave. | 29 | 2 | 66.5 | 66.6 | 66 | 0.1 | 12 | Snd Lvl | 66.6 | 0.0 | 10 | -10.0 |
| 30 Building 1297 Storey Ave. | 30 | 2 | 66.5 | 68.5 | 66 | 2.0 | 12 | Snd Lvl | 68.5 | 0.0 | 10 | -10.0 |
| 31 Building 1295 Storey Ave. | 31 | 2 | 66.5 | 70.5 | 66 | 4.0 | 12 | Snd Lvl | 70.5 | 0.0 | 10 | -10.0 |
| 32 Building 1294 Storey Ave. | 32 | 2 | 66.5 | 71.1 | 66 | 4.6 | 12 | Snd Lvl | 71.1 | 0.0 | 10 | -10.0 |
| 33 Building 1293 Storey Ave. | 33 | 2 | 66.5 | 72.1 | 66 | 5.6 | 12 | Snd Lvl | 72.1 | 0.0 | 10 | -10.0 |
| 34 Building 1291 Storey Ave. | 34 | 2 | 66.5 | 72.7 | 66 | 6.2 | 12 | Snd Lvl | 72.7 | 0.0 | 10 | -10.0 |
| 35 Building 1290 Storey Ave. | 35 | 2 | 66.5 | 73.6 | 66 | 7.1 | 12 | Snd Lvl | 73.6 | 0.0 | 10 | -10.0 |
| 36 Building 1289 Storey Ave. | 36 | 2 | 66.5 | 72.7 | 66 | 6.2 | 12 | Snd Lvl | 72.7 | 0.0 | 10 | -10.0 |
| 37 Building 1263 Storey Ave. | 37 | 2 | 0.0 | 69.3 | 66 | 69.3 | 12 | Snd Lvl | 69.3 | 0.0 | 10 | -10.0 |
| 38 Building 682/Cross Cultural Center | 38 | 0 | 65.5 | 65.1 | 66 | -0.4 | 12 | — | 65.1 | 0.0 | 10 | -10.0 |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | 64.0 | 60.4 | 71 | -3.6 | 12 | — | 60.4 | 0.0 | 10 | -10.0 |
| 40 Building 662/Cavalry Stable | 40 | 0 | 64.0 | 62.8 | 71 | -1.2 | 12 | — | 62.8 | 0.0 | 10 | -10.0 |
| 41 Building 663/Cavalry Stable | 41 | 0 | 64.0 | 63.3 | 71 | -0.7 | 12 | — | 63.3 | 0.0 | 10 | -10.0 |
| 42 Building 667/Cavalry Stable | 42 | 0 | 64.0 | 67.3 | 71 | 3.3 | 12 | — | 67.3 | 0.0 | 10 | -10.0 |
| 43 National Cemetery Grave Site | 43 | 0 | 69.0 | 64.6 | 66 | -4.4 | 12 | — | 64.6 | 0.0 | 10 | -10.0 |
| 44 Building 129 | 44 | 1 | 0.0 | 57.6 | 66 | 57.6 | 12 | — | 57.6 | 0.0 | 10 | -10.0 |
| 45 Building 122 | 45 | 0 | 0.0 | 62.5 | 71 | 62.5 | 12 | — | 62.5 | 0.0 | 10 | -10.0 |
| 46 Building 108 | 46 | 0 | 0.0 | 62.6 | 71 | 62.6 | 12 | — | 62.6 | 0.0 | 10 | -10.0 |
| 47 Building 107 | 47 | 0 | 0.0 | 67.7 | 71 | 67.7 | 12 | — | 67.7 | 0.0 | 10 | -10.0 |
| 48 Building 104 | 48 | 0 | 74.0 | 58.8 | 71 | -15.2 | 12 | — | 58.8 | 0.0 | 10 | -10.0 |
| 49 Building 105 | 49 | 0 | 74.0 | 73.5 | 71 | -0.5 | 12 | Snd Lvl | 73.5 | 0.0 | 10 | -10.0 |
| 50 Building 106 | 50 | 0 | 76.0 | 72.6 | 71 | -3.4 | 12 | Snd Lvl | 72.6 | 0.0 | 10 | -10.0 |
| 51 Building 211 | 51 | 0 | 0.0 | 66.2 | 71 | 66.2 | 12 | — | 66.2 | 0.0 | 10 | -10.0 |
| 52 Building 204 | 52 | 0 | 0.0 | 59.6 | 71 | 59.6 | 12 | — | 59.6 | 0.0 | 10 | -10.0 |
| 53 Building 210 | 53 | 0 | 0.0 | 62.8 | 71 | 62.8 | 12 | — | 62.8 | 0.0 | 10 | -10.0 |
| 54 Building 201 | 54 | 0 | 0.0 | 55.9 | 71 | 55.9 | 12 | — | 55.9 | 0.0 | 10 | -10.0 |
| 55 Building 220 | 55 | 0 | 0.0 | 53.7 | 71 | 53.7 | 12 | — | 53.7 | 0.0 | 10 | -10.0 |
| 56 Building 231 | 56 | 0 | 0.0 | 66.1 | 71 | 66.1 | 12 | — | 66.1 | 0.0 | 10 | -10.0 |
| 57 Building 228 | 57 | 0 | 0.0 | 62.2 | 71 | 62.2 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 58 Building 229 | 58 | 0 | 0.0 | 59.4 | 71 | 59.4 | 12 | — | 59.4 | 0.0 | 10 | -10.0 |
| 59 Building 223 | 59 | 0 | 0.0 | 57.5 | 71 | 57.5 | 12 | — | 57.5 | 0.0 | 10 | -10.0 |
| 60 Building 230 | 60 | 0 | 0.0 | 72.1 | 71 | 72.1 | 12 | Snd Lvl | 72.1 | 0.0 | 10 | -10.0 |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 57.0 | 60.1 | 66 | 3.1 | 12 | — | 60.1 | 0.0 | 10 | -10.0 |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 57.0 | 57.5 | 66 | 0.5 | 12 | — | 57.5 | 0.0 | 10 | -10.0 |
| 63 Building 1063 | 63 | 0 | 68.5 | 63.0 | 71 | -5.5 | 12 | — | 63.0 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 Building 1062 | 64 | 0 | 68.5 | 59.6 | 71 | -8.9 | 12 | — | 59.6 | 0.0 | 10 | -10.0 |
| 65 Building 1060 | 65 | 0 | 68.5 | 60.0 | 71 | -8.5 | 12 | — | 60.0 | 0.0 | 10 | -10.0 |
| 66 Building 1167 | 66 | 0 | 68.0 | 65.2 | 71 | -2.8 | 12 | — | 65.2 | 0.0 | 10 | -10.0 |
| 67 Building 1163 | 67 | 0 | 0.0 | 65.1 | 71 | 65.1 | 12 | — | 65.1 | 0.0 | 10 | -10.0 |
| 68 Building 1169 | 68 | 0 | 68.0 | 64.4 | 71 | -3.6 | 12 | — | 64.4 | 0.0 | 10 | -10.0 |
| 69 Building 1162 | 69 | 0 | 0.0 | 63.2 | 71 | 63.2 | 12 | — | 63.2 | 0.0 | 10 | -10.0 |
| 70 Building 1170 | 70 | 0 | 68.0 | 71.3 | 71 | 3.3 | 12 | Snd Lvl | 71.3 | 0.0 | 10 | -10.0 |
| 71 Building 1161 | 71 | 0 | 0.0 | 67.0 | 71 | 67.0 | 12 | — | 67.0 | 0.0 | 10 | -10.0 |
| 72 Building 1160 | 72 | 0 | 0.0 | 71.4 | 71 | 71.4 | 12 | Snd Lvl | 71.4 | 0.0 | 10 | -10.0 |
| 73 Building 1152/YMCA | 73 | 0 | 0.0 | 69.9 | 66 | 69.9 | 12 | Snd Lvl | 69.9 | 0.0 | 10 | -10.0 |
| 74 Building 1151/YMCA Pool | 74 | 0 | 0.0 | 72.0 | 66 | 72.0 | 12 | Snd Lvl | 72.0 | 0.0 | 10 | -10.0 |
| 75 Building 1004 | 75 | 0 | 0.0 | 56.6 | 71 | 56.6 | 12 | — | 56.6 | 0.0 | 10 | -10.0 |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 76.5 | 73.0 | 66 | -3.5 | 12 | Snd Lvl | 73.0 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 229 | 0.0 | 0.0 | 0.0 |
| All Impacted | 27 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |


Merchant Rd. Slip Ramp 2030 PM
Sheet 1 of 1
30 Aug 2004
Environmental Science Associates, Inc.
Plan View
Project/Contract No. Doyle Drive - 204235
Run name: Merchant Rd Slip Ramp Option 203
TNM Version 2.5, Feb 2004
Scale:
200 meters
Analysis By: Win Lindeman
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
-800
-600
-400
-200
0
200
400
600
800
1000
1200
1400

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Merchant Rd. Slip Ramp 2030 PM

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

| Roadway | | Points | | | | | Flow Control | | | Segment | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle to North Tunnel | 18.0 | 1 - North | 11 | -1,185.0 | 519.0 | 53.00 | | | | Average | |
| | | 2 - 1+97.5 | 10 | -1,060.0 | 368.0 | 56.00 | | | | Average | |
| | | 3 - 4+74 | 9 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 4 - 5+27 | 8 | -827.0 | 138.0 | 51.50 | | | | Average | |
| | | 5 - 5+27 | 7 | -826.0 | 138.0 | 51.50 | | | | Average | Y |
| | | 6 - 6+00 | 6 | -764.0 | 95.0 | 49.00 | | | | Average | Y |
| | | 7 - 8+00 | 5 | -588.0 | 7.0 | 40.00 | | | | Average | Y |
| | | 8 - 9+57 | 4 | -450.0 | -50.0 | 33.00 | | | | Average | Y |
| | | 9 - 11+10 | 3 | -294.0 | -88.0 | 27.00 | | | | Average | Y |
| | | 10 - 11+1 | 2 | -293.0 | -88.0 | 27.00 | | | | Average | |
| | | 11 - 11+5 | 1 | -253.0 | -96.0 | 26.00 | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 18.0 | 1 - 13+93 | 18 | -17.0 | -142.0 | 16.00 | | | | Average | |
| | | 2 - 14+10 | 17 | 0.0 | -143.0 | 16.00 | | | | Average | |
| | | 3 - 14+60 | 16 | 49.0 | -143.0 | 14.00 | | | | Average | |
| | | 4 - 15+00 | 15 | 88.0 | -135.0 | 12.00 | | | | Average | |
| | | 5 - 15+85. | 14 | 170.0 | -112.0 | 9.00 | | | | Average | |
| | | 6 - 17+33. | 13 | 310.0 | -65.0 | 5.00 | | | | Average | |
| | | 7 - 17+80 | 12 | 354.0 | -52.0 | 4.00 | | | | | |
| EB Doyle from South Tunnel to Francisco | 18.0 | 1 - 20+95 | 19 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 21+20 | 20 | 684.0 | 14.0 | 3.00 | | | | Average | |
| | | 3 - 21+20 | 21 | 685.0 | 14.0 | 3.00 | | | | Average | Y |
| | | 4 - 22+42. | 22 | 807.0 | 18.0 | 5.00 | | | | Average | Y |
| | | 5 - 23+00 | 23 | 859.0 | 12.0 | 6.00 | | | | Average | Y |
| | | 6 - 23+25 | 24 | 925.0 | -10.0 | 6.00 | | | | Average | Y |
| | | 7 - 23+25 | 25 | 926.0 | -10.0 | 6.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 - 24+20 | 26 | 966.0 | -41.0 | 5.00 | | | | Average | |
| | | 9 - 24+85. | 27 | 1,016.0 | -88.0 | 4.00 | | | | Average | |
| | | 10 - 25+17 | 28 | 1,030.0 | -108.0 | 3.50 | | | | Average | |
| | | 11 - 25+64 | 29 | 1,062.0 | -146.0 | 3.00 | | | | Average | |
| | | 12 - Gorg | 30 | 1,178.0 | -259.0 | 4.00 | | | | Average | |
| | | 13 - Franc | 31 | 1,320.0 | -400.0 | 4.00 | | | | | |
| WB Doyle from Fanclsco to South Tunnel | 10.8 | 1 - Francls | 32 | 1,320.0 | -380.0 | 4.00 | | | | Average | |
| | | 2 - 27+20. | 33 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 3 - 26+00 | 34 | 1,095.0 | -152.0 | 3.50 | | | | Average | |
| | | 4 - 25+40 | 35 | 1,055.0 | -120.0 | 3.50 | | | | Average | |
| | | 5 - 24+73 | 36 | 1,018.0 | -65.0 | 4.00 | | | | Average | |
| | | 6 - 24+20 | 37 | 977.0 | -21.0 | 5.00 | | | | Average | |
| | | 7 - 23+75 | 38 | 950.0 | 0.0 | 6.00 | | | | Average | |
| | | 8 - 23+75 | 39 | 949.0 | 0.0 | 6.00 | | | | Average | Y |
| | | 9 - 23+22 | 40 | 900.0 | 22.0 | 6.00 | | | | Average | Y |
| | | 10 - 23+22 | 41 | 899.0 | 22.0 | 6.00 | | | | Average | |
| | | 11 - 22+68 | 42 | 843.0 | 34.0 | 6.00 | | | | Average | |
| | | 12 - 22+00 | 43 | 775.0 | 33.0 | 4.00 | | | | Average | |
| | | 13 - 20+85 | 44 | 661.0 | 31.0 | 2.00 | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 10.8 | 1 - 18+05 | 45 | 386.0 | -15.0 | 3.50 | | | | Average | |
| | | 2 - 15+00 | 46 | 96.0 | -107.0 | 10.00 | | | | Average | |
| | | 3 - 14+10 | 47 | 10.0 | -119.0 | 14.00 | | | | | |
| WB Doyle from North Tunnel to North End | 13.2 | 1 - 11+80 | 51 | -216.0 | -85.0 | 24.00 | | | | Average | |
| | | 2 - 11+00 | 52 | -295.0 | -69.0 | 27.00 | | | | Average | |
| | | 3 - 11+00 | 53 | -296.0 | -69.0 | 27.00 | | | | Average | Y |
| | | 4 - 9+80 | 54 | -407.0 | -39.0 | 32.00 | | | | Average | Y |
| | | 5 - 8+73 | 55 | -488.0 | -9.0 | 36.00 | | | | Average | Y |
| | | 6 - 7+00 | 56 | -661.0 | 69.0 | 44.00 | | | | Average | Y |
| | | 7 - 6+60 | 57 | -696.0 | 88.0 | 46.00 | | | | Average | Y |
| | | 8 - 6+60 | 58 | -697.0 | 88.0 | 46.00 | | | | Average | |
| | | 9 - 5+54 | 59 | -789.0 | 145.0 | 50.00 | | | | Average | |
| | | 10 - 5+54 | 60 | -790.0 | 145.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+14 | 61 | -817.0 | 169.0 | 52.00 | | | | Average | Y |
| | | 12 - 5+14 | 62 | -818.0 | 169.0 | 52.00 | | | | Average | |
| | | 13 - 4+00 | 63 | -907.0 | 237.0 | 56.00 | | | | Average | |
| | | 14 - 3+10 | 64 | -975.0 | 300.0 | 56.00 | | | | Average | |
| | | 15 - 0+00 | 65 | -1,170.0 | 522.0 | 53.00 | | | | | |
| WB Doyle off ramp to SB Park Presidio | 7.0 | 1 - 0+00 | 66 | -488.0 | -9.0 | 42.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 - 1+30 | 67 | -600.0 | 52.0 | 42.00 | | | | Average | Y |
| | | 3 - 1+80 | 68 | -639.0 | 82.0 | 42.00 | | | | Average | Y |
| | | 4 - 2+20 | 69 | -661.0 | 114.0 | 42.00 | | | | Average | Y |
| | | 5 - 2+20 | 70 | -662.0 | 114.0 | 42.00 | | | | Average | |
| | | 6 - 2+48 | 71 | -673.0 | 139.0 | 42.00 | | | | Average | |
| | | 7 - 3+09 | 72 | -693.0 | 165.0 | 42.00 | | | | Average | |
| | | 8 - 3+40 | 73 | -718.0 | 184.0 | 42.00 | | | | Average | |
| | | 9 - 3+60 | 74 | -746.0 | 194.0 | 42.00 | | | | Average | |
| | | 10 - 3+80 | 75 | -787.0 | 185.0 | 42.00 | | | | Average | |
| | | 11 - 4+00 | 76 | -803.0 | 171.0 | 42.00 | | | | Average | |
| | | 12 - 4+20 | 77 | -813.0 | 153.0 | 42.00 | | | | Average | |
| | | 13 - 4+40 | 78 | -818.0 | 134.0 | 42.00 | | | | Average | |
| | | 14 - 4+59 | 79 | -815.0 | 112.0 | 42.00 | | | | Average | |
| | | 15 - 4+80 | 80 | -807.0 | 93.0 | 42.00 | | | | Average | |
| | | 16 - 5+00 | 81 | -796.0 | 76.0 | 41.00 | | | | Average | |
| | | 17 - 5+20 | 82 | -782.0 | 61.0 | 40.00 | | | | Average | |
| | | 18 - 5+80 | 83 | -735.0 | 24.0 | 40.00 | | | | Average | |
| | | 19 - 6+06 | 84 | -719.0 | 5.0 | 40.00 | | | | Average | |
| | | 20 - 6+31 | 85 | -706.0 | -15.0 | 40.00 | | | | Average | |
| | | 21 - 6+60 | 86 | -696.0 | -42.0 | 40.00 | | | | Average | |
| | | 22 - 6+88 | 87 | -694.0 | -68.0 | 40.00 | | | | Average | |
| | | 23 - 8+23 | 169 | -699.0 | -203.0 | 40.00 | | | | Average | |
| | | 24 - 5+88. | 88 | -698.0 | -337.0 | 40.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 10.2 | 1 - 0+00 | 89 | -690.0 | -337.0 | 40.00 | | | | Average | |
| | | 2A | 170 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 3+72.3 | 90 | -667.0 | 32.0 | 37.00 | | | | Average | |
| | | 3 - 4+00 | 91 | -667.0 | 61.0 | 38.00 | | | | Average | |
| | | 4 - 4+40 | 92 | -677.0 | 101.0 | 40.00 | | | | Average | |
| | | 5 - 4+60 | 93 | -698.0 | 137.0 | 48.00 | | | | Average | |
| | | 6 - 5+00 | 94 | -715.0 | 150.0 | 48.00 | | | | Average | |
| | | 7 - 5+20 | 95 | -734.0 | 160.0 | 49.00 | | | | Average | |
| | | 8 - 5+40 | 96 | -753.0 | 165.0 | 49.00 | | | | Average | |
| | | 9 - 5+53 | 97 | -760.0 | 168.0 | 50.00 | | | | Average | |
| | | 10 - 5+53 | 98 | -761.0 | 168.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+80 | 99 | -792.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 12 - 5+98 | 100 | -807.0 | 183.0 | 52.00 | | | | Average | Y |
| | | 13 - 5+98 | 101 | -808.0 | 183.0 | 52.00 | | | | Average | |
| | | 14 - 6+58. | 102 | -857.0 | 212.0 | 53.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15 - 8+04. | 103 | -975.0 | 300.0 | 56.00 | | | | | |
| NB Park Presidio to EB Doyle Drive | 7.0 | 1 - 0+00 | 104 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 1+35.9 | 105 | -657.0 | 20.0 | 36.00 | | | | Average | |
| | | 3 - 1+60 | 106 | -654.0 | 44.0 | 40.00 | | | | Average | |
| | | 4 - 1+80 | 107 | -657.0 | 65.0 | 40.00 | | | | Average | |
| | | 5 - 2+00 | 108 | -661.0 | 85.0 | 40.00 | | | | Average | |
| | | 6 - 2+20 | 109 | -667.0 | 104.0 | 42.00 | | | | Average | |
| | | 7 - 2+40 | 110 | -675.0 | 123.0 | 42.00 | | | | Average | |
| | | 8 - 2+60 | 111 | -686.0 | 140.0 | 42.00 | | | | Average | |
| | | 9 - 2+81.9 | 112 | -700.0 | 157.0 | 42.00 | | | | Average | |
| | | 10 - 3+09. | 113 | -723.0 | 175.0 | 42.00 | | | | Average | |
| | | 11 - 3+40 | 114 | -754.0 | 180.0 | 42.00 | | | | Average | |
| | | 12 - 3+60 | 115 | -775.0 | 173.0 | 42.00 | | | | Average | |
| | | 13 - 3+80 | 116 | -790.0 | 158.0 | 42.00 | | | | Average | |
| | | 14 - 4+00 | 117 | -796.0 | 138.0 | 42.00 | | | | Average | |
| | | 15 - 4+20 | 118 | -795.0 | 116.0 | 42.00 | | | | Average | |
| | | 16 - 4+40 | 119 | -788.0 | 97.0 | 42.00 | | | | Average | |
| | | 17 - 4+53. | 120 | -778.0 | 88.0 | 42.00 | | | | Average | |
| | | 18 - 5+20 | 121 | -722.0 | 51.0 | 42.00 | | | | Average | |
| | | 19 - 5+20 | 122 | -721.0 | 51.0 | 42.00 | | | | Average | Y |
| | | 20 - 6+00 | 123 | -652.0 | 11.0 | 42.00 | | | | Average | Y |
| | | 21 - 6+40 | 124 | -614.0 | -3.0 | 42.00 | | | | Average | |
| | | 22 - 8+19. | 125 | -450.0 | -50.0 | 33.00 | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 10.0 | 1 - 0+00 | 128 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 2 - 0+65 | 129 | -823.0 | 116.0 | 52.00 | | | | Average | |
| | | 3 - 0+65 | 130 | -822.0 | 116.0 | 52.00 | | | | Average | Y |
| | | 4 - 2+00 | 131 | -723.0 | 35.0 | 44.00 | | | | Average | Y |
| | | 5 - 2+00 | 132 | -722.0 | 35.0 | 44.00 | | | | Average | |
| | | 6 - 2+40 | 133 | -700.0 | 5.0 | 42.00 | | | | Average | |
| | | 7 - 2+80 | 134 | -687.0 | -30.0 | 40.00 | | | | Average | |
| | | 8 - 3+14.5 | 135 | -685.0 | -63.0 | 37.00 | | | | Average | |
| | | 9 - 5+88.1 | 136 | -698.0 | -337.0 | 40.00 | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 6.0 | 1 - 0+00 | 137 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 0+42 | 138 | 685.0 | 0.0 | 2.00 | | | | Average | |
| | | 3 - 0+42 | 139 | 686.0 | 0.0 | 2.00 | | | | Average | Y |
| | | 4 - 1+00 | 140 | 740.0 | -2.0 | 2.00 | | | | Average | Y |
| | | 5 - 1+50 | 141 | 786.0 | -11.0 | 2.00 | | | | Average | Y |
| | | 6 - 1+50 | 142 | 787.0 | -11.0 | 2.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7 - 2+12.1 | 143 | 843.0 | -30.0 | 1.00 | | | | Average | Y |
| | | 8 - EC 0+7 | 144 | 898.0 | -75.0 | 1.50 | | | | Average | |
| | | 9 | 145 | 998.0 | -167.0 | 3.00 | | | | Average | |
| | | 10 | 146 | 1,024.0 | -186.0 | 3.00 | | | | Average | |
| | | 11 | 147 | 1,128.0 | -265.0 | 4.00 | | | | Average | |
| | | 12 | 148 | 1,148.0 | -281.0 | 4.00 | | | | Average | |
| | | 13 - Inters | 149 | 1,178.0 | -259.0 | 4.00 | | | | | |
| NB Girard Rd. from Marina to Lincoln | 3.7 | 1 - 0+00 | 150 | 1,201.0 | 188.0 | 4.00 | | | | Average | |
| | | 2 - 0+65 | 151 | 1,153.0 | 136.0 | 3.60 | | | | Average | |
| | | 3 - 2+80 | 152 | 965.0 | 40.0 | 0.50 | | | | Average | |
| | | 4 - 4+09.9 | 153 | 843.0 | -23.0 | 0.00 | | | | Average | |
| | | 5 - 4+40 | 154 | 828.0 | -40.0 | 1.00 | | | | Average | |
| | | 6 - 4+80 | 155 | 796.0 | -65.0 | 4.70 | | | | Average | |
| | | 7 - 5+20 | 156 | 772.0 | -98.0 | 5.50 | | | | Average | |
| | | 8 - 7+20 | 157 | 673.0 | -273.0 | 11.50 | | | | | |
| SB Girard Rd. from Lincoln to Marina | 3.7 | 1 - 7+20 | 158 | 678.0 | -273.0 | 11.50 | | | | Average | |
| | | 2 - 5+20 | 159 | 779.0 | -102.0 | 5.50 | | | | Average | |
| | | 3 - 4+80 | 160 | 803.0 | -70.0 | 4.70 | | | | Average | |
| | | 4 - 4+40 | 161 | 831.0 | -44.0 | 1.00 | | | | Average | |
| | | 5 - 4+09.9 | 162 | 852.0 | -31.0 | 0.00 | | | | Average | |
| | | 6 - 2+80 | 163 | 965.0 | 27.0 | 0.50 | | | | Average | |
| | | 7 - 0+65 | 164 | 1,156.0 | 127.0 | 3.60 | | | | Average | |
| | | 8 - Palace | 239 | 1,178.0 | 146.0 | 4.00 | | | | Average | |
| | | 9 - Mason | 165 | 1,218.0 | 191.0 | 4.00 | | | | | |
| Halleck St. from Lincon to Mason | 7.2 | 1 - 3+65 | 166 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 2 - 2+77.9 | 167 | 612.0 | -139.0 | 10.00 | | | | Average | |
| | | 3 - 0+00 | 168 | 673.0 | 130.0 | 4.00 | | | | | |
| Lincoln from McDowell to Letterman | 7.3 | 1 | 180 | -316.0 | -214.0 | 33.00 | | | | Average | |
| | | 2 | 181 | -279.0 | -132.0 | 33.00 | | | | Average | |
| | | 3 | 182 | -251.0 | -115.0 | 33.00 | | | | Average | |
| | | 4 | 183 | -216.0 | -104.0 | 32.00 | | | | Average | |
| | | 5 | 184 | -118.0 | -147.0 | 31.00 | | | | Average | |
| | | 6 | 185 | -93.0 | -152.0 | 29.00 | | | | Average | |
| | | 7 | 186 | -59.0 | -148.0 | 29.00 | | | | Average | |
| | | 8 | 187 | -38.0 | -151.0 | 29.00 | | | | Average | |
| | | 9 | 188 | -14.0 | -158.0 | 29.00 | | | | Average | |
| | | 10 | 189 | 13.0 | -167.0 | 27.00 | | | | Average | |
| | | 11 | 190 | 50.0 | -170.0 | 26.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 12 | 191 | 182.0 | -134.0 | 19.00 | | | | Average | |
| | | 13 | 192 | 245.0 | -108.0 | 15.00 | | | | Average | |
| | | 14 | 193 | 324.0 | -68.0 | 12.00 | | | | Average | |
| | | 15 | 194 | 376.0 | -100.0 | 13.00 | | | | Average | |
| | | 16 | 195 | 396.0 | -124.0 | 13.00 | | | | Average | |
| | | 17 | 196 | 478.0 | -160.0 | 12.00 | | | | Average | |
| | | 18 | 197 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 19 | 198 | 673.0 | -273.0 | 11.50 | | | | Average | |
| | | 20 | 199 | 735.0 | -310.0 | 12.00 | | | | | |
| Mason St. from Crissy Ave. to Marina | 7.3 | 1 | 200 | -500.0 | 96.0 | 3.00 | | | | Average | |
| | | 2 | 201 | 40.0 | 0.0 | 4.00 | | | | Average | |
| | | 3 | 202 | 72.0 | 4.0 | 4.00 | | | | Average | |
| | | 4 | 203 | 96.0 | 15.0 | 4.00 | | | | Average | |
| | | 5 | 204 | 144.0 | 60.0 | 4.00 | | | | Average | |
| | | 6 | 205 | 174.0 | 68.0 | 4.00 | | | | Average | |
| | | 7 | 206 | 673.0 | 130.0 | 4.00 | | | | Average | |
| | | 8 | 207 | 768.0 | 138.0 | 4.00 | | | | Average | |
| | | 9 | 208 | 952.0 | 159.0 | 4.00 | | | | Average | |
| | | 10 | 209 | 1,185.0 | 187.0 | 4.00 | | | | Average | |
| | | 11 | 210 | 1,218.0 | 191.0 | 4.00 | | | | Average | |
| | | 12 | 211 | 1,270.0 | 196.0 | 4.00 | | | | | |
| Baker St. from Marina to Richardson | 7.3 | 1 | 212 | 1,270.0 | 196.0 | 4.00 | | | | Average | |
| | | 2 | 213 | 1,280.0 | 93.0 | 4.00 | | | | Average | |
| | | 3 | 214 | 1,290.0 | -7.0 | 4.00 | | | | Average | |
| | | 4 | 215 | 1,310.0 | -276.0 | 4.00 | | | | Average | |
| | | 5 | 216 | 1,327.0 | -400.0 | 4.00 | | | | | |
| Palace Drive from Richardson to Marina | 7.3 | 1 | 217 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 2 | 218 | 1,186.0 | -245.0 | 4.00 | | | | Average | |
| | | 3 | 219 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 4 | 220 | 1,180.0 | -195.0 | 3.50 | | | | Average | |
| | | 5 | 221 | 1,151.0 | -188.0 | 3.00 | | | | Average | |
| | | 6 | 222 | 1,125.0 | -175.0 | 3.00 | | | | Average | |
| | | 7 | 223 | 1,100.0 | -153.0 | 3.00 | | | | Average | |
| | | 8 | 224 | 1,081.0 | -130.0 | 3.00 | | | | Average | |
| | | 9 | 225 | 1,069.0 | -108.0 | 3.00 | | | | Average | |
| | | 10 | 226 | 1,060.0 | -83.0 | 3.00 | | | | Average | |
| | | 11 | 227 | 1,055.0 | -63.5 | 4.00 | | | | Average | |
| | | 12 | 228 | 1,053.0 | -39.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 13 | 229 | 1,055.0 | -14.0 | 4.00 | | | | Average | |
| | | 14 | 230 | 1,061.0 | 10.0 | 4.00 | | | | Average | |
| | | 15 | 231 | 1,073.0 | 40.0 | 4.00 | | | | Average | |
| | | 16 | 232 | 1,088.0 | 68.0 | 4.00 | | | | Average | |
| | | 17 | 233 | 1,116.0 | 91.0 | 4.00 | | | | Average | |
| | | 18 | 234 | 1,185.0 | 139.0 | 4.00 | | | | Average | |
| | | 19 | 235 | 1,178.0 | 146.0 | 4.00 | | | | | |
| Montgomery St. from Sherian to Lincoln | 9.2 | 1 | 236 | 237.0 | -280.0 | 16.00 | | | | Average | |
| | | 2 | 237 | 350.0 | -117.0 | 13.00 | | | | Average | |
| | | 3 | 238 | 396.0 | -124.0 | 13.00 | | | | | |
| Merchant Road Slip Ramp | 3.7 | 1 - 3+10 | 240 | -746.0 | 194.0 | 42.00 | | | | Average | |
| | | 2 | 241 | -795.0 | 211.0 | 42.00 | | | | Average | |
| | | 3 | 242 | -844.0 | 230.0 | 42.00 | | | | Average | |
| | | 4 | 243 | -895.0 | 260.0 | 48.00 | | | | Average | |
| | | 5 | 244 | -916.0 | 276.0 | 48.00 | | | | Average | |
| | | 6 - Merch | 245 | -1,118.0 | 487.0 | 43.00 | | | | | |

Environmental Science Associates, Inc. 30 August 2004
Win Lindeman TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Merchant Rd. Slip Ramp 2030 PM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle to North Tunnel | 1 - North End | 11 | 5438 | 88 | 17 | 88 | 73 | 88 | 62 | 88 | 17 | 88 |
| | 2 - 1+97.539 | 10 | 5438 | 88 | 17 | 88 | 73 | 88 | 62 | 88 | 17 | 88 |
| | 3 - 4+74 | 9 | 3091 | 88 | 10 | 88 | 41 | 88 | 35 | 88 | 10 | 88 |
| | 4 - 5+27 | 8 | 3091 | 88 | 10 | 88 | 41 | 88 | 35 | 88 | 10 | 88 |
| | 5 - 5+27 | 7 | 3091 | 88 | 10 | 88 | 41 | 88 | 35 | 88 | 10 | 88 |
| | 6 - 6+00 | 6 | 3091 | 88 | 10 | 88 | 41 | 88 | 35 | 88 | 10 | 88 |
| | 7 - 8+00 | 5 | 3091 | 88 | 10 | 88 | 9 | 88 | 41 | 88 | 10 | 88 |
| | 8 - 9+57 | 4 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 9 - 11+10 | 3 | 4732 | 88 | 49 | 88 | 10 | 88 | 49 | 88 | 49 | 88 |
| | 10 - 11+10 | 2 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 11 - 11+53 | 1 | | | | | | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 1 - 13+93 | 18 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 2 - 14+10 | 17 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 3 - 14+60 | 16 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 4 - 15+00 | 15 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 5 - 15+85.44 | 14 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 6 - 17+33.198 | 13 | 3668 | 88 | 11 | 88 | 49 | 88 | 42 | 88 | 11 | 88 |
| | 7 - 17+80 | 12 | | | | | | | | | | |
| EB Doyle from South Tunnel to Francisco | 1 - 20+95 | 19 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 2 - 21+20 | 20 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 3 - 21+20 | 21 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 22+42.630 | 22 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 5 - 23+00 | 23 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 6 - 23+25 | 24 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 7 - 23+25 | 25 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 8 - 24+20 | 26 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 9 - 24+85.060 | 27 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 10 - 25+17.10 | 28 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 11 - 25+64.74 | 29 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 12 - Gorgas I | 30 | 2324 | 56 | 7 | 56 | 31 | 56 | 26 | 56 | 7 | 56 |
| | 13 - Francisc | 31 | | | | | | | | | | |
| WB Doyle from Fancisco to South Tunnel | 1 - Francisco | 32 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 2 - 27+20.608 | 33 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 3 - 26+00 | 34 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 4 - 25+40 | 35 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 5 - 24+73 | 36 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 6 - 24+20 | 37 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 7 - 23+75 | 38 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 8 - 23+75 | 39 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 9 - 23+22 | 40 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 10 - 23+22 | 41 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 11 - 22+68 | 42 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 12 - 22+00 | 43 | 3268 | 56 | 0 | 0 | 7 | 56 | 92 | 56 | 34 | 56 |
| | 13 - 20+85 | 44 | | | | | | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 1 - 18+05 | 45 | 4732 | 88 | 0 | 0 | 10 | 88 | 133 | 88 | 49 | 88 |
| | 2 - 15+00 | 46 | 4732 | 88 | 0 | 0 | 10 | 88 | 133 | 88 | 49 | 88 |
| | 3 - 14+10 | 47 | | | | | | | | | | |
| WB Doyle from North Tunnel to North End | 1 - 11+80 | 51 | 4732 | 88 | 0 | 0 | 10 | 88 | 133 | 88 | 49 | 88 |
| | 2 - 11+00 | 52 | 4732 | 88 | 0 | 0 | 10 | 88 | 133 | 88 | 49 | 88 |
| | 3 - 11+00 | 53 | 4732 | 88 | 0 | 0 | 10 | 88 | 133 | 88 | 49 | 88 |
| | 4 - 9+80 | 54 | 4732 | 88 | 0 | 0 | 10 | 88 | 133 | 88 | 49 | 88 |
| | 5 - 8+73 | 55 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 6 - 7+00 | 56 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 7 - 6+60 | 57 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 8 - 6+60 | 58 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9 - 5+54 | 59 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 10 - 5+54 | 60 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 11 - 5+14 | 61 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 12 - 5+14 | 62 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 13 - 4+00 | 63 | 4086 | 88 | 0 | 0 | 9 | 88 | 115 | 88 | 43 | 88 |
| | 14 - 3+10 | 64 | 6197 | 88 | 0 | 0 | 13 | 88 | 174 | 88 | 64 | 88 |
| | 15 - 0+00 | 65 | | | | | | | | | | |
| WB Doyle off ramp to SB Park Presidio | 1 - 0+00 | 66 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 2 - 1+30 | 67 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 3 - 1+80 | 68 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 4 - 2+20 | 69 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 5 - 2+20 | 70 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 6 - 2+48 | 71 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 7 - 3+09 | 72 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 8 - 3+40 | 73 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 9 - 3+60 | 74 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 10 - 3+80 | 75 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 11 - 4+00 | 76 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 12 - 4+20 | 77 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 13 - 4+40 | 78 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 14 - 4+59 | 79 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 15 - 4+80 | 80 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 16 - 5+00 | 81 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 17 - 5+20 | 82 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 18 - 5+80 | 83 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 19 - 6+06 | 84 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 20 - 6+31 | 85 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 21 - 6+60 | 86 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 22 - 6+88 | 87 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 23 - 8+23 | 169 | 645 | 56 | 0 | 0 | 1 | 56 | 18 | 56 | 7 | 56 |
| | 24 - 5+88.184 | 88 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 - 0+00 | 89 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 2A | 170 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 2 - 3+72.391 | 90 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 - 4+00 | 91 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 4 - 4+40 | 92 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 5 - 4+60 | 93 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 6 - 5+00 | 94 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 7 - 5+20 | 95 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 8 - 5+40 | 96 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 9 - 5+53 | 97 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 10 - 5+53 | 98 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 11 - 5+80 | 99 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 12 - 5+98 | 100 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 13 - 5+98 | 101 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 14 - 6+58.037 | 102 | 2141 | 56 | 0 | 0 | 9 | 56 | 22 | 56 | 24 | 56 |
| | 15 - 8+04.414 | 103 | | | | | | | | | | |
| NB Park Presidio to EB Doyle Drive | 1 - 0+00 | 104 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 2 - 1+35.965 | 105 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 3 - 1+60 | 106 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 4 - 1+80 | 107 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 5 - 2+00 | 108 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 6 - 2+20 | 109 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 7 - 2+40 | 110 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 8 - 2+60 | 111 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 9 - 2+81.908 | 112 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 10 - 3+09.875 | 113 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 11 - 3+40 | 114 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 12 - 3+60 | 115 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 13 - 3+80 | 116 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 14 - 4+00 | 117 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 15 - 4+20 | 118 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 16 - 4+40 | 119 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 17 - 4+53.16 | 120 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 18 - 5+20 | 121 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 19 - 5+20 | 122 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 20 - 6+00 | 123 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |
| | 21 - 6+40 | 124 | 581 | 56 | 2 | 56 | 2 | 56 | 4 | 56 | 7 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 22 - 8+19.142 | 125 | | | | | | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 1 - 0+00 | 128 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 2 - 0+65 | 129 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 3 - 0+65 | 130 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 4 - 2+00 | 131 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 5 - 2+00 | 132 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 6 - 2+40 | 133 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 7 - 2+80 | 134 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 8 - 3+14.595 | 135 | 2306 | 56 | 0 | 0 | 5 | 56 | 65 | 56 | 24 | 56 |
| | 9 - 5+88.184 | 136 | | | | | | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 1 - 0+00 | 137 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+42 | 138 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+42 | 139 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 1+00 | 140 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 1+50 | 141 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 1+50 | 142 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 2+12.133 | 143 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - EC 0+74.1 | 144 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 145 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 146 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 147 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 148 | 222 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 - Intersect | 149 | | | | | | | | | | |
| NB Girard Rd. from Marina to Lincoln | 1 - 0+00 | 150 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+65 | 151 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 2+80 | 152 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 4+09.995 | 153 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+40 | 154 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 4+80 | 155 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 5+20 | 156 | 91 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - 7+20 | 157 | | | | | | | | | | |
| SB Girard Rd. from Lincoln to Marina | 1 - 7+20 | 158 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 5+20 | 159 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 4+80 | 160 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 4+40 | 161 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+09.995 | 162 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 2+80 | 163 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 0+65 | 164 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - Palace Dr | 239 | 115 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 - Mason/Mc | 165 | | | | | | | | | | |
| Halleck St. from Lincon to Mason | 1 - 3+65 | 166 | 57 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 2+77.948 | 167 | 57 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+00 | 168 | | | | | | | | | | |
| Lincoln from McDowell to Letterman | 1 | 180 | 259 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 181 | 259 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 3 | 182 | 259 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 4 | 183 | 265 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 5 | 184 | 265 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 6 | 185 | 265 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 7 | 186 | 265 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 8 | 187 | 265 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 9 | 188 | 265 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 10 | 189 | 275 | 32 | 3 | 32 | 0 | 0 | 3 | 32 | 3 | 32 |
| | 11 | 190 | 128 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 12 | 191 | 128 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 13 | 192 | 128 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 14 | 193 | 128 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 15 | 194 | 128 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 16 | 195 | 365 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 17 | 196 | 363 | 32 | 4 | 32 | 0 | 0 | 4 | 32 | 4 | 32 |
| | 18 | 197 | 430 | 32 | 5 | 32 | 0 | 0 | 5 | 32 | 5 | 32 |
| | 19 | 198 | 919 | 32 | 9 | 32 | 0 | 0 | 9 | 32 | 9 | 32 |
| | 20 | 199 | | | | | | | | | | |
| Mason St. from Crissy Ave. to Marina | 1 | 200 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 201 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 202 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 203 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 204 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 205 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 206 | 39 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 8 | 207 | 39 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 9 | 208 | 44 | 32 | 1 | 32 | 1 | 32 | 1 | 32 | 1 | 32 |
| | 10 | 209 | 2188 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 210 | 2188 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 211 | | | | | | | | | | |
| Baker St. from Marina to Richardson | 1 | 212 | 38 | 32 | 1 | 32 | 0 | 0 | 0 | 0 | 1 | 32 |
| | 2 | 213 | 3 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 214 | 7 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 215 | 9 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 216 | | | | | | | | | | |
| Palace Drive from Richardson to Marina | 1 | 217 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 218 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 219 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 220 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 221 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 222 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 223 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 224 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 225 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 226 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 228 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 14 | 230 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 15 | 231 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 16 | 232 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 17 | 233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 18 | 234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 19 | 235 | | | | | | | | | | |
| Montgomery St. from Sherlan to Lincoln | 1 | 236 | 113 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 237 | 113 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 3 | 238 | | | | | | | | | | |

**INPUT: TRAFFIC FOR LAeq1h Volumes** **Doyle Drive - 204235**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Merchant Road Slip Ramp | 1 - 3+10 | 240 | 313 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 241 | 313 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 242 | 313 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 243 | 313 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 244 | 313 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - Merchant | 245 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

30 August 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Merchant Rd. Slip Ramp 2030 PM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 1,098.0 | -130.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 1,133.0 | -91.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3 Buildings 1187/1188 | 3 | 0 | 1,148.0 | 150.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4 Building 1182 | 4 | 0 | 1,087.0 | 125.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5 Buildings 1183/1186 | 5 | 0 | 1,020.0 | 116.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6 Buildings 1184/1185 | 6 | 0 | 893.0 | 103.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7 Building 603/Crissy Center | 7 | 0 | 571.0 | 88.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8 PX Building | 8 | 0 | 500.0 | 33.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9 Post Commissary/Sports Basement | 9 | 0 | 240.0 | -54.0 | 4.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 10 Battery Blaney | 10 | 0 | -30.0 | -96.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11 Battery Slaughter | 11 | 0 | -104.0 | -98.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12 Battery Sherwood | 12 | 0 | -223.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13 Battery Baldwin | 13 | 0 | -297.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14 Building 644 | 14 | 0 | -260.0 | 16.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15 Building 649 | 15 | 0 | -364.0 | 4.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16 Building 650/Stilwell Hall | 16 | 0 | -437.0 | 11.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17 1253 Armistead Road | 17 | 1 | -785.0 | 235.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18 Home on Armistead Road | 18 | 1 | -939.0 | 296.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19 Building 969 | 19 | 0 | -887.0 | 410.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20 Building 968 | 20 | 0 | -978.0 | 427.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21 Building 967 | 21 | 0 | -1,040.0 | 427.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22 Building 966 | 22 | 0 | -1,044.0 | 433.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 Building 964 | 23 | 0 | -1,016.0 | 446.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24 Building 963 | 24 | 0 | -1,002.0 | 452.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25 Building 962 | 25 | 0 | -987.0 | 455.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26 Unknown Building | 26 | 0 | -1,153.0 | 421.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27 Building 1299/Log Cabin | 27 | 0 | -1,003.0 | 177.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28 Building 1387 | 28 | 0 | -1,105.0 | 268.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29 Building 1298 Storey Ave. | 29 | 2 | -977.0 | 123.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30 Building 1297 Storey Ave. | 30 | 2 | -950.0 | 123.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31 Building 1295 Storey Ave. | 31 | 2 | -919.0 | 119.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32 Building 1294 Storey Ave. | 32 | 2 | -900.0 | 116.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33 Building 1293 Storey Ave. | 33 | 2 | -865.0 | 102.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34 Building 1291 Storey Ave. | 34 | 2 | -841.0 | 92.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35 Building 1290 Storey Ave. | 35 | 2 | -811.0 | 78.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36 Building 1289 Storey Ave. | 36 | 2 | -804.0 | 63.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37 Building 1263 Storey Ave. | 37 | 2 | -722.0 | -152.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38 Building 682/Cross Cultural Center | 38 | 0 | -650.0 | -254.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | -556.0 | -70.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40 Building 662/Cavalry Stable | 40 | 0 | -508.0 | -97.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41 Building 663/Cavalry Stable | 41 | 0 | -488.0 | -140.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42 Building 667/Cavalry Stable | 42 | 0 | -384.0 | -122.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43 National Cemetery Grave Site | 43 | 0 | -23.0 | -163.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44 Building 129 | 44 | 1 | 104.0 | -168.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45 Building 122 | 45 | 0 | 148.0 | -157.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46 Building 108 | 46 | 0 | 225.0 | -136.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47 Building 107 | 47 | 0 | 230.0 | -120.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48 Building 104 | 48 | 0 | 252.0 | -143.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49 Building 105 | 49 | 0 | 285.0 | -93.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50 Building 106 | 50 | 0 | 328.0 | -78.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51 Building 211 | 51 | 0 | 433.0 | -52.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52 Building 204 | 52 | 0 | 522.0 | -17.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53 Building 210 | 53 | 0 | 320.0 | -97.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54 Building 201 | 54 | 0 | 623.0 | 8.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55 Building 220 | 55 | 0 | 590.0 | -104.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56 Building 231 | 56 | 0 | 650.0 | -5.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57 Building 228 | 57 | 0 | 643.0 | -31.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 Building 229 | 58 | 0 | 637.0 | -60.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59 Building 223 | 59 | 0 | 636.0 | -108.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60 Building 230 | 60 | 0 | 740.0 | 6.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 706.0 | -77.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 698.0 | -113.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63 Building 1063 | 63 | 0 | 842.0 | -60.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64 Building 1062 | 64 | 0 | 852.0 | -100.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65 Building 1060 | 65 | 0 | 898.0 | -127.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66 Building 1167 | 66 | 0 | 900.0 | -18.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67 Building 1163 | 67 | 0 | 892.0 | -26.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68 Building 1169 | 68 | 0 | 955.0 | -58.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69 Building 1162 | 69 | 0 | 943.0 | -73.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70 Building 1170 | 70 | 0 | 1,035.0 | -132.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71 Building 1161 | 71 | 0 | 1,035.0 | -161.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72 Building 1160 | 72 | 0 | 1,066.0 | -166.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73 Building 1152/YMCA | 73 | 0 | 1,100.0 | -200.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74 Building 1151/YMCA Pool | 74 | 0 | 1,140.0 | -235.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75 Building 1004 | 75 | 0 | 965.0 | -246.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 1,216.0 | -270.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

30 August 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Merchant Rd. Slip Ramp 2030 PM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

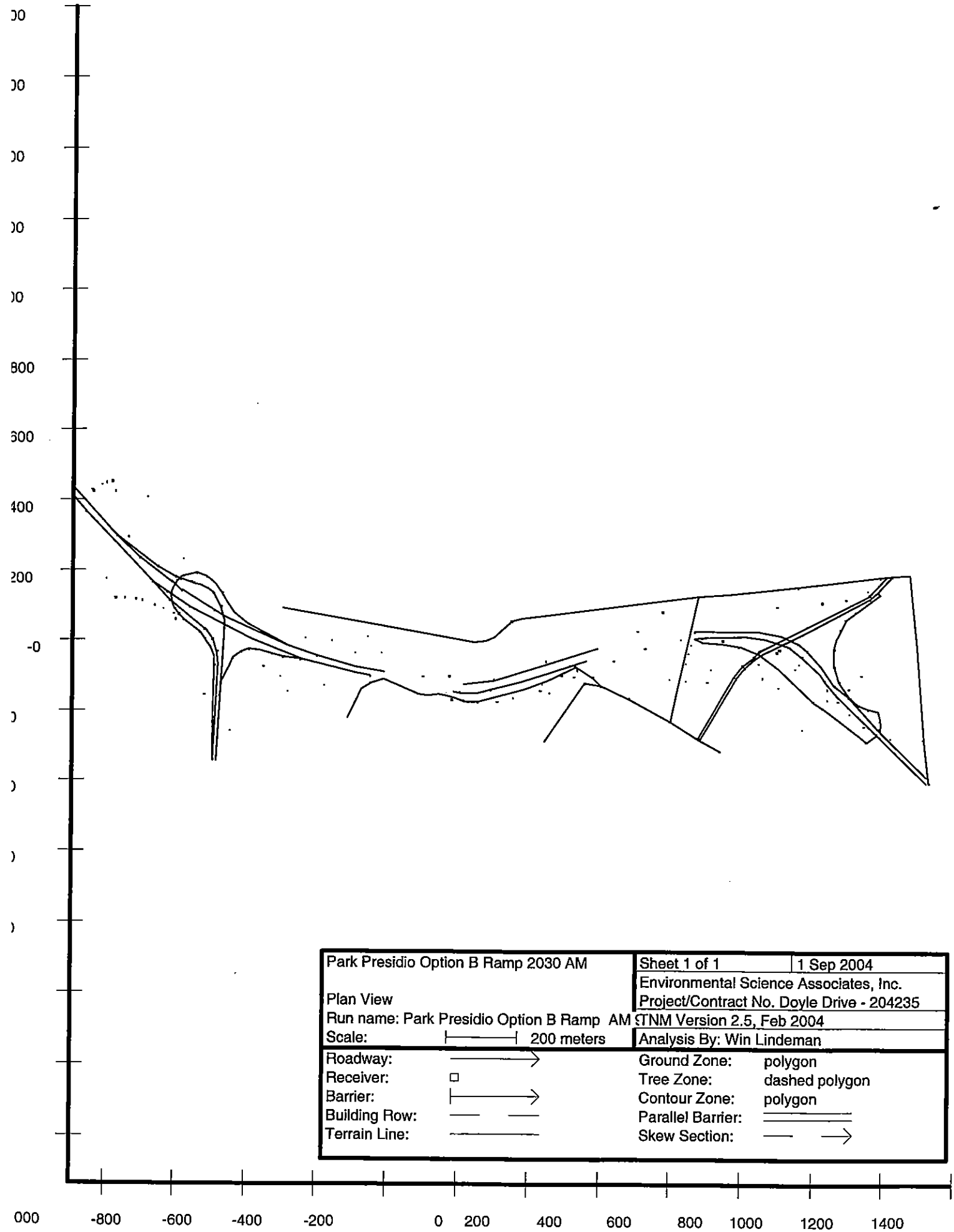
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 69.9 | 66 | 69.9 | 12 | Snd Lvl | 69.9 | 0.0 | 10 | -10.0 |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 61.8 | 66 | 61.8 | 12 | — | 61.8 | 0.0 | 10 | -10.0 |
| 3 Buildings 1187/1188 | 3 | 0 | 81.0 | 57.3 | 71 | -23.7 | 12 | — | 57.3 | 0.0 | 10 | -10.0 |
| 4 Building 1182 | 4 | 0 | 81.0 | 56.1 | 71 | -24.9 | 12 | — | 56.1 | 0.0 | 10 | -10.0 |
| 5 Buildings 1183/1186 | 5 | 0 | 81.0 | 57.2 | 71 | -23.8 | 12 | — | 57.2 | 0.0 | 10 | -10.0 |
| 6 Buildings 1184/1185 | 6 | 0 | 81.0 | 59.6 | 71 | -21.4 | 12 | — | 59.6 | 0.0 | 10 | -10.0 |
| 7 Building 603/Crissy Center | 7 | 0 | 72.0 | 56.8 | 71 | -15.2 | 12 | — | 56.8 | 0.0 | 10 | -10.0 |
| 8 PX Building | 8 | 0 | 0.0 | 60.0 | 71 | 60.0 | 12 | — | 60.0 | 0.0 | 10 | -10.0 |
| 9 Post Commissary/Sports Basement | 9 | 0 | 69.0 | 70.9 | 66 | 1.9 | 12 | Snd Lvl | 70.9 | 0.0 | 10 | -10.0 |
| 10 Battery Blaney | 10 | 0 | 68.0 | 69.6 | 66 | 1.6 | 12 | Snd Lvl | 69.6 | 0.0 | 10 | -10.0 |
| 11 Battery Slaughter | 11 | 0 | 68.0 | 65.7 | 66 | -2.3 | 12 | — | 65.7 | 0.0 | 10 | -10.0 |
| 12 Battery Sherwood | 12 | 0 | 68.0 | 65.8 | 66 | -2.2 | 12 | — | 65.8 | 0.0 | 10 | -10.0 |
| 13 Battery Baldwin | 13 | 0 | 68.0 | 68.1 | 66 | 0.1 | 12 | Snd Lvl | 68.1 | 0.0 | 10 | -10.0 |
| 14 Building 644 | 14 | 0 | 0.0 | 60.6 | 71 | 60.6 | 12 | — | 60.6 | 0.0 | 10 | -10.0 |
| 15 Building 649 | 15 | 0 | 0.0 | 60.8 | 66 | 60.8 | 12 | — | 60.8 | 0.0 | 10 | -10.0 |
| 16 Building 650/Stilwell Hall | 16 | 0 | 70.0 | 59.4 | 66 | -10.6 | 12 | — | 59.4 | 0.0 | 10 | -10.0 |
| 17 1253 Armistead Road | 17 | 1 | 66.0 | 66.6 | 66 | 0.6 | 12 | Snd Lvl | 66.6 | 0.0 | 10 | -10.0 |
| 18 Home on Armistead Road | 18 | 1 | 66.0 | 77.4 | 66 | 11.4 | 12 | Snd Lvl | 77.4 | 0.0 | 10 | -10.0 |
| 19 Building 969 | 19 | 0 | 0.0 | 62.1 | 71 | 62.1 | 12 | — | 62.1 | 0.0 | 10 | -10.0 |
| 20 Building 968 | 20 | 0 | 0.0 | 64.2 | 71 | 64.2 | 12 | — | 64.2 | 0.0 | 10 | -10.0 |
| 21 Building 967 | 21 | 0 | 0.0 | 67.1 | 71 | 67.1 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 22 Building 966 | 22 | 0 | 0.0 | 67.3 | 71 | 67.3 | 12 | — | 67.3 | 0.0 | 10 | -10.0 |
| 23 Building 964 | 23 | 0 | 0.0 | 67.0 | 66 | 67.0 | 12 | Snd Lvl | 67.0 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 Building 963 | 24 | 0 | 0.0 | 66.3 | 66 | 66.3 | 12 | Snd Lvl | 66.3 | 0.0 | 10 | -10.0 |
| 25 Building 962 | 25 | 0 | 0.0 | 65.8 | 66 | 65.8 | 12 | — | 65.8 | 0.0 | 10 | -10.0 |
| 26 Unknown Building | 26 | 0 | 0.0 | 75.0 | 71 | 75.0 | 12 | Snd Lvl | 75.0 | 0.0 | 10 | -10.0 |
| 27 Building 1299/Log Cabin | 27 | 0 | 63.0 | 68.9 | 66 | 5.9 | 12 | Snd Lvl | 68.9 | 0.0 | 10 | -10.0 |
| 28 Building 1387 | 28 | 0 | 0.0 | 67.4 | 71 | 67.4 | 12 | — | 67.4 | 0.0 | 10 | -10.0 |
| 29 Building 1298 Storey Ave. | 29 | 2 | 66.5 | 66.7 | 66 | 0.2 | 12 | Snd Lvl | 66.7 | 0.0 | 10 | -10.0 |
| 30 Building 1297 Storey Ave. | 30 | 2 | 66.5 | 68.6 | 66 | 2.1 | 12 | Snd Lvl | 68.6 | 0.0 | 10 | -10.0 |
| 31 Building 1295 Storey Ave. | 31 | 2 | 66.5 | 70.6 | 66 | 4.1 | 12 | Snd Lvl | 70.6 | 0.0 | 10 | -10.0 |
| 32 Building 1294 Storey Ave. | 32 | 2 | 66.5 | 71.2 | 66 | 4.7 | 12 | Snd Lvl | 71.2 | 0.0 | 10 | -10.0 |
| 33 Building 1293 Storey Ave. | 33 | 2 | 66.5 | 72.2 | 66 | 5.7 | 12 | Snd Lvl | 72.2 | 0.0 | 10 | -10.0 |
| 34 Building 1291 Storey Ave. | 34 | 2 | 66.5 | 72.8 | 66 | 6.3 | 12 | Snd Lvl | 72.8 | 0.0 | 10 | -10.0 |
| 35 Building 1290 Storey Ave. | 35 | 2 | 66.5 | 73.7 | 66 | 7.2 | 12 | Snd Lvl | 73.7 | 0.0 | 10 | -10.0 |
| 36 Building 1289 Storey Ave. | 36 | 2 | 66.5 | 72.7 | 66 | 6.2 | 12 | Snd Lvl | 72.7 | 0.0 | 10 | -10.0 |
| 37 Building 1263 Storey Ave. | 37 | 2 | 0.0 | 69.3 | 66 | 69.3 | 12 | Snd Lvl | 69.3 | 0.0 | 10 | -10.0 |
| 38 Building 682/Cross Cultural Center | 38 | 0 | 65.5 | 65.1 | 66 | -0.4 | 12 | — | 65.1 | 0.0 | 10 | -10.0 |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | 64.0 | 60.2 | 71 | -3.8 | 12 | — | 60.2 | 0.0 | 10 | -10.0 |
| 40 Building 662/Cavalry Stable | 40 | 0 | 64.0 | 62.6 | 71 | -1.4 | 12 | — | 62.6 | 0.0 | 10 | -10.0 |
| 41 Building 663/Cavalry Stable | 41 | 0 | 64.0 | 63.3 | 71 | -0.7 | 12 | — | 63.3 | 0.0 | 10 | -10.0 |
| 42 Building 667/Cavalry Stable | 42 | 0 | 64.0 | 67.4 | 71 | 3.4 | 12 | — | 67.4 | 0.0 | 10 | -10.0 |
| 43 National Cemetery Grave Site | 43 | 0 | 69.0 | 64.2 | 66 | -4.8 | 12 | — | 64.2 | 0.0 | 10 | -10.0 |
| 44 Building 129 | 44 | 1 | 0.0 | 57.2 | 66 | 57.2 | 12 | — | 57.2 | 0.0 | 10 | -10.0 |
| 45 Building 122 | 45 | 0 | 0.0 | 62.3 | 71 | 62.3 | 12 | — | 62.3 | 0.0 | 10 | -10.0 |
| 46 Building 108 | 46 | 0 | 0.0 | 62.6 | 71 | 62.6 | 12 | — | 62.6 | 0.0 | 10 | -10.0 |
| 47 Building 107 | 47 | 0 | 0.0 | 67.6 | 71 | 67.6 | 12 | — | 67.6 | 0.0 | 10 | -10.0 |
| 48 Building 104 | 48 | 0 | 74.0 | 58.7 | 71 | -15.3 | 12 | — | 58.7 | 0.0 | 10 | -10.0 |
| 49 Building 105 | 49 | 0 | 74.0 | 73.5 | 71 | -0.5 | 12 | Snd Lvl | 73.5 | 0.0 | 10 | -10.0 |
| 50 Building 106 | 50 | 0 | 76.0 | 72.5 | 71 | -3.5 | 12 | Snd Lvl | 72.5 | 0.0 | 10 | -10.0 |
| 51 Building 211 | 51 | 0 | 0.0 | 66.2 | 71 | 66.2 | 12 | — | 66.2 | 0.0 | 10 | -10.0 |
| 52 Building 204 | 52 | 0 | 0.0 | 59.6 | 71 | 59.6 | 12 | — | 59.6 | 0.0 | 10 | -10.0 |
| 53 Building 210 | 53 | 0 | 0.0 | 62.8 | 71 | 62.8 | 12 | — | 62.8 | 0.0 | 10 | -10.0 |
| 54 Building 201 | 54 | 0 | 0.0 | 57.8 | 71 | 57.8 | 12 | — | 57.8 | 0.0 | 10 | -10.0 |
| 55 Building 220 | 55 | 0 | 0.0 | 53.8 | 71 | 53.8 | 12 | — | 53.8 | 0.0 | 10 | -10.0 |
| 56 Building 231 | 56 | 0 | 0.0 | 65.9 | 71 | 65.9 | 12 | — | 65.9 | 0.0 | 10 | -10.0 |
| 57 Building 228 | 57 | 0 | 0.0 | 62.2 | 71 | 62.2 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 58 Building 229 | 58 | 0 | 0.0 | 59.3 | 71 | 59.3 | 12 | — | 59.3 | 0.0 | 10 | -10.0 |
| 59 Building 223 | 59 | 0 | 0.0 | 57.4 | 71 | 57.4 | 12 | — | 57.4 | 0.0 | 10 | -10.0 |
| 60 Building 230 | 60 | 0 | 0.0 | 71.9 | 71 | 71.9 | 12 | Snd Lvl | 71.9 | 0.0 | 10 | -10.0 |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 57.0 | 59.9 | 66 | 2.9 | 12 | — | 59.9 | 0.0 | 10 | -10.0 |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 57.0 | 57.3 | 66 | 0.3 | 12 | — | 57.3 | 0.0 | 10 | -10.0 |
| 63 Building 1063 | 63 | 0 | 68.5 | 62.3 | 71 | -6.2 | 12 | — | 62.3 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 Building 1062 | 64 | 0 | 68.5 | 59.2 | 71 | -9.3 | 12 | — | 59.2 | 0.0 | 10 | -10.0 |
| 65 Building 1060 | 65 | 0 | 68.5 | 59.5 | 71 | -9.0 | 12 | — | 59.5 | 0.0 | 10 | -10.0 |
| 66 Building 1167 | 66 | 0 | 68.0 | 65.4 | 71 | -2.6 | 12 | — | 65.4 | 0.0 | 10 | -10.0 |
| 67 Building 1163 | 67 | 0 | 0.0 | 65.0 | 71 | 65.0 | 12 | — | 65.0 | 0.0 | 10 | -10.0 |
| 68 Building 1169 | 68 | 0 | 68.0 | 64.3 | 71 | -3.7 | 12 | — | 64.3 | 0.0 | 10 | -10.0 |
| 69 Building 1162 | 69 | 0 | 0.0 | 62.9 | 71 | 62.9 | 12 | — | 62.9 | 0.0 | 10 | -10.0 |
| 70 Building 1170 | 70 | 0 | 68.0 | 71.4 | 71 | 3.4 | 12 | Snd Lvl | 71.4 | 0.0 | 10 | -10.0 |
| 71 Building 1161 | 71 | 0 | 0.0 | 67.0 | 71 | 67.0 | 12 | — | 67.0 | 0.0 | 10 | -10.0 |
| 72 Building 1160 | 72 | 0 | 0.0 | 71.5 | 71 | 71.5 | 12 | Snd Lvl | 71.5 | 0.0 | 10 | -10.0 |
| 73 Building 1152/YMCA | 73 | 0 | 0.0 | 71.0 | 66 | 71.0 | 12 | Snd Lvl | 71.0 | 0.0 | 10 | -10.0 |
| 74 Building 1151/YMCA Pool | 74 | 0 | 0.0 | 72.6 | 66 | 72.6 | 12 | Snd Lvl | 72.6 | 0.0 | 10 | -10.0 |
| 75 Building 1004 | 75 | 0 | 0.0 | 57.0 | 71 | 57.0 | 12 | — | 57.0 | 0.0 | 10 | -10.0 |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 76.5 | 74.6 | 66 | -1.9 | 12 | Snd Lvl | 74.6 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 229 | 0.0 | 0.0 | 0.0 |
| All Impacted | 28 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |


Park Presidio Option B Ramp 2030 AM
Sheet 1 of 1
1 Sep 2004
Environmental Science Associates, Inc.
Plan View
Project/Contract No. Doyle Drive - 204235
Run name: Park Presidio Option B Ramp AM
STNM Version 2.5, Feb 2004
Scale:
200 meters
Analysis By: Win Lindeman
Roadway:
Receiver:
Barrier:
Building Row:
Terrain Line:
Ground Zone: polygon
Tree Zone: dashed polygon
Contour Zone: polygon
Parallel Barrier:
Skew Section:
-800
-600
-400
-200
0
200
400
600
800
1000
1200
1400

Environmental Science Associates, Inc.
Win Lindeman

1 September 2004
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Park Presidio Option B Ramp 2030 AM

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

| Roadway | | Points | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Width | Name | No. | Coordinates (pavement) | | | Flow Control | | | Segment | |
| | | | | X | Y | Z | Control Device | Speed Constraint | Percent Vehicles Affected | Pvmt Type | On Struct? |
| | m | | | m | m | m | | km/h | % | | |
| EB Doyle to North Tunnel | 18.0 | 1 - North I | 11 | -1,185.0 | 519.0 | 53.00 | | | | Average | |
| | | 2 - 1+97.5 | 10 | -1,060.0 | 368.0 | 56.00 | | | | Average | |
| | | 3 - 4+74 | 9 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 4 - 5+27 | 8 | -827.0 | 138.0 | 51.50 | | | | Average | |
| | | 5 - 5+27 | 7 | -826.0 | 138.0 | 51.50 | | | | Average | Y |
| | | 6 - 6+00 | 6 | -764.0 | 95.0 | 49.00 | | | | Average | Y |
| | | 7 - 8+00 | 5 | -588.0 | 7.0 | 40.00 | | | | Average | Y |
| | | 8 - 9+57 | 4 | -450.0 | -50.0 | 33.00 | | | | Average | Y |
| | | 9 - 11+10 | 3 | -294.0 | -88.0 | 27.00 | | | | Average | Y |
| | | 10 - 11+1( | 2 | -293.0 | -88.0 | 27.00 | | | | Average | |
| | | 11 - 11+53 | 1 | -253.0 | -96.0 | 26.00 | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 18.0 | 1 - 13+93 | 18 | -17.0 | -142.0 | 16.00 | | | | Average | |
| | | 2 - 14+10 | 17 | 0.0 | -143.0 | 16.00 | | | | Average | |
| | | 3 - 14+60 | 16 | 49.0 | -143.0 | 14.00 | | | | Average | |
| | | 4 - 15+00 | 15 | 88.0 | -135.0 | 12.00 | | | | Average | |
| | | 5 - 15+85. | 14 | 170.0 | -112.0 | 9.00 | | | | Average | |
| | | 6 - 17+33. | 13 | 310.0 | -65.0 | 5.00 | | | | Average | |
| | | 7 - 17+80 | 12 | 354.0 | -52.0 | 4.00 | | | | | |
| EB Doyle from South Tunnel to Francisco | 18.0 | 1 - 20+95 | 19 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 21+20 | 20 | 684.0 | 14.0 | 3.00 | | | | Average | |
| | | 3 - 21+20 | 21 | 685.0 | 14.0 | 3.00 | | | | Average | Y |
| | | 4 - 22+42. | 22 | 807.0 | 18.0 | 5.00 | | | | Average | Y |
| | | 5 - 23+00 | 23 | 859.0 | 12.0 | 6.00 | | | | Average | Y |
| | | 6 - 23+25 | 24 | 925.0 | -10.0 | 6.00 | | | | Average | Y |
| | | 7 - 23+25 | 25 | 926.0 | -10.0 | 6.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 - 24+20 | 26 | 966.0 | -41.0 | 5.00 | | | | Average | |
| | | 9 - 24+85. | 27 | 1,016.0 | -88.0 | 4.00 | | | | Average | |
| | | 10 - 25+17 | 28 | 1,030.0 | -108.0 | 3.50 | | | | Average | |
| | | 11 - 25+64 | 29 | 1,062.0 | -146.0 | 3.00 | | | | Average | |
| | | 12 - Gorg | 30 | 1,178.0 | -259.0 | 4.00 | | | | Average | |
| | | 13 - Franc | 31 | 1,320.0 | -400.0 | 4.00 | | | | | |
| WB Doyle from Fancisco to South Tunnel | 10.8 | 1 - Francis | 32 | 1,320.0 | -380.0 | 4.00 | | | | Average | |
| | | 2 - 27+20. | 33 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 3 - 26+00 | 34 | 1,095.0 | -152.0 | 3.50 | | | | Average | |
| | | 4 - 25+40 | 35 | 1,055.0 | -120.0 | 3.50 | | | | Average | |
| | | 5 - 24+73 | 36 | 1,018.0 | -65.0 | 4.00 | | | | Average | |
| | | 6 - 24+20 | 37 | 977.0 | -21.0 | 5.00 | | | | Average | |
| | | 7 - 23+75 | 38 | 950.0 | 0.0 | 6.00 | | | | Average | |
| | | 8 - 23+75 | 39 | 949.0 | 0.0 | 6.00 | | | | Average | Y |
| | | 9 - 23+22 | 40 | 900.0 | 22.0 | 6.00 | | | | Average | Y |
| | | 10 - 23+22 | 41 | 899.0 | 22.0 | 6.00 | | | | Average | |
| | | 11 - 22+68 | 42 | 843.0 | 34.0 | 6.00 | | | | Average | |
| | | 12 - 22+00 | 43 | 775.0 | 33.0 | 4.00 | | | | Average | |
| | | 13 - 20+88 | 44 | 661.0 | 31.0 | 2.00 | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 10.8 | 1 - 18+05 | 45 | 386.0 | -15.0 | 3.50 | | | | Average | |
| | | 2 - 15+00 | 46 | 96.0 | -107.0 | 10.00 | | | | Average | |
| | | 3 - 14+10 | 47 | 10.0 | -119.0 | 14.00 | | | | | |
| WB Doyle from North Tunnel to North End | 13.2 | 1 - 11+80 | 51 | -216.0 | -85.0 | 24.00 | | | | Average | |
| | | 2 - 11+00 | 52 | -295.0 | -69.0 | 27.00 | | | | Average | |
| | | 3 - 11+00 | 53 | -296.0 | -69.0 | 27.00 | | | | Average | Y |
| | | 4 - 9+80 | 54 | -407.0 | -39.0 | 32.00 | | | | Average | Y |
| | | 5 - 8+73 | 55 | -488.0 | -9.0 | 36.00 | | | | Average | Y |
| | | 6 - 7+00 | 56 | -661.0 | 69.0 | 44.00 | | | | Average | Y |
| | | 7 - 6+60 | 57 | -696.0 | 88.0 | 46.00 | | | | Average | Y |
| | | 8 - 6+60 | 58 | -697.0 | 88.0 | 46.00 | | | | Average | |
| | | 9 - 5+54 | 59 | -789.0 | 145.0 | 50.00 | | | | Average | |
| | | 10 - 5+54 | 60 | -790.0 | 145.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+14 | 61 | -817.0 | 169.0 | 52.00 | | | | Average | Y |
| | | 12 - 5+14 | 62 | -818.0 | 169.0 | 52.00 | | | | Average | |
| | | 13 - 4+00 | 63 | -907.0 | 237.0 | 56.00 | | | | Average | |
| | | 14 - 3+10 | 64 | -975.0 | 300.0 | 56.00 | | | | Average | |
| | | 15 - 0+00 | 65 | -1,170.0 | 522.0 | 53.00 | | | | | |
| WB Doyle off ramp to SB Park Presidio | 7.0 | 1 - 0+00 | 66 | -488.0 | -9.0 | 42.00 | | | | Average | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 - 1+30 | 67 | -600.0 | 52.0 | 42.00 | | | | Average | Y |
| | | 3 - 1+80 | 68 | -639.0 | 82.0 | 42.00 | | | | Average | Y |
| | | 4 - 2+20 | 69 | -661.0 | 114.0 | 42.00 | | | | Average | Y |
| | | 5 - 2+20 | 70 | -662.0 | 114.0 | 42.00 | | | | Average | |
| | | 6 - 2+48 | 71 | -673.0 | 139.0 | 42.00 | | | | Average | |
| | | 7 - 3+09 | 72 | -693.0 | 165.0 | 42.00 | | | | Average | |
| | | 8 - 3+40 | 73 | -718.0 | 184.0 | 42.00 | | | | Average | |
| | | 9 - 3+60 | 74 | -746.0 | 194.0 | 42.00 | | | | Average | |
| | | 10 - 3+80 | 75 | -787.0 | 185.0 | 42.00 | | | | Average | |
| | | 11 - 4+00 | 76 | -803.0 | 171.0 | 42.00 | | | | Average | |
| | | 12 - 4+20 | 77 | -813.0 | 153.0 | 42.00 | | | | Average | |
| | | 13 - 4+40 | 78 | -818.0 | 134.0 | 42.00 | | | | Average | |
| | | 14 - 4+59 | 79 | -815.0 | 112.0 | 42.00 | | | | Average | |
| | | 15 - 4+80 | 80 | -807.0 | 93.0 | 42.00 | | | | Average | |
| | | 16 - 5+00 | 81 | -796.0 | 76.0 | 41.00 | | | | Average | |
| | | 17 - 5+20 | 82 | -782.0 | 61.0 | 40.00 | | | | Average | |
| | | 18 - 5+80 | 83 | -735.0 | 24.0 | 40.00 | | | | Average | |
| | | 19 - 6+06 | 84 | -719.0 | 5.0 | 40.00 | | | | Average | |
| | | 20 - 6+31 | 85 | -706.0 | -15.0 | 40.00 | | | | Average | |
| | | 21 - 6+60 | 86 | -696.0 | -42.0 | 40.00 | | | | Average | |
| | | 22 - 6+88 | 87 | -694.0 | -68.0 | 40.00 | | | | Average | |
| | | 23 - 8+23 | 169 | -699.0 | -203.0 | 40.00 | | | | Average | |
| | | 24 - 5+88. | 88 | -698.0 | -337.0 | 40.00 | | | | | |
| NB Park Presidio to WB Doyle Drive | 10.2 | 1 - 0+00 | 89 | -690.0 | -337.0 | 40.00 | | | | Average | |
| | | 2A | 170 | -679.0 | -153.0 | 38.50 | | | | Average | |
| | | 2 - 3+72.3 | 90 | -667.0 | 32.0 | 37.00 | | | | Average | |
| | | 3 - 4+00 | 91 | -667.0 | 61.0 | 38.00 | | | | Average | |
| | | 4 - 4+40 | 92 | -677.0 | 101.0 | 40.00 | | | | Average | |
| | | 5 - 4+60 | 93 | -698.0 | 137.0 | 48.00 | | | | Average | |
| | | 6 - 5+00 | 94 | -715.0 | 150.0 | 48.00 | | | | Average | |
| | | 7 - 5+20 | 95 | -734.0 | 160.0 | 49.00 | | | | Average | |
| | | 8 - 5+40 | 96 | -753.0 | 165.0 | 49.00 | | | | Average | |
| | | 9 - 5+53 | 97 | -760.0 | 168.0 | 50.00 | | | | Average | |
| | | 10 - 5+53 | 98 | -761.0 | 168.0 | 50.00 | | | | Average | Y |
| | | 11 - 5+80 | 99 | -792.0 | 176.0 | 51.00 | | | | Average | Y |
| | | 12 - 5+98 | 100 | -807.0 | 183.0 | 52.00 | | | | Average | Y |
| | | 13 - 5+98 | 101 | -808.0 | 183.0 | 52.00 | | | | Average | |
| | | 14 - 6+58. | 102 | -857.0 | 212.0 | 53.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15 - 8+04. | 103 | -975.0 | 300.0 | 56.00 | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 10.0 | 1 - 0+00 | 128 | -870.0 | 167.0 | 54.00 | | | | Average | |
| | | 2 - 0+65 | 129 | -823.0 | 116.0 | 52.00 | | | | Average | |
| | | 3 - 0+65 | 130 | -822.0 | 116.0 | 52.00 | | | | Average | Y |
| | | 4 - 2+00 | 131 | -723.0 | 35.0 | 44.00 | | | | Average | Y |
| | | 5 - 2+00 | 132 | -722.0 | 35.0 | 44.00 | | | | Average | |
| | | 6 - 2+40 | 133 | -700.0 | 5.0 | 42.00 | | | | Average | |
| | | 7 - 2+80 | 134 | -687.0 | -30.0 | 40.00 | | | | Average | |
| | | 8 - 3+14.5 | 135 | -685.0 | -63.0 | 37.00 | | | | Average | |
| | | 9 - 5+88.1 | 136 | -698.0 | -337.0 | 40.00 | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 6.0 | 1 - 0+00 | 137 | 660.0 | 11.0 | 2.00 | | | | Average | |
| | | 2 - 0+42 | 138 | 685.0 | 0.0 | 2.00 | | | | Average | |
| | | 3 - 0+42 | 139 | 686.0 | 0.0 | 2.00 | | | | Average | Y |
| | | 4 - 1+00 | 140 | 740.0 | -2.0 | 2.00 | | | | Average | Y |
| | | 5 - 1+50 | 141 | 786.0 | -11.0 | 2.00 | | | | Average | Y |
| | | 6 - 1+50 | 142 | 787.0 | -11.0 | 2.00 | | | | Average | Y |
| | | 7 - 2+12.1 | 143 | 843.0 | -30.0 | 1.00 | | | | Average | Y |
| | | 8 - EC 0+7 | 144 | 898.0 | -75.0 | 1.50 | | | | Average | |
| | | 9 | 145 | 998.0 | -167.0 | 3.00 | | | | Average | |
| | | 10 | 146 | 1,024.0 | -186.0 | 3.00 | | | | Average | |
| | | 11 | 147 | 1,128.0 | -265.0 | 4.00 | | | | Average | |
| | | 12 | 148 | 1,148.0 | -281.0 | 4.00 | | | | Average | |
| | | 13 - Inters | 149 | 1,178.0 | -259.0 | 4.00 | | | | | |
| NB Girard Rd. from Marina to Lincoln | 3.7 | 1 - 0+00 | 150 | 1,201.0 | 188.0 | 4.00 | | | | Average | |
| | | 2 - 0+65 | 151 | 1,153.0 | 136.0 | 3.60 | | | | Average | |
| | | 3 - 2+80 | 152 | 965.0 | 40.0 | 0.50 | | | | Average | |
| | | 4 - 4+09.9 | 153 | 843.0 | -23.0 | 0.00 | | | | Average | |
| | | 5 - 4+40 | 154 | 828.0 | -40.0 | 1.00 | | | | Average | |
| | | 6 - 4+80 | 155 | 796.0 | -65.0 | 4.70 | | | | Average | |
| | | 7 - 5+20 | 156 | 772.0 | -98.0 | 5.50 | | | | Average | |
| | | 8 - 7+20 | 157 | 673.0 | -273.0 | 11.50 | | | | | |
| SB Girard Rd. from Lincoln to Marina | 3.7 | 1 - 7+20 | 158 | 678.0 | -273.0 | 11.50 | | | | Average | |
| | | 2 - 5+20 | 159 | 779.0 | -102.0 | 5.50 | | | | Average | |
| | | 3 - 4+80 | 160 | 803.0 | -70.0 | 4.70 | | | | Average | |
| | | 4 - 4+40 | 161 | 831.0 | -44.0 | 1.00 | | | | Average | |
| | | 5 - 4+09.9 | 162 | 852.0 | -31.0 | 0.00 | | | | Average | |
| | | 6 - 2+80 | 163 | 965.0 | 27.0 | 0.50 | | | | Average | |
| | | 7 - 0+65 | 164 | 1,156.0 | 127.0 | 3.60 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8 - Palace | 239 | 1,178.0 | 146.0 | 4.00 | | | | Average | |
| | | 9 - Mason | 165 | 1,218.0 | 191.0 | 4.00 | | | | | |
| Halleck St. from Lincon to Mason | 7.2 | 1 - 3+65 | 166 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 2 - 2+77.9 | 167 | 612.0 | -139.0 | 10.00 | | | | Average | |
| | | 3 - 0+00 | 168 | 673.0 | 130.0 | 4.00 | | | | | |
| Lincoln from McDowell to Letterman | 7.3 | 1 | 180 | -316.0 | -214.0 | 33.00 | | | | Average | |
| | | 2 | 181 | -279.0 | -132.0 | 33.00 | | | | Average | |
| | | 3 | 182 | -251.0 | -115.0 | 33.00 | | | | Average | |
| | | 4 | 183 | -216.0 | -104.0 | 32.00 | | | | Average | |
| | | 5 | 184 | -118.0 | -147.0 | 31.00 | | | | Average | |
| | | 6 | 185 | -93.0 | -152.0 | 29.00 | | | | Average | |
| | | 7 | 186 | -59.0 | -148.0 | 29.00 | | | | Average | |
| | | 8 | 187 | -38.0 | -151.0 | 29.00 | | | | Average | |
| | | 9 | 188 | -14.0 | -158.0 | 29.00 | | | | Average | |
| | | 10 | 189 | 13.0 | -167.0 | 27.00 | | | | Average | |
| | | 11 | 190 | 50.0 | -170.0 | 26.00 | | | | Average | |
| | | 12 | 191 | 182.0 | -134.0 | 19.00 | | | | Average | |
| | | 13 | 192 | 245.0 | -108.0 | 15.00 | | | | Average | |
| | | 14 | 193 | 324.0 | -68.0 | 12.00 | | | | Average | |
| | | 15 | 194 | 376.0 | -100.0 | 13.00 | | | | Average | |
| | | 16 | 195 | 396.0 | -124.0 | 13.00 | | | | Average | |
| | | 17 | 196 | 478.0 | -160.0 | 12.00 | | | | Average | |
| | | 18 | 197 | 593.0 | -225.0 | 11.00 | | | | Average | |
| | | 19 | 198 | 673.0 | -273.0 | 11.50 | | | | Average | |
| | | 20 | 199 | 735.0 | -310.0 | 12.00 | | | | | |
| Mason St. from Crissy Ave. to Marina | 7.3 | 1 | 200 | -500.0 | 96.0 | 3.00 | | | | Average | |
| | | 2 | 201 | 40.0 | 0.0 | 4.00 | | | | Average | |
| | | 3 | 202 | 72.0 | 4.0 | 4.00 | | | | Average | |
| | | 4 | 203 | 96.0 | 15.0 | 4.00 | | | | Average | |
| | | 5 | 204 | 144.0 | 60.0 | 4.00 | | | | Average | |
| | | 6 | 205 | 174.0 | 68.0 | 4.00 | | | | Average | |
| | | 7 | 206 | 673.0 | 130.0 | 4.00 | | | | Average | |
| | | 8 | 207 | 768.0 | 138.0 | 4.00 | | | | Average | |
| | | 9 | 208 | 952.0 | 159.0 | 4.00 | | | | Average | |
| | | 10 | 209 | 1,185.0 | 187.0 | 4.00 | | | | Average | |
| | | 11 | 210 | 1,218.0 | 191.0 | 4.00 | | | | Average | |
| | | 12 | 211 | 1,270.0 | 196.0 | 4.00 | | | | | |
| Baker St. from Marina to Richardson | 7.3 | 1 | 212 | 1,270.0 | 196.0 | 4.00 | | | | Average | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 213 | 1,280.0 | 93.0 | 4.00 | | | | Average | |
| | | 3 | 214 | 1,290.0 | -7.0 | 4.00 | | | | Average | |
| | | 4 | 215 | 1,310.0 | -276.0 | 4.00 | | | | Average | |
| | | 5 | 216 | 1,327.0 | -400.0 | 4.00 | | | | | |
| Palace Drive from Richardson to Marina | 7.3 | 1 | 217 | 1,182.0 | -246.0 | 4.00 | | | | Average | |
| | | 2 | 218 | 1,186.0 | -245.0 | 4.00 | | | | Average | |
| | | 3 | 219 | 1,186.0 | -221.0 | 4.00 | | | | Average | |
| | | 4 | 220 | 1,180.0 | -195.0 | 3.50 | | | | Average | |
| | | 5 | 221 | 1,151.0 | -188.0 | 3.00 | | | | Average | |
| | | 6 | 222 | 1,125.0 | -175.0 | 3.00 | | | | Average | |
| | | 7 | 223 | 1,100.0 | -153.0 | 3.00 | | | | Average | |
| | | 8 | 224 | 1,081.0 | -130.0 | 3.00 | | | | Average | |
| | | 9 | 225 | 1,069.0 | -108.0 | 3.00 | | | | Average | |
| | | 10 | 226 | 1,060.0 | -83.0 | 3.00 | | | | Average | |
| | | 11 | 227 | 1,055.0 | -63.5 | 4.00 | | | | Average | |
| | | 12 | 228 | 1,053.0 | -39.0 | 4.00 | | | | Average | |
| | | 13 | 229 | 1,055.0 | -14.0 | 4.00 | | | | Average | |
| | | 14 | 230 | 1,061.0 | 10.0 | 4.00 | | | | Average | |
| | | 15 | 231 | 1,073.0 | 40.0 | 4.00 | | | | Average | |
| | | 16 | 232 | 1,088.0 | 68.0 | 4.00 | | | | Average | |
| | | 17 | 233 | 1,116.0 | 91.0 | 4.00 | | | | Average | |
| | | 18 | 234 | 1,185.0 | 139.0 | 4.00 | | | | Average | |
| | | 19 | 235 | 1,178.0 | 146.0 | 4.00 | | | | | |
| Montgomery St. from Sherian to Lincoln | 9.2 | 1 | 236 | 237.0 | -280.0 | 16.00 | | | | Average | |
| | | 2 | 237 | 350.0 | -117.0 | 13.00 | | | | Average | |
| | | 3 | 238 | 396.0 | -124.0 | 13.00 | | | | | |
| NB Park Presidio to EB Doyle Drive | 4.6 | 1 | 240 | -673.0 | -113.0 | 45.70 | | | | Average | |
| | | 2 | 241 | -652.0 | -68.0 | 43.70 | | | | Average | |
| | | 3 | 242 | -641.0 | -46.0 | 41.90 | | | | Average | |
| | | 4 | 243 | -618.0 | -28.0 | 41.80 | | | | Average | |
| | | 5 | 244 | -597.0 | -21.0 | 41.00 | | | | Average | |
| | | 6 | 245 | -565.0 | -23.0 | 40.10 | | | | Average | |
| | | 7 | 246 | -530.0 | -34.0 | 38.00 | | | | Average | |
| | | 8 | 248 | -500.0 | -43.0 | 35.00 | | | | Average | |
| | | 8 | 247 | -450.0 | -50.0 | 33.00 | | | | | |

Environmental Science Associates, Inc.
Win Lindeman

1 September 2004
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Park Presidio Option B Ramp 2030 AM

| Roadway | Points | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Name | No. | Segment | | | | | | | | | |
| | | | Autos | | MTrucks | | HTrucks | | Buses | | Motorcycles | |
| | | | V | S | V | S | V | S | V | S | V | S |
| | | | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h | veh/hr | km/h |
| EB Doyle to North Tunnel | 1 - North End | 11 | 6340 | 88 | 66 | 88 | 13 | 88 | 66 | 88 | 66 | 88 |
| | 2 - 1+97.539 | 10 | 6340 | 88 | 66 | 88 | 13 | 88 | 66 | 88 | 66 | 88 |
| | 3 - 4+74 | 9 | 4190 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 4 - 5+27 | 8 | 4190 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 5 - 5+27 | 7 | 4190 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 6 - 6+00 | 6 | 4190 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 7 - 8+00 | 5 | 4190 | 88 | 43 | 88 | 9 | 88 | 43 | 88 | 43 | 88 |
| | 8 - 9+57 | 4 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 9 - 11+10 | 3 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 10 - 11+10 | 2 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 11 - 11+53 | 1 | | | | | | | | | | |
| EB Doyle from North Tunnel to S. Tunnel | 1 - 13+93 | 18 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 2 - 14+10 | 17 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 3 - 14+60 | 16 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 4 - 15+00 | 15 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 5 - 15+85.44 | 14 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 6 - 17+33.198 | 13 | 4793 | 88 | 50 | 88 | 10 | 88 | 50 | 88 | 50 | 88 |
| | 7 - 17+80 | 12 | | | | | | | | | | |
| EB Doyle from South Tunnel to Francisco | 1 - 20+95 | 19 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 2 - 21+20 | 20 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 3 - 21+20 | 21 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 - 22+42.630 | 22 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 5 - 23+00 | 23 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 6 - 23+25 | 24 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 7 - 23+25 | 25 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 8 - 24+20 | 26 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 9 - 24+85.060 | 27 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 10 - 25+17.10 | 28 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 11 - 25+64.74 | 29 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 12 - Gorgas I | 30 | 3030 | 56 | 31 | 56 | 6 | 56 | 31 | 56 | 31 | 56 |
| | 13 - Francisc | 31 | | | | | | | | | | |
| WB Doyle from Fancisco to South Tunnel | 1 - Francisco | 32 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 2 - 27+20.608 | 33 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 3 - 26+00 | 34 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 4 - 25+40 | 35 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 5 - 24+73 | 36 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 6 - 24+20 | 37 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 7 - 23+75 | 38 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 8 - 23+75 | 39 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 9 - 23+22 | 40 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 10 - 23+22 | 41 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 11 - 22+68 | 42 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 12 - 22+00 | 43 | 2708 | 56 | 28 | 56 | 37 | 56 | 17 | 56 | 28 | 56 |
| | 13 - 20+85 | 44 | | | | | | | | | | |
| WB Doyle from S. Tunnel to N. Tunnel | 1 - 18+05 | 45 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 2 - 15+00 | 46 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 3 - 14+10 | 47 | | | | | | | | | | |
| WB Doyle from North Tunnel to North End | 1 - 11+80 | 51 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 2 - 11+00 | 52 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 3 - 11+00 | 53 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 4 - 9+80 | 54 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 5 - 8+73 | 55 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 6 - 7+00 | 56 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 7 - 6+60 | 57 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 8 - 6+60 | 58 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9 - 5+54 | 59 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 10 - 5+54 | 60 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 11 - 5+14 | 61 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 12 - 5+14 | 62 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 13 - 4+00 | 63 | 2877 | 88 | 30 | 88 | 39 | 88 | 18 | 88 | 30 | 88 |
| | 14 - 3+10 | 64 | 4892 | 88 | 51 | 88 | 66 | 88 | 31 | 88 | 51 | 88 |
| | 15 - 0+00 | 65 | | | | | | | | | | |
| WB Doyle off ramp to SB Park Presidio | 1 - 0+00 | 66 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 2 - 1+30 | 67 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 3 - 1+80 | 68 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 4 - 2+20 | 69 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 5 - 2+20 | 70 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 6 - 2+48 | 71 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 7 - 3+09 | 72 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 8 - 3+40 | 73 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 9 - 3+60 | 74 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 10 - 3+80 | 75 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 11 - 4+00 | 76 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 12 - 4+20 | 77 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 13 - 4+40 | 78 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 14 - 4+59 | 79 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 15 - 4+80 | 80 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 16 - 5+00 | 81 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 17 - 5+20 | 82 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 18 - 5+80 | 83 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 19 - 6+06 | 84 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 20 - 6+31 | 85 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 21 - 6+60 | 86 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 22 - 6+88 | 87 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 23 - 8+23 | 169 | 340 | 56 | 4 | 56 | 5 | 56 | 2 | 56 | 4 | 56 |
| | 24 - 5+88.184 | 88 | | | | | | | | | | |
| NB Park Presidio to WB Doyle Drive | 1 - 0+00 | 89 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 2A | 170 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 2 - 3+72.391 | 90 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 - 4+00 | 91 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 4 - 4+40 | 92 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 5 - 4+60 | 93 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 6 - 5+00 | 94 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 7 - 5+20 | 95 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 8 - 5+40 | 96 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 9 - 5+53 | 97 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 10 - 5+53 | 98 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 11 - 5+80 | 99 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 12 - 5+98 | 100 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 13 - 5+98 | 101 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 14 - 6+58.037 | 102 | 2385 | 56 | 25 | 56 | 25 | 56 | 0 | 0 | 17 | 56 |
| | 15 - 8+04.414 | 103 | | | | | | | | | | |
| SB Off-ramp from Doyle to Park Presidio | 1 - 0+00 | 128 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 2 - 0+65 | 129 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 3 - 0+65 | 130 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 4 - 2+00 | 131 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 5 - 2+00 | 132 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 6 - 2+40 | 133 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 7 - 2+80 | 134 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 8 - 3+14.595 | 135 | 2373 | 56 | 25 | 56 | 5 | 56 | 25 | 56 | 25 | 56 |
| | 9 - 5+88.184 | 136 | | | | | | | | | | |
| Gorgas Ave. from SB Doyle to Richardso | 1 - 0+00 | 137 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+42 | 138 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+42 | 139 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 1+00 | 140 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 1+50 | 141 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 1+50 | 142 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 2+12.133 | 143 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - EC 0+74.1 | 144 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 145 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 146 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 147 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 148 | 385 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**INPUT: TRAFFIC FOR LAeq1h Volumes** **Doyle Drive - 204235**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 13 - Intersect | 149 | | | | | | | | | | |
| NB Girard Rd. from Marina to Lincoln | 1 - 0+00 | 150 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 0+65 | 151 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 2+80 | 152 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 4+09.995 | 153 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+40 | 154 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 4+80 | 155 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 5+20 | 156 | 111 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - 7+20 | 157 | | | | | | | | | | |
| SB Girard Rd. from Lincoln to Marina | 1 - 7+20 | 158 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 5+20 | 159 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 4+80 | 160 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 - 4+40 | 161 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 - 4+09.995 | 162 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 - 2+80 | 163 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 - 0+65 | 164 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 - Palace Dr | 239 | 79 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 - Mason/M | 165 | | | | | | | | | | |
| Halleck St. from Lincon to Mason | 1 - 3+65 | 166 | 42 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 - 2+77.948 | 167 | 42 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 - 0+00 | 168 | | | | | | | | | | |
| Lincoln from McDowell to Letterman | 1 | 180 | 98 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 181 | 98 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 3 | 182 | 98 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 4 | 183 | 187 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 5 | 184 | 187 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 6 | 185 | 187 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 7 | 186 | 187 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 8 | 187 | 187 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 9 | 188 | 187 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 10 | 189 | 190 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 11 | 190 | 54 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 12 | 191 | 54 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 13 | 192 | 54 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 14 | 193 | 54 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 15 | 194 | 54 | 32 | 1 | 32 | 0 | 0 | 1 | 32 | 1 | 32 |
| | 16 | 195 | 251 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 17 | 196 | 251 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 18 | 197 | 715 | 32 | 7 | 32 | 0 | 0 | 7 | 32 | 7 | 32 |
| | 19 | 198 | 782 | 32 | 8 | 32 | 0 | 0 | 8 | 32 | 8 | 32 |
| | 20 | 199 | | | | | | | | | | |
| Mason St. from Crissy Ave. to Marina | 1 | 200 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 201 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 202 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 203 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 204 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 205 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 206 | 15 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 207 | 15 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 208 | 17 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 209 | 1495 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 11 | 210 | 1495 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 211 | | | | | | | | | | |
| Baker St. from Marina to Richardson | 1 | 212 | 83 | 32 | 1 | 32 | 0 | 0 | 0 | 0 | 1 | 32 |
| | 2 | 213 | 3 | 32 | 1 | 32 | 0 | 0 | 0 | 0 | 1 | 32 |
| | 3 | 214 | 8 | 32 | 1 | 32 | 0 | 0 | 0 | 0 | 1 | 32 |
| | 4 | 215 | 8 | 32 | 1 | 32 | 0 | 0 | 0 | 0 | 1 | 32 |
| | 5 | 216 | | | | | | | | | | |
| Palace Drive from Richardson to Marina | 1 | 217 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2 | 218 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 219 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 220 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 221 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 222 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 223 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 224 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 225 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 10 | 226 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 11 | 227 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12 | 228 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 13 | 229 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 14 | 230 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 15 | 231 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 16 | 232 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 17 | 233 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 18 | 234 | 35 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 19 | 235 | | | | | | | | | | |
| Montgomery St. from Sherian to Lincoln | 1 | 236 | 110 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 2 | 237 | 110 | 32 | 2 | 32 | 0 | 0 | 2 | 32 | 2 | 32 |
| | 3 | 238 | | | | | | | | | | |
| NB Park Presidio to EB Doyle Drive | 1 | 240 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 2 | 241 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 3 | 242 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 4 | 243 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 5 | 244 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 6 | 245 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 7 | 246 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 8 | 248 | 602 | 56 | 4 | 56 | 6 | 56 | 6 | 56 | 4 | 56 |
| | 8 | 247 | | | | | | | | | | |

Environmental Science Associates, Inc
Win Lindeman

1 September 2004
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Park Presidio Option B Ramp 2030 AM

| Receiver Name | No. | #DUs | Coordinates (ground) X | Y | Z | Height above Ground | Input Sound Levels and Criteria: Existing LAeq1h | Impact Criteria LAeq1h | Impact Criteria Sub'l | NR Goal | Active in Calc. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | m | dBA | dBA | dB | dB | |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 1,098.0 | -130.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 1,133.0 | -91.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 3 Buildings 1187/1188 | 3 | 0 | 1,148.0 | 150.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 4 Building 1182 | 4 | 0 | 1,087.0 | 125.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 5 Buildings 1183/1186 | 5 | 0 | 1,020.0 | 116.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 6 Buildings 1184/1185 | 6 | 0 | 893.0 | 103.0 | 2.40 | 1.50 | 81.00 | 71 | 12.0 | 10.0 | Y |
| 7 Building 603/Crissy Center | 7 | 0 | 571.0 | 88.0 | 3.00 | 1.50 | 72.00 | 71 | 12.0 | 10.0 | Y |
| 8 PX Building | 8 | 0 | 500.0 | 33.0 | 3.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 9 Post Commissary/Sports Basement | 9 | 0 | 240.0 | -54.0 | 4.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 10 Battery Blaney | 10 | 0 | -30.0 | -96.0 | 24.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 11 Battery Slaughter | 11 | 0 | -104.0 | -98.0 | 28.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 12 Battery Sherwood | 12 | 0 | -223.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 13 Battery Baldwin | 13 | 0 | -297.0 | -32.0 | 21.00 | 1.50 | 68.00 | 66 | 12.0 | 10.0 | Y |
| 14 Building 644 | 14 | 0 | -260.0 | 16.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 15 Building 649 | 15 | 0 | -364.0 | 4.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 16 Building 650/Stilwell Hall | 16 | 0 | -437.0 | 11.0 | 5.00 | 1.50 | 70.00 | 66 | 12.0 | 10.0 | Y |
| 17 1253 Armistead Road | 17 | 1 | -785.0 | 235.0 | 45.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 18 Home on Armistead Road | 18 | 1 | -939.0 | 296.0 | 57.00 | 1.50 | 66.00 | 66 | 12.0 | 10.0 | Y |
| 19 Building 969 | 19 | 0 | -887.0 | 410.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 20 Building 968 | 20 | 0 | -978.0 | 427.0 | 38.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 21 Building 967 | 21 | 0 | -1,040.0 | 427.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 22 Building 966 | 22 | 0 | -1,044.0 | 433.0 | 46.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 Building 964 | 23 | 0 | -1,016.0 | 446.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 24 Building 963 | 24 | 0 | -1,002.0 | 452.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 25 Building 962 | 25 | 0 | -987.0 | 455.0 | 46.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 26 Unknown Building | 26 | 0 | -1,153.0 | 421.0 | 58.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 27 Building 1299/Log Cabin | 27 | 0 | -1,003.0 | 177.0 | 64.00 | 1.50 | 63.00 | 66 | 12.0 | 10.0 | Y |
| 28 Building 1387 | 28 | 0 | -1,105.0 | 268.0 | 65.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 29 Building 1298 Storey Ave. | 29 | 2 | -977.0 | 123.0 | 63.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 30 Building 1297 Storey Ave. | 30 | 2 | -950.0 | 123.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 31 Building 1295 Storey Ave. | 31 | 2 | -919.0 | 119.0 | 62.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 32 Building 1294 Storey Ave. | 32 | 2 | -900.0 | 116.0 | 59.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 33 Building 1293 Storey Ave. | 33 | 2 | -865.0 | 102.0 | 57.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 34 Building 1291 Storey Ave. | 34 | 2 | -841.0 | 92.0 | 56.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 35 Building 1290 Storey Ave. | 35 | 2 | -811.0 | 78.0 | 55.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 36 Building 1289 Storey Ave. | 36 | 2 | -804.0 | 63.0 | 53.00 | 1.50 | 66.50 | 66 | 12.0 | 10.0 | Y |
| 37 Building 1263 Storey Ave. | 37 | 2 | -722.0 | -152.0 | 61.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 38 Building 682/Cross Cultural Center | 38 | 0 | -650.0 | -254.0 | 38.00 | 1.50 | 65.50 | 66 | 12.0 | 10.0 | Y |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | -556.0 | -70.0 | 21.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 40 Building 662/Cavalry Stable | 40 | 0 | -508.0 | -97.0 | 20.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 41 Building 663/Cavalry Stable | 41 | 0 | -488.0 | -140.0 | 18.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 42 Building 667/Cavalry Stable | 42 | 0 | -384.0 | -122.0 | 23.00 | 1.50 | 64.00 | 71 | 12.0 | 10.0 | Y |
| 43 National Cemetery Grave Site | 43 | 0 | -23.0 | -163.0 | 29.00 | 1.50 | 69.00 | 66 | 12.0 | 10.0 | Y |
| 44 Building 129 | 44 | 1 | 104.0 | -168.0 | 21.50 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 45 Building 122 | 45 | 0 | 148.0 | -157.0 | 21.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 46 Building 108 | 46 | 0 | 225.0 | -136.0 | 17.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 47 Building 107 | 47 | 0 | 230.0 | -120.0 | 16.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 48 Building 104 | 48 | 0 | 252.0 | -143.0 | 16.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 49 Building 105 | 49 | 0 | 285.0 | -93.0 | 14.00 | 1.50 | 74.00 | 71 | 12.0 | 10.0 | Y |
| 50 Building 106 | 50 | 0 | 328.0 | -78.0 | 12.00 | 1.50 | 76.00 | 71 | 12.0 | 10.0 | Y |
| 51 Building 211 | 51 | 0 | 433.0 | -52.0 | 12.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 52 Building 204 | 52 | 0 | 522.0 | -17.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 53 Building 210 | 53 | 0 | 320.0 | -97.0 | 13.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 54 Building 201 | 54 | 0 | 623.0 | 8.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 55 Building 220 | 55 | 0 | 590.0 | -104.0 | 7.60 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 56 Building 231 | 56 | 0 | 650.0 | -5.0 | 6.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 57 Building 228 | 57 | 0 | 643.0 | -31.0 | 6.50 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |

**INPUT: RECEIVERS** **Doyle Drive - 204235**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 Building 229 | 58 | 0 | 637.0 | -60.0 | 7.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 59 Building 223 | 59 | 0 | 636.0 | -108.0 | 8.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 60 Building 230 | 60 | 0 | 740.0 | 6.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 706.0 | -77.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 698.0 | -113.0 | 6.00 | 1.50 | 57.00 | 66 | 12.0 | 10.0 | Y |
| 63 Building 1063 | 63 | 0 | 842.0 | -60.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 64 Building 1062 | 64 | 0 | 852.0 | -100.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 65 Building 1060 | 65 | 0 | 898.0 | -127.0 | 2.00 | 1.50 | 68.50 | 71 | 12.0 | 10.0 | Y |
| 66 Building 1167 | 66 | 0 | 900.0 | -18.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 67 Building 1163 | 67 | 0 | 892.0 | -26.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 68 Building 1169 | 68 | 0 | 955.0 | -58.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 69 Building 1162 | 69 | 0 | 943.0 | -73.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 70 Building 1170 | 70 | 0 | 1,035.0 | -132.0 | 2.00 | 1.50 | 68.00 | 71 | 12.0 | 10.0 | Y |
| 71 Building 1161 | 71 | 0 | 1,035.0 | -161.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 72 Building 1160 | 72 | 0 | 1,066.0 | -166.0 | 2.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 73 Building 1152/YMCA | 73 | 0 | 1,100.0 | -200.0 | 2.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 74 Building 1151/YMCA Pool | 74 | 0 | 1,140.0 | -235.0 | 4.00 | 1.50 | 0.00 | 66 | 12.0 | 10.0 | Y |
| 75 Building 1004 | 75 | 0 | 965.0 | -246.0 | 4.00 | 1.50 | 0.00 | 71 | 12.0 | 10.0 | Y |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 1,216.0 | -270.0 | 4.00 | 1.50 | 76.50 | 66 | 12.0 | 10.0 | Y |

Environmental Science Associates, Inc.
Win Lindeman

1 September 2004
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Doyle Drive - 204235
RUN: Park Presidio Option B Ramp 2030 AM
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 20 deg C, 50% RH

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

| Receiver Name | No. | #DUs | Existing LAeq1h | No Barrier LAeq1h Calculated | Crit'n | Increase over existing Calculated | Crit'n Sub'l Inc | Type Impact | With Barrier Calculated LAeq1h | Noise Reduction Calculated | Goal | Calculated minus Goal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | dBA | dBA | dBA | dB | dB | | dBA | dB | dB | dB |
| 1 Palace of Fine Arts near Richardson | 1 | 0 | 0.0 | 69.7 | 66 | 69.7 | 12 | Snd Lvl | 69.7 | 0.0 | 10 | -10.0 |
| 2 Palace of Fine Arts near Girard | 2 | 0 | 0.0 | 62.0 | 66 | 62.0 | 12 | --- | 62.0 | 0.0 | 10 | -10.0 |
| 3 Buildings 1187/1188 | 3 | 0 | 81.0 | 57.3 | 71 | -23.7 | 12 | --- | 57.3 | 0.0 | 10 | -10.0 |
| 4 Building 1182 | 4 | 0 | 81.0 | 56.1 | 71 | -24.9 | 12 | --- | 56.1 | 0.0 | 10 | -10.0 |
| 5 Buildings 1183/1186 | 5 | 0 | 81.0 | 57.0 | 71 | -24.0 | 12 | --- | 57.0 | 0.0 | 10 | -10.0 |
| 6 Buildings 1184/1185 | 6 | 0 | 81.0 | 59.5 | 71 | -21.5 | 12 | --- | 59.5 | 0.0 | 10 | -10.0 |
| 7 Building 603/Crissy Center | 7 | 0 | 72.0 | 56.3 | 71 | -15.7 | 12 | --- | 56.3 | 0.0 | 10 | -10.0 |
| 8 PX Building | 8 | 0 | 0.0 | 59.2 | 71 | 59.2 | 12 | --- | 59.2 | 0.0 | 10 | -10.0 |
| 9 Post Commissary/Sports Basement | 9 | 0 | 69.0 | 69.8 | 66 | 0.8 | 12 | Snd Lvl | 69.8 | 0.0 | 10 | -10.0 |
| 10 Battery Blaney | 10 | 0 | 68.0 | 69.4 | 66 | 1.4 | 12 | Snd Lvl | 69.4 | 0.0 | 10 | -10.0 |
| 11 Battery Slaughter | 11 | 0 | 68.0 | 65.4 | 66 | -2.6 | 12 | --- | 65.4 | 0.0 | 10 | -10.0 |
| 12 Battery Sherwood | 12 | 0 | 68.0 | 65.0 | 66 | -3.0 | 12 | --- | 65.0 | 0.0 | 10 | -10.0 |
| 13 Battery Baldwin | 13 | 0 | 68.0 | 67.6 | 66 | -0.4 | 12 | Snd Lvl | 67.6 | 0.0 | 10 | -10.0 |
| 14 Building 644 | 14 | 0 | 0.0 | 60.1 | 71 | 60.1 | 12 | --- | 60.1 | 0.0 | 10 | -10.0 |
| 15 Building 649 | 15 | 0 | 0.0 | 60.7 | 66 | 60.7 | 12 | --- | 60.7 | 0.0 | 10 | -10.0 |
| 16 Building 650/Stilwell Hall | 16 | 0 | 70.0 | 59.3 | 66 | -10.7 | 12 | --- | 59.3 | 0.0 | 10 | -10.0 |
| 17 1253 Armistead Road | 17 | 1 | 66.0 | 64.5 | 66 | -1.5 | 12 | --- | 64.5 | 0.0 | 10 | -10.0 |
| 18 Home on Armistead Road | 18 | 1 | 66.0 | 76.9 | 66 | 10.9 | 12 | Snd Lvl | 76.9 | 0.0 | 10 | -10.0 |
| 19 Building 969 | 19 | 0 | 0.0 | 58.4 | 71 | 58.4 | 12 | --- | 58.4 | 0.0 | 10 | -10.0 |
| 20 Building 968 | 20 | 0 | 0.0 | 60.1 | 71 | 60.1 | 12 | --- | 60.1 | 0.0 | 10 | -10.0 |
| 21 Building 967 | 21 | 0 | 0.0 | 65.4 | 71 | 65.4 | 12 | --- | 65.4 | 0.0 | 10 | -10.0 |
| 22 Building 966 | 22 | 0 | 0.0 | 65.4 | 71 | 65.4 | 12 | --- | 65.4 | 0.0 | 10 | -10.0 |
| 23 Building 964 | 23 | 0 | 0.0 | 63.4 | 66 | 63.4 | 12 | --- | 63.4 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 Building 963 | 24 | 0 | 0.0 | 62.8 | 66 | 62.8 | 12 | — | 62.8 | 0.0 | 10 | -10.0 |
| 25 Building 962 | 25 | 0 | 0.0 | 62.1 | 66 | 62.1 | 12 | — | 62.1 | 0.0 | 10 | -10.0 |
| 26 Unknown Building | 26 | 0 | 0.0 | 75.0 | 71 | 75.0 | 12 | Snd Lvl | 75.0 | 0.0 | 10 | -10.0 |
| 27 Building 1299/Log Cabin | 27 | 0 | 63.0 | 68.9 | 66 | 5.9 | 12 | Snd Lvl | 68.9 | 0.0 | 10 | -10.0 |
| 28 Building 1387 | 28 | 0 | 0.0 | 67.4 | 71 | 67.4 | 12 | — | 67.4 | 0.0 | 10 | -10.0 |
| 29 Building 1298 Storey Ave. | 29 | 2 | 66.5 | 66.7 | 66 | 0.2 | 12 | Snd Lvl | 66.7 | 0.0 | 10 | -10.0 |
| 30 Building 1297 Storey Ave. | 30 | 2 | 66.5 | 68.7 | 66 | 2.2 | 12 | Snd Lvl | 68.7 | 0.0 | 10 | -10.0 |
| 31 Building 1295 Storey Ave. | 31 | 2 | 66.5 | 70.8 | 66 | 4.3 | 12 | Snd Lvl | 70.8 | 0.0 | 10 | -10.0 |
| 32 Building 1294 Storey Ave. | 32 | 2 | 66.5 | 71.4 | 66 | 4.9 | 12 | Snd Lvl | 71.4 | 0.0 | 10 | -10.0 |
| 33 Building 1293 Storey Ave. | 33 | 2 | 66.5 | 72.4 | 66 | 5.9 | 12 | Snd Lvl | 72.4 | 0.0 | 10 | -10.0 |
| 34 Building 1291 Storey Ave. | 34 | 2 | 66.5 | 73.1 | 66 | 6.6 | 12 | Snd Lvl | 73.1 | 0.0 | 10 | -10.0 |
| 35 Building 1290 Storey Ave. | 35 | 2 | 66.5 | 73.6 | 66 | 7.1 | 12 | Snd Lvl | 73.6 | 0.0 | 10 | -10.0 |
| 36 Building 1289 Storey Ave. | 36 | 2 | 66.5 | 72.8 | 66 | 6.3 | 12 | Snd Lvl | 72.8 | 0.0 | 10 | -10.0 |
| 37 Building 1263 Storey Ave. | 37 | 2 | 0.0 | 69.1 | 66 | 69.1 | 12 | Snd Lvl | 69.1 | 0.0 | 10 | -10.0 |
| 38 Building 682/Cross Cultural Center | 38 | 0 | 65.5 | 65.2 | 66 | -0.3 | 12 | — | 65.2 | 0.0 | 10 | -10.0 |
| 39 Building 661/Cavalry Stable Pen | 39 | 0 | 64.0 | 59.5 | 71 | -4.5 | 12 | — | 59.5 | 0.0 | 10 | -10.0 |
| 40 Building 662/Cavalry Stable | 40 | 0 | 64.0 | 62.2 | 71 | -1.8 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 41 Building 663/Cavalry Stable | 41 | 0 | 64.0 | 63.2 | 71 | -0.8 | 12 | — | 63.2 | 0.0 | 10 | -10.0 |
| 42 Building 667/Cavalry Stable | 42 | 0 | 64.0 | 67.1 | 71 | 3.1 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 43 National Cemetery Grave Site | 43 | 0 | 69.0 | 63.1 | 66 | -5.9 | 12 | — | 63.1 | 0.0 | 10 | -10.0 |
| 44 Building 129 | 44 | 1 | 0.0 | 56.9 | 66 | 56.9 | 12 | — | 56.9 | 0.0 | 10 | -10.0 |
| 45 Building 122 | 45 | 0 | 0.0 | 61.9 | 71 | 61.9 | 12 | — | 61.9 | 0.0 | 10 | -10.0 |
| 46 Building 108 | 46 | 0 | 0.0 | 61.9 | 71 | 61.9 | 12 | — | 61.9 | 0.0 | 10 | -10.0 |
| 47 Building 107 | 47 | 0 | 0.0 | 67.1 | 71 | 67.1 | 12 | — | 67.1 | 0.0 | 10 | -10.0 |
| 48 Building 104 | 48 | 0 | 74.0 | 58.4 | 71 | -15.6 | 12 | — | 58.4 | 0.0 | 10 | -10.0 |
| 49 Building 105 | 49 | 0 | 74.0 | 73.1 | 71 | -0.9 | 12 | Snd Lvl | 73.1 | 0.0 | 10 | -10.0 |
| 50 Building 106 | 50 | 0 | 76.0 | 71.7 | 71 | -4.3 | 12 | Snd Lvl | 71.7 | 0.0 | 10 | -10.0 |
| 51 Building 211 | 51 | 0 | 0.0 | 65.4 | 71 | 65.4 | 12 | — | 65.4 | 0.0 | 10 | -10.0 |
| 52 Building 204 | 52 | 0 | 0.0 | 59.1 | 71 | 59.1 | 12 | — | 59.1 | 0.0 | 10 | -10.0 |
| 53 Building 210 | 53 | 0 | 0.0 | 62.3 | 71 | 62.3 | 12 | — | 62.3 | 0.0 | 10 | -10.0 |
| 54 Building 201 | 54 | 0 | 0.0 | 57.6 | 71 | 57.6 | 12 | — | 57.6 | 0.0 | 10 | -10.0 |
| 55 Building 220 | 55 | 0 | 0.0 | 53.5 | 71 | 53.5 | 12 | — | 53.5 | 0.0 | 10 | -10.0 |
| 56 Building 231 | 56 | 0 | 0.0 | 66.0 | 71 | 66.0 | 12 | — | 66.0 | 0.0 | 10 | -10.0 |
| 57 Building 228 | 57 | 0 | 0.0 | 62.2 | 71 | 62.2 | 12 | — | 62.2 | 0.0 | 10 | -10.0 |
| 58 Building 229 | 58 | 0 | 0.0 | 59.3 | 71 | 59.3 | 12 | — | 59.3 | 0.0 | 10 | -10.0 |
| 59 Building 223 | 59 | 0 | 0.0 | 57.3 | 71 | 57.3 | 12 | — | 57.3 | 0.0 | 10 | -10.0 |
| 60 Building 230 | 60 | 0 | 0.0 | 71.9 | 71 | 71.9 | 12 | Snd Lvl | 71.9 | 0.0 | 10 | -10.0 |
| 61 Building 1029/Swords to Plowshares | 61 | 100 | 57.0 | 60.1 | 66 | 3.1 | 12 | — | 60.1 | 0.0 | 10 | -10.0 |
| 62 Building 1030/Swords to Plowshares | 62 | 100 | 57.0 | 57.6 | 66 | 0.6 | 12 | — | 57.6 | 0.0 | 10 | -10.0 |
| 63 Building 1063 | 63 | 0 | 68.5 | 62.8 | 71 | -5.7 | 12 | — | 62.8 | 0.0 | 10 | -10.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 64 Building 1062 | 64 | 0 | 68.5 | 59.6 | 71 | -8.9 | 12 | --- | 59.6 | 0.0 | 10 | -10.0 |
| 65 Building 1060 | 65 | 0 | 68.5 | 60.0 | 71 | -8.5 | 12 | --- | 60.0 | 0.0 | 10 | -10.0 |
| 66 Building 1167 | 66 | 0 | 68.0 | 65.1 | 71 | -2.9 | 12 | --- | 65.1 | 0.0 | 10 | -10.0 |
| 67 Building 1163 | 67 | 0 | 0.0 | 65.2 | 71 | 65.2 | 12 | --- | 65.2 | 0.0 | 10 | -10.0 |
| 68 Building 1169 | 68 | 0 | 68.0 | 64.8 | 71 | -3.2 | 12 | --- | 64.8 | 0.0 | 10 | -10.0 |
| 69 Building 1162 | 69 | 0 | 0.0 | 63.4 | 71 | 63.4 | 12 | --- | 63.4 | 0.0 | 10 | -10.0 |
| 70 Building 1170 | 70 | 0 | 68.0 | 71.8 | 71 | 3.8 | 12 | Snd Lvl | 71.8 | 0.0 | 10 | -10.0 |
| 71 Building 1161 | 71 | 0 | 0.0 | 67.4 | 71 | 67.4 | 12 | --- | 67.4 | 0.0 | 10 | -10.0 |
| 72 Building 1160 | 72 | 0 | 0.0 | 71.9 | 71 | 71.9 | 12 | Snd Lvl | 71.9 | 0.0 | 10 | -10.0 |
| 73 Building 1152/YMCA | 73 | 0 | 0.0 | 71.5 | 66 | 71.5 | 12 | Snd Lvl | 71.5 | 0.0 | 10 | -10.0 |
| 74 Building 1151/YMCA Pool | 74 | 0 | 0.0 | 72.9 | 66 | 72.9 | 12 | Snd Lvl | 72.9 | 0.0 | 10 | -10.0 |
| 75 Building 1004 | 75 | 0 | 0.0 | 57.1 | 71 | 57.1 | 12 | --- | 57.1 | 0.0 | 10 | -10.0 |
| 76 Residences at 3234 Lyon St. | 76 | 8 | 76.5 | 74.3 | 66 | -2.2 | 12 | Snd Lvl | 74.3 | 0.0 | 10 | -10.0 |

| Dwelling Units | # DUs | Noise Reduction | | |
|---|---|---|---|---|
| | | Min | Avg | Max |
| | | dB | dB | dB |
| All Selected | 229 | 0.0 | 0.0 | 0.0 |
| All Impacted | 27 | 0.0 | 0.0 | 0.0 |
| All that meet NR Goal | 0 | 0.0 | 0.0 | 0.0 |

# APPENDIX E

# DETAILED RECEPTOR LOCATION INFORMATION

## RECEPTOR LOCATIONS

| ID # | Name of Location | Detailed Description of Prediction Location |
|---|---|---|
| 1 | Palace of Fine Arts Building | 19 meters east of NB Richardson and 165 meters north of Gorgas Avenue at the back edge (west side) of the building. |
| 2 | Palace of Fine Arts Building | 16 meters south of EB Doyle Drive at the NW corner of the back edge of the building. |
| 3 | Buildings 1187/1188 Mason Warehouses | 9 meters north of WB Doyle Drive at the SE corner of the building. |
| 4 | Building 1182 Mason Warehouses | 8 meters north of WB Doyle Drive at the SE corner of the building. |
| 5 | Building 1183/1186 Mason Warehouses | 10 meters north of WB Doyle Drive at the SE corner of the building. |
| 6 | Building 1184/1185 Mason Warehouse | 11 meters north of WB Doyle Drive at the SW corner of the building. |
| 7 | Building 603/Crissy Interpretative Center | 40 meters north of the Richardson WB on-ramp to Doyle Drive at the SE corner of the building. |
| 8 | PX Building | 19 meters north of WB Doyle Drive at the center of the south side of the building. |
| 9 | Building 610/Post Commissary Sports Basement | 14 meters north of WB Doyle Drive at the SE corner of the building. |
| 10 | Battery Blaney | 20 meters north of WB Doyle Drive at the southern edge of the site. |
| 11 | Battery Slaughter | 5 meters north of WB Doyle Drive at the southern edge of the site. |
| 12 | Battery Sherwood | 21 meters north of WB Doyle Drive at the southern edge of the site. |
| 13 | Battery Baldwin | 8 meters north of WB Doyle Drive at the southern edge of the site. |
| 14 | Building 644/Unit Motor Pool | 61 meters north of WB Doyle Drive at the SE corner of the building. |
| 15 | Building 649/Army Reserves | 20 meters north of WB Doyle Drive at the SW corner of the building. |
| 16 | Building 650/Stilwell Hall | 5 meters north of WB Doyle Drive at the SE corner of the building. |
| 17 | Landrum Court/Officers Quarters – residential | 91 meters north of WB Doyle Drive at the SE corner of the building. |
| 18 | 1253 Armistead Road/Officers Quarters – residential | 100 meters north of WB Doyle Drive at the SW corner of the building. |
| 19 | Building 969/Garage | 142 meters north of WB Doyle Drive at the SE corner of the building. |

| ID # | Name of Location | Detailed Description of Prediction Location |
|---|---|---|
| 20 | Building 968/Garage | 82 meters north of WB Doyle Drive at the SE corner of the building. |
| 21 | Building 967/Film Vault | 31meters north of WB Doyle Drive at the SW corner of the building. |
| 22 | Building 966/Radio Receiver Station | 32 meters north of WB Doyle Drive at the SE corner of the building. |
| 23 | Building 964/Officer Family Housing (pilots) | 63 meters north of WB Doyle Drive at the SE corner of the building. |
| 24 | Building 963/Officer Family Housing (pilots) | 75 meters north of WB Doyle Drive at the SE corner of the building. |
| 25 | Building 962/Officer Family Housing (pilots) | 91 meters north of WB Doyle Drive at the SE corner of the building. |
| 26 | Building 1659/Data Center | 25 meters south of EB Doyle Drive at the NE corner of the building. |
| 27 | Log Cabin Picnic Area | 61 meters south of EB Doyle Drive at the NE corner of the area. |
| 28 | Ft. Scott Chapel | 115 meters south of EB Doyle Drive at the NE corner of the building. |
| 29 | 1298 Storey Avenue/Enlisted Family Housing | 86 meters south of EB Doyle Drive at the NE corner of the building. |
| 30 | 1297 Storey Avenue/Enlisted Family Housing | 67 meters south of EB Doyle Drive at the NE corner of the building. |
| 31 | 1295 Storey Avenue/Enlisted Family Housing | 51 meters south of EB Doyle Drive at the NE corner of the building. |
| 32 | 1294 Storey Avenue/Enlisted Family Housing | 44 meters south of EB Doyle Drive at the NW corner of the building. |
| 33 | 1293 Storey Avenue/Enlisted Family Housing | 37 meters south of EB Doyle Drive at the NE corner of the building. |
| 34 | 1291 Storey Avenue/Enlisted Family Housing | 33 meters south of EB Doyle Drive at the NE corner of the building. |
| 35 | 1290 Storey Avenue/Enlisted Family Housing | 33 meters south of EB Doyle Drive at the NW corner of the building. |
| 36 | 1289 Storey Avenue/Enlisted Family Housing | 43 meters south of EB Doyle Drive at the NW corner of the building. |
| 37 | 1263 Storey Avenue/Enlisted Family Housing | 30 meters west of SB Park Presidio Blvd. at the SE corner of the |
| 38 | Building 682/Cross Cultural Environmental Center | 33 meters east of SB Park Presidio Blvd. at the SW corner of the building |
| 39 | Building 661/Cavalry Stables | 89 meters south of EB Doyle Drive at the NW corner of the pens. |

| ID # | Name of Location | Detailed Description of Prediction Location |
|---|---|---|
| 40 | Building 662/Cavalry Stables | 103 meters south of EB Doyle Drive at the north side of the building. |
| 41 | Building 663/Cavalry Stables | 136 meters south of EB Doyle Drive at the NE corner of the building. |
| 42 | Building 667/Cavalry Stables | 87 meters south of EB Doyle Drive at the NE corner of the building. |
| 43 | National Cemetery Grave Site | 27 meters south of EB Doyle Drive at a gravesite in the National Cemetery next to the iron fence near the corner of Lincoln and Sheridan Avenue. |
| 44 | Building 129/Enlisted Family Quarters | 19 meters south of EB Doyle Drive at the NW corner of the building. |
| 45 | Building 122/Gymnasium (Main Post Community Center) | 20 meters south of EB Doyle Drive at the NW corner of the building. |
| 46 | Building 108/Storage Electrical Shop | 23 meters south of EB Doyle Drive at the NW corner of the building. |
| 47 | Building 107/Switching Station | 11 meters south of EB Doyle Drive at the NW corner of the building. |
| 48 | Building 104/Barracks and Mess Hall | 57 meters south of EB Doyle Drive at the NW corner of the building. |
| 49 | Building 105/Barracks and Mess Hall | 19 meters south of EB Doyle Drive at the NW corner of the building. |
| 50 | Building 106/Band Barracks Union Pacific offices | 13 meters south of EB Doyle Drive at the NW corner of the building. |
| 51 | Building 211 (former Burger King) | 23 meters south of EB Doyle Drive at the NW corner of the building. |
| 52 | Building 204/Exchange Store (Presidio Thrift Shop) | 17 meters south of EB Doyle Drive at the NW corner of the building. |
| 53 | Building 210/Guard House | 62 meters south of EB Doyle Drive at the NW corner of the building. |
| 54 | Building 201/Exchange Store | 9 meters south of EB Doyle Drive at the NW corner of the building. |
| 55 | Building 220/Bakers and Cooks School and Barracks | 118 meters south of EB Doyle Drive at the NW corner of the building. |
| 56 | Building 231/Exchange Gas Service Station | 31 meters south of EB Doyle Drive at the NW corner of the building. |
| 57 | Building 228/Bakery | 57 meters south of EB Doyle Drive at the NW corner of the building. |
| 58 | Building 227/Warehouse | 85 meters south of EB Doyle Drive at the NW corner of the building. |
| 59 | Building 223/Warehouse | 133 meters south of EB Doyle Drive at the NE corner of the building. |
| 60 | Building 230/Warehouse | 20 meters south of EB Doyle Drive at the NW corner of the building. |

| ID # | Name of Location | Detailed Description of Prediction Location |
|---|---|---|
| 61 | Building 1029/Swords to Plowshares | 120 meters south of EB Doyle Drive at the NW corner of the building. |
| 62 | Building 1030/Swords to Plowshares | 153 meters south of EB Doyle Drive at the NW corner of the building. |
| 63 | Building 1063/Medical Supply Warehouse | 117 meters south of EB Doyle Drive at the NW corner of the building. |
| 64 | Building 1062/Quartermaster Shop | 160 meters south of EB Doyle Drive at the NW corner of the building. |
| 65 | Building 1060/Medical Supply Warehouse | 195 meters south of EB Doyle Drive at the NW corner of the building. |
| 66 | Building 1167/Gorgas Warehouse | 80 meters south of EB Doyle Drive at the NW corner of the building. |
| 67 | Building 1163/Gorgas Warehouse | 94 meters south of EB Doyle Drive at the NW corner of the building. |
| 68 | Building 1169/Gorgas Warehouse | 135 meters south of EB Doyle Drive at the NW corner of the building. |
| 69 | Building 1162/Gorgas Warehouse | 146 meters south of EB Doyle Drive at the NW corner of the building. |
| 70 | Building 1170/Gorgas Warehouse | 220 meters south of EB Doyle Drive and 15 meters west of Richardson Avenue at the east center of the building. |
| 71 | Building 1161/Gorgas Warehouse | 248 meters south of EB Doyle Drive and 28 meters west of Richardson Avenue at the east center of the building. |
| 72 | Building 1160/Gorgas Warehouse | 247 meters south of EB Doyle Drive and 9 meters west of Richardson Avenue at the NE corner of the building. |
| 73 | Building 1152/Presidio YMCA Gym | 270 meters south of EB Doyle Drive and 6 meters west of Richardson Avenue at the NE corner of the building. |
| 74 | Building 1151/Presidio YMCA Warehouse | 345 meters south of EB Doyle Drive and 4 meters west of Richardson Avenue at the east center of the building. |
| 75 | Building 1004/Officers Quarters | 137 meters west of Richardson Avenue and at the corner of Edie Road and O'Reilly Avenue at the SE corner of the building. |
| 76 | 3234 Lyon Street | 3 meters east of Lyon and 5 meters east of Richardson at the center of the building. |