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**2<sup>nd</sup> ADDENDUM TO THE SIERRA VISTA SPECIFIC PLAN  
ENVIRONMENTAL IMPACT REPORT (SCH #2008032115, ADOPTED ON  
MAY 5, 2010)**

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<b>Project Title/File Number:</b>	SVSP PCL JM-1, JM-20, JM-21, FD-6, FD-7, FD-24 – JMC TM#2 Project; File# PL17-0204
<b>Project Location:</b>	2100 Sierra Glen Drive, Roseville, Placer County, CA; The project includes several parcels within the Sierra Vista Specific Plan, which are generally located south of Pleasant Grove Boulevard, east of Market Street, west of Fiddymont Road, and north of Baseline Road; Roseville, CA 95747; Placer County
<b>Project Description:</b>	The project includes a: 1.) General Plan Amendment to change the land use designation of Parcel JM-1 from Low Density Residential (LDR) to Medium Density Residential (MDR) and Parcel JM-21 from MDR to LDR; 2.) Specific Plan Amendment to reallocate acreage and units consistent with the land use changes; 3.) Development Agreement Amendments; 4.) Tentative Subdivision Maps to create a total of 236 single-family lots in Parcels FD-6, FD-7, and FD-24; 5.) Modification to a Small Lot Tentative Subdivision Map for Parcels JM-1, JM-20, and JM-21; 6.) Modification to a Large Lot Tentative Subdivision Map for FD-24 and a portion of JM-20; and 7.) Design Review Permit for a Residential Subdivision to establish design and development standards for the subdivisions.
<b>Project Applicant:</b>	Steve Schnable, Mourier Investments, LLC
<b>Property Owner:</b>	Steve Schnable, Mourier Investments, LLC
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An Addendum to a previously certified environmental impact report (EIR) may be prepared for a project if only minor technical changes or additions are necessary or none of the conditions calling for the preparation of a subsequent EIR or negative declaration have occurred (California Environmental Quality Act Guidelines [CEQA] Section 15164). Consistent with CEQA Guidelines Section 15164, the below analysis has been prepared in order to demonstrate that none of the conditions described in Section 15162 of the CEQA Guidelines calling for preparation of a subsequent EIR have occurred and that only minor technical changes or additions are necessary in order to deem the adopted EIR adequate to describe the impacts of the proposed project. CEQA Guidelines Section 15164 also states that an addendum need not be circulated for public review, but can be included in or attached to the final EIR for consideration by the hearing body. This Addendum focuses only on those aspects of the project or its impacts which require additional discussion.

# Table of Contents

**Project Description** ..... 3

**Purpose and Scope of Addendum** ..... 5

**Initial Study Checklist**

- I. Aesthetics ..... 8
- II. Agricultural & Forestry Resources ..... 9
- III. Air Quality ..... 10
- IV. Biological Resources ..... 11
- V. Cultural Resources ..... 13
- VI. Geology and Soils ..... 14
- VII. Greenhouse Gases ..... 15
- VIII. Hazards and Hazardous Materials ..... 16
- IX. Hydrology and Water Quality ..... 18
- X. Land Use and Planning ..... 21
- XI. Mineral Resources ..... 22
- XII. Noise ..... 22
- XIII. Population and Housing ..... 24
- XIV. Public Services ..... 25
- XV. Recreation ..... 26
- XVI. Transportation / Traffic ..... 27
- XVII. Tribal Cultural Resources ..... 30
- XVIII. Utilities and Service Systems ..... 32
- XIX. Other Considerations ..... 40
- XX. Mandatory Findings of Significance ..... 41

**Environmental Determination** ..... 36

**Attachments** ..... 36

## PROJECT DESCRIPTION

### Project Location

The project address is 2100 Sierra Glen Drive, within the eastern portion of the Sierra Vista Specific Plan (SVSP), south of Pleasant Grove Boulevard, east of Market Street, west of Fiddlyment Road, and north of Baseline Road (see Figure 1).

### Background

The SVSP was approved on May 5, 2010 (file #2007PL-044). An Environmental Impact Report (EIR) was certified on May 5, 2010 (SCH #2008032115) and a Mitigation Monitoring Program was adopted with the SVSP. The plan area includes 2,064 acres west of Fiddlyment Road, north of Baseline Road. The SVSP at a program level anticipated development of the plan area with a mix of residential, commercial, parks and open space land uses. Additionally, Development Agreements with the property owners of the SVSP parcels and the City were entered into to outline development obligations within the SVSP.

On December 12, 2013, the City of Roseville Planning Commission approved a project to create large-lot and small-lot tentative subdivision maps, which included several hundred acres and over 1,000 small lots (File #2012PL-038). The approved maps created 84 lots within Parcel JM-01, 319 lots within Parcel JM-20, and 171 lots within Parcel JM-21, all three of which are part of the current proposed project.

### Environmental Setting

The project site is undeveloped, and is dominated by relatively flat topography supporting annual grasslands. There are no structures on the property. No native oak trees or other trees are present on the site, as the area has historically been grazed and maintained. The project area is located south of existing single-family subdivisions within the SVSP, and west of Upland Drive. New subdivisions are currently under development east and southeast of the project area.

### Proposed Project

- A. General Plan Amendment** – The project includes a General Plan Amendment (GPA) to reconfigure the land use designations of approximately 36 acres of land. The proposed changes will add Low Density

**Figure 1: Project Location (parcels bordered in red)**



Residential (LDR) acreage and decrease the Medium Density Residential (MDR) acreage but will not change the overall number of residential units designated for the project area or extend beyond the development area of the SVSP. The affected parcels include Parcel JM-1 (changing from LDR to MDR) and Parcel JM-21 (changing from MDR to LDR). Attachment 3 includes the proposed amendment to the General Plan Amendment figures reflecting the land use changes and amended unit allocations. No policy amendments are requested with this project.

- B. Sierra Vista Specific Plan Amendment** – The project includes an Amendment to the SVSP, which includes land use changes consistent with those described in the General Plan Amendment as well as unit transfers among parcels FD-6, FD-7, FD-21, FD-24, JM-1, JM-20, and JM-21. The Specific Plan Amendment also includes changes to the text, tables, and figures to reflect the land use changes and unit transfers. The map amendment is reflected in Attachment 3 and Attachment 4 is the proposed change pages for the text, tables, and figures of the SVSP.

The applicant has proposed a gated community for Parcel FD-24 and a portion of Parcel JM-20, which is not shown as gated within the SVSP. Therefore, the project will revise SVSP Figure B-25, which identifies the locations where gated communities are permitted (included with Attachment 4). In addition, the application includes reconfiguring the alignment of the trail within the open space area north of Parcel FD-24, shifting the trail alignment south to the edge of the open space instead of the current location in the middle of the open space. This is proposed as a result of the permitting and consultation process with federal agencies such as the United States Army Corps of Engineers, because the new alignment results in fewer impacts within the open space area. This trail modification requires amending SVSP Figure 6-21 and B-5.

- C. Development Agreement (DA) Amendments** – The project includes the amendment of four development agreements within the SVSP: Mourier & Bagley, Mourier & Computer Deductions, Mourier & Wealth Management, and Mourier. All four of the amendments include the removal of fee deferrals, excepting the deferrals for the SPRTA Tier II Traffic Fee and the City-Wide Park Fee. As a result of the unit transfers associated with the project, the development agreements also include a change in the number of units within the affected development agreements as well as the proposed land use changes.
- D. Tentative Subdivision Map** -- The applicant proposes new gated subdivisions on Parcels FD-6, FD-7, and FD-24. Each map results in a total of 95, 57, and 84 lots, respectively. The Tentative Subdivision Maps are included as Attachments 5-7.
- E. Modification of a Small Lot Tentative Subdivision Map** – The applicant requests approval of a modification to the approved small-lot maps for Parcel JM-1, Parcel JM-20, and Parcel JM-21. The modifications are reflected in Attachment 8. The modification of the small-lot map approved within Parcel JM-1 increases the total number of lots from 84 to 135, which triggers a change in land use from LDR to MDR based on the number of units per acre (Attachment 9). The modification also adds a roadway connection into Parcel FD-7 to the west. The modification of the small-lot map approved within Parcel JM-20 includes removing several roadway connections, in order to allow for a portion of the parcel to be within a gated community. The elimination of the road connections also results in a minor reconfiguration of the lots, and increases the number of lots from 319 to 322 lots. The proposed map modification for JM-20 is reflected in Attachment 7. The modification of the small-lot map approved within Parcel JM-21 decreases the total number of lots from 171 to 95, which triggers a change in land use from MDR to LDR based on the number of units per acre (Attachment 10).
- F. Modification of a Large Lot Tentative Subdivision Map** – The applicant requests approval of a modification to the large lot maps for Parcel FD-24 and JM-20 to establish large lot boundaries consistent with the phasing plan of the proposed small-lot maps (Attachment 11).

**G. Design Review Permit for a Residential Subdivision (DRRS) and Modification to DRRS** – The project includes elevations and development standards for the subdivisions within parcels FD-6, FD-7, JM-1, JM-20 and FD-24. The proposed elevations are consistent with the previously approved DRRS for JM-20 (file #PL18-0344). The subdivisions will utilize the development standards approved for JM-21 (file #2012PL-038), but will be modified to specify a lot width applicable to flag lots in FD-24 and JM-21. The development standards for JM-20 will be modified to be consistent with the development standards proposed for the parcels above. The development standards are included as Attachment 12.

## **PURPOSE AND SCOPE OF ADDENDUM**

As discussed in the Background section, development of the project area was covered by the EIR for the SVSP that was approved and adopted on May 5, 2010. A copy of the SVSP EIR is available for review online at [www.roseville.ca.us/planning](http://www.roseville.ca.us/planning) under Specific Plans and then the Sierra Vista Specific Plan page. The City Council adopted a Statement of Overriding Considerations when it certified the SVSP EIR. The EIR identified the following impacts associated with development of the SVSP area, including the buildout of the project area, as significant and unavoidable:

- Conversion of agricultural land to developed uses
- Inducement of substantial population growth
- Increased traffic on City of Roseville roadways
- Increased traffic on State Highways, including Interstate 80
- Increased traffic on Placer County roadways
- Increased emissions of fugitive dust and PM10 from grading and trenching activities (short term)
- Increased emissions of ozone precursors during construction (short-term)
- Increased emissions of air pollutants during operation
- Loss of oak trees of greater than 6 inches diameter breast height (dbh) (short-term)
- Removal of historically significant properties and/or loss of historic integrity of such resources
- Increased demand for solid waste services at the Western Regional Sanitary Landfill
- Increased demand for solid waste services at the Materials Recovery Facility (MRF)
- Construction debris demand for solid waste services
- Alteration of the visual character of the site and vicinity
- New sources of light and glare

For build out of the SVSP project area, the SVSP EIR also identified the following cumulative impacts as significant and unavoidable:

- Agricultural land conversion
- Air pollutant emissions from construction
- Air pollutant emissions from operation
- Contribution to greenhouse gas emissions/global warming
- On-site noise levels that exceed City standards
- Off-site noise levels that exceed City standards
- Traffic impacts to Roseville, Placer County, Sacramento County, Sutter County and State facilities
- Increased demand for water
- Increased demand for recycled water distribution system
- Increased generation of solid waste
- Change in visual character

The analyses below rely on the EIR analysis with minor supplements or technical updates where appropriate. Most of the project impacts remain identical to the impacts of the SVSP EIR, because the proposed project changes the location and balance of land uses, but requires the same grading and development as the existing

approved land uses. Impacts to physical resources (such as agricultural land, biological resources, etc.) are based on the grading and development of an area, not on the land use designation of the property. For other types of impacts which are affected by land use type, the project uses reduce or maintain the same level of potential impacts.

## **ENVIRONMENTAL CHECKLIST FOR ADDENDUM ENVIRONMENTAL REVIEW**

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The purpose of this checklist is to evaluate the categories in terms of any “changed condition” (i.e. changed circumstances, project changes, or new information of substantial importance) that may result in a changed environmental result. A “no” answer does not necessarily mean there are no potential impacts relative to the environmental category, but that there is no change in the condition or status of the impact since it was analyzed and addressed in prior environmental documents.

### **EXPLANATION OF CHECKLIST EVALUATION CATEGORIES**

#### **Where Impact was Analyzed**

This column provides a cross-reference to the pages of the prior environmental documents where information and analysis may be found relative to the environmental issue listed under each topic.

#### **Do Proposed Changes Involve New Significant Impacts?**

Pursuant to Section 15162(a)(1) of the CEQA Guidelines, this column indicates whether the changes represented by the current project will result in new significant impacts that have not already been considered and mitigated by the prior environmental review documents and related approvals, or will result in a substantial increase in the severity of a previously identified impact.

#### **Any new Circumstances Involving New Impacts?**

Pursuant to Section 15162(a)(2) of the CEQA Guidelines, this column indicates whether there have been changes to the project site or the vicinity (circumstances under which the project is undertaken) which have occurred subsequent to the certification or adoption of prior environmental documents, which would result in the current project having new significant environmental impacts that were not considered in the prior environmental documents or that substantially increase the severity of a previously identified impact.

#### **Any new Information Requiring New Analysis or Verification?**

Pursuant to Section 15162(a)(3)(A–D) of the CEQA Guidelines, this column indicates whether new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence at the time the previous environmental documents were certified or adopted is available requiring an update to the analysis of the previous environmental documents to verify that the environmental conclusions and mitigation measures remain valid. Either “yes” or “no” will be answered to indicate whether there is new information showing that: (A) the project will have one or more significant effects not discussed in the prior environmental documents; (B) that significant effects previously examined will be substantially more severe than shown in the prior environmental documents; (C) that mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or (D) that mitigation measures or alternatives which are considerably different from those analyzed in the prior environmental documents would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative. If “no,” then no additional environmental documentation (supplemental or subsequent EIR) is required.

#### **Mitigation Measures Implemented or Addressing Impacts**

Pursuant to Section 15162(a)(3) of the CEQA Guidelines, this column indicates whether the prior environmental documents provide mitigation measures to address effects in the related impact category. In some cases, the mitigation measures have already been implemented. A “yes” response will be provided in any instance where mitigation was included, regardless of whether the mitigation has been completed at this time. If “none” is

indicated, this environmental analysis concludes a significant impact does not occur with this project, no mitigation was previously included, and no mitigation is needed.

## **DISCUSSION AND MITIGATION SECTIONS**

### **Discussion**

A discussion of the elements of the checklist is provided under each environmental category in order to clarify the answers. The discussion provides information about the particular environmental issue, how the project relates to the issue and the status of any mitigation that may be required or has already been implemented.

### **Mitigation Measures**

Applicable mitigation measures from the prior environmental review that apply to the project are listed under each environmental category.

### **Conclusions**

A discussion of the conclusion relating to the analysis contained in each section.

# CHECKLIST

## I. Aesthetics

	Where Impact Was Analyzed in Prior Environmental Documents	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a. Have a substantial adverse effect on a scenic vista?	Section 4.14	No	No	No	None
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Same	No	No	No	None
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	Same	No	No	No	None
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Same	No	No	No	Yes

**Discussion:** Impacts to visual and aesthetic resources were adequately addressed in the SVSP EIR as it relates to the proposed project, and were previously identified as significant and unavoidable. There is no significant change in the proposed project that would change the environmental impact for this section. The proposed land use changes and subdivision map do not introduce development to properties not already planned for development. The proposed uses are substantially consistent with the build out assumptions and would not increase the severity of already identified significant impacts.

The project has been evaluated for compliance with the City's Community Design Guidelines and the design guidelines established in the SVSP. As it relates to aesthetics, these standards ensure the high quality design and architectural character of any buildings developed as well as minimum landscaping standards. As it relates to light and glare, MM 4.13-1 requires all light fixtures to have glare shields and all new buildings to be constructed with low-glare materials. Based on the reasons listed in this section, there would be no new significant impacts not previously identified in the WRSP FEIR. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that "none of the conditions described in Section 15162 calling for preparation of a subsequent FEIR have occurred" relative to aesthetic resources.

**Mitigation Measures:** None required.

**II. Agricultural & Forestry Resources**

	Where Impact Was Analyzed in Prior Environmental Documents	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Section 4.1	No	No	No	Yes
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Same	No	No	No	None
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	Same	No	No	No	None
d) Result in the loss of forest land or conversion of forest land to non-forest use?	Same	No	No	No	None
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	Same	No	No	No	None

**Discussion:** Agricultural resources were adequately addressed in the SVSP EIR as it relates to the proposed project. There is no significant change in the proposed project that would change the environmental impact for this section. The SVSP EIR concluded development of the project area would convert fallow grazing land to urbanized development. The proposed project will result in the same impact, as it falls within the planned development footprint of the SVSP.

**Mitigation Measures:** EIR Mitigation Measure MM 4.1-2 required preservation of open space within Placer County in order to mitigate for the loss of open space in the SVSP. Though this measure remains applicable to the project, the measure has been completed via an established fee program that directs funds to the Placer Land Trust, which then sets aside land.

**III. Air Quality**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Conflict with or obstruct implementation of the applicable air quality plan?	Section 4.4	No	No	No	None
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Same	No	No	No	Yes
c) Result in a cumulatively considerable net increase of any criteria for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	Same	No	No	No	Yes
d) Expose sensitive receptors to substantial pollutant concentrations?	Same	No	No	No	None
e) Create objectionable odors affecting a substantial number of people?	Same	No	No	No	None

**Discussion:** The SVSP EIR concluded that standard dust control and other construction measures would be sufficient to avoid particulate matter and ozone precursor construction impacts, but that reactive organic gases would remain significant. Construction activity associated with the proposed project remains consistent with the scale of activity and resulting scope of impacts anticipated in the SVSP EIR. For operational impacts, the proposed project changes the balance of land uses in the area, but not in a manner that would increase emissions. The impacts of the project fall within the scope of the impacts and mitigation already established in the SVSP EIR.

Greenhouse gas emissions, from both the construction and operational phases, will result in impacts consistent with those analyzed in the SVSP EIR. The project will comply with the required mitigation in the SVSP EIR.

**Mitigation Measures:** Mitigation Measures 4.4-1 (construction emissions), 4.5-1 (operational emissions), 4.5-2 (greenhouse gas emissions) from the SVSP EIR remain applicable to the proposed project, and have been incorporated into the design of the project as appropriate.

**IV. Biological Resources**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Section 4.8	No	No	No	Yes
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Same	No	No	No	Yes
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Same	No	No	No	Yes

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Same	No	No	No	Yes
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Same	No	No	No	None
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Same	No	No	No	None

**Discussion:** Biological Resources were adequately addressed in the SVSP EIR as it relates to the proposed project. Mitigation measures were adopted to reduce impacts to wetlands, vernal pool species, Swainson’s hawk, burrowing owl, and other protected raptors nesting and foraging habitat to less-than-significant levels. There is no significant change in the proposed project that would change the environmental impact for this section and the proposed project is located on properties already anticipated for development.

The proposed uses are substantially consistent with the buildout assumptions and would not result in any new or modified impacts to biological resources. Thus, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent FEIR have occurred” relative to biological resources.

**Mitigation Measures:** Mitigation Measure MM 4.8-1 (wetland permits and no net loss), 4.8-2 (relocate western spadefoot), 4.8-3 (protection for nesting birds), 4.8-4 (preservation of grassland habitat), 4.8-5 (wildlife movement protection), 4.8-6 (habitat restoration), 4.8-7 (off-site surveys for infrastructure), and 4.14-3 (avoid light spill into Curry Creek open space) were identified to reduce the impact to biological resources to less than significant. These measures remain applicable to the proposed project.

## V. Cultural, Archeological, or Paleontological Resources

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Cause a substantial adverse change in the significance of an historic resource as defined in Section 15064.5?	Section 4.9	No	No	No	None
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Same	No	No	No	Yes
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Same	No	No	No	Yes
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	Same	No	No	No	Yes
<p><b>Discussion:</b> The SVSP EIR discussed the potential for subsurface remains or deposits to be found on the site, and included a mitigation measure requiring a cessation of work should any item of cultural interest be found. The mitigation was found to render potential impacts less than significant. The project will result in the same impact, and the mitigation remains applicable to the proposed project.</p> <p><b>Mitigation Measures:</b> Mitigation Measure 4.9-1 (cease work and consult with archeologist) and 4.9-2 (cease work and consult with paleontologist) remain applicable to the proposed project.</p>					

**VI. Geology and Soils**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	Section 4.7	No	No	No	None
i) Ruptures of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	Same	No	No	No	None
ii) Strong seismic ground shaking?	Same	No	No	No	None
iii) Seismic-related ground failure, including liquefaction?	Same	No	No	No	None
iv) Landslides?	Same	No	No	No	None
b) Result in substantial soil erosion or the loss of topsoil?	Same	No	No	No	None
c) Be located in a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Same	No	No	No	None
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	Same	No	No	No	None

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	Same	No	No	No	None
<p><b>Discussion:</b> The project is not expected to expose people or structures to potential substantial adverse effects involving seismic shaking, ground failure or landslides. The project site is located in Roseville, which is in Placer County. The California Department of Mines and Geology classifies the South Placer area as a low severity earthquake zone. No active faults are known to exist within the County. The project site is considered to have low seismic risk with respect to faulting, ground shaking, seismically related ground failure and liquefaction.</p> <p>The SVSP EIR indicated that compliance with existing regulations and permit requirements would be sufficient to avoid impacts related to these issues. This conclusion remains appropriate for this Project because there is no new information indicating that geologic conditions are different than previously understood.</p> <p><b>Mitigation Measures:</b> None required for this project.</p>					

**VII. Greenhouse Gases**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Section 4.4	No	No	No	Yes
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Same	No	No	No	None
<p><b>Discussion:</b> The SVSP EIR concluded that buildout of the project area would cause significant and unavoidable impacts with respect to greenhouse gases (GHG) emissions and mitigation measures were adopted to reduce the project's GHG emissions and resultant impacts. Greenhouse gas emissions, from both the construction and operational phases, will result in impacts consistent with those analyzed in the SVSP EIR. The project will comply with the required mitigation in the SVSP EIR. Thus, pursuant to CEQA Guidelines Section 15164, subdivision (a),</p>					

the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred” relative to GHG emissions.

**Mitigation Measures:** Mitigation Measures 4.4-1 (construction emissions), 4.5-1 (operational emissions), 4.5-2 (greenhouse gas emissions) from the SVSP EIR remain applicable to the proposed project, and have been incorporated into the design of the project as appropriate.

**VIII. Hazards and Hazardous Materials**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Section 4.10	No	No	No	None
b) Create a significant hazard to the public or the environment though reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Same	No	No	No	Yes
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within on-quarter mile of an existing or proposed school?	Same	No	No	No	None
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Same	No	No	No	None

<p>e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?</p>	<p>Same</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>None</p>
<p>f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing in the project area?</p>	<p>Same</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>None</p>
<p>g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</p>	<p>Same</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>None</p>
<p>h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?</p>	<p>Same</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>None</p>

**Discussion:** The SVSP EIR includes a brief overview for each impact topic, concluding that compliance with existing federal, state, and local regulations regarding the use, transport and disposal of hazardous materials would ensure most impacts will be less than significant. The exception was for unknown soil contamination, as land which was used for agricultural purposes may include undiscovered, underground storage tanks or other contamination issues; mitigation for this was included. The project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The SVSP EIR analysis also found that there would be sufficient emergency services and facilities and that the area was not located within an airport land use plan or other aviation hazard area. These conclusions still fit for the proposed project, which is within the same development footprint and contains the same types of uses.

The California Department of Forestry and Fire Protection (CAL FIRE) is the state agency responsible for wildland fire protection and management. As part of that task, CAL FIRE maintains maps designating Wildland Fire Hazard Severity zones. The City is not located within a Very High Fire Hazard Severity Zone, and is not in a CAL FIRE responsibility area; fire suppression is entirely within local responsibility. The project site is in an urban area, and therefore would not expose people to any risk from wildland fire.

The proposed uses are substantially consistent with the build out assumptions and would not increase the severity of already identified significant impacts; therefore, there would be no new significant impacts not previously identified in the SVSP EIR regarding hazardous materials. Thus, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent FEIR have occurred” relative to hazards and hazardous materials.

**Mitigation Measures:** The SVSP EIR included a mitigation measure to address the low possibility that some contamination of soils still lingered due to past use of the land for agricultural purposes. The measure, Mitigation Measure 4.10-1, indicates that if evidence of contamination is observed (stained soils, unearthing of a tank, etc.) then proper testing and remediation is required, in coordination with the appropriate City Departments. This measure remains applicable to the project.

**IX. Hydrology and Water Quality**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Violate any water quality standards or waste discharge requirements?	Section 4.13	No	No	No	None

<p>b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</p>	<p>Same</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>None</p>
<p>c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off-site?</p>	<p>Same</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>None</p>
<p>d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site?</p>	<p>Same</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>None</p>
<p>e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted water?</p>	<p>Same</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>None</p>
<p>f) Otherwise substantially degrade water quality?</p>	<p>Same</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>Yes</p>
<p>g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?</p>	<p>Same</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>None</p>
<p>h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?</p>	<p>Same</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>None</p>

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	Same	No	No	No	None
j) Inundation by seiche, tsunami, or mudflow?	Same	No	No	No	None

**Discussion:** A Drainage and Storm water Master Plan was prepared and approved by the City as part of the SVSP EIR. As noted in the EIR, the Drainage and Storm water Master Plan demonstrated that the increases in impervious surfaces being caused by buildout of the SVSP would be offset by proposed drainage facilities and storm water improvements. The project would offset increases in peak flow, no development would occur within the 100-year floodplain area, and consistency with existing City regulations would ensure that all homes would be elevated at least two feet above the 100-year water surface elevation. With regard to storm water quality, the EIR notes that there are existing programs, regulations, and permits in place to ensure that the project would not have significant effects related to water pollution from construction or operation, though a mitigation measure is included to require compliance with this regulations. The project is in an area of flat topography and is not near any large water bodies or dams/levees, so would not be subject to losses due to dam/levee failure, seiche, tsunami, or mudflow.

The proposed uses are substantially consistent with the build out assumptions and would not increase the severity of already identified significant impacts; therefore, there would be no new significant impacts not previously identified in the SVSP EIR related to hydrology and water quality. Thus, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent FEIR have occurred” relative to hydrology and water quality.

**Mitigation Measures:** Mitigation Measure 4.13-1 was included to require compliance with the City’s stormwater quality standards, including preparation of a Storm Water Pollution Prevention Plan (SWPPP). This measure remains applicable to the proposed project.

**X. Land Use and Planning**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Physically divide an established community?	Section 4.1	No	No	No	None
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	Same	No	No	No	Yes
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	Same	No	No	No	None

**Discussion:** The SVSP EIR concluded that there were some potential land use incompatibilities, but that these could be addressed by a mix of mitigation and compliance with the City Noise Ordinance and Grading Ordinance. Land use issues discussed and addressed included noise from McClellan overflights, agricultural uses in Placer County next to urban uses in the SVSP, and construction noise, and commercial land use noise. Note that overflight noise is a potential nuisance discussion requiring disclosure to future purchasers within the Project area; noise volumes do not exceed standards. It was concluded that the project would not physically divide an established community and that the project did not conflict with any land use policies or regulations, or with a Habitat Conservation Plan (or similar). The EIR concluded that all impacts of the SVSP could be reduced to less than significant levels with mitigation. The project involves the same use types within the same development footprint, and therefore the conclusions of SVSP EIR remain applicable to the proposed project.

**Mitigation Measures:** Mitigation Measure 4.1-3 (McClellan overflight disclosure), 4.6-1 (construction noise) and 4.6-2 (commercial noise controls). The measure regarding disclosure ensure that people purchasing property within the project area which could be affected by overflight noise are aware of this potential affects. The disclosure measure is implemented by including a Condition of Approval requiring that the deed disclosures are a component of the Covenants, Conditions, and Restrictions for all affected properties. The condition has been addressed in the Development Agreement for the project area, so the measures are already complete. The construction noise and commercial noise control measures are applied during construction, so remain applicable to the proposed project.

**XI. Mineral Resources**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Section 4.7	No	No	No	None
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	Same	No	No	No	None
<p><b>Discussion:</b> The SVSP EIR indicated that there were no significant mineral resources in the area. Therefore, the project is not considered to have any impacts on mineral resources. Thus, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds <i>that "none of the conditions described in Section 15162 calling for preparation of a subsequent FEIR have occurred"</i> relative to mineral resources.</p> <p><b>Mitigation Measures:</b> None required for this project.</p>					

**XII. Noise**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Section 4.6	No	No	No	Yes
b) Exposure of persons to or generation of excessive ground borne vibration of ground borne noise levels?	Same	No	No	No	Yes
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Same	No	No	No	None
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Same	No	No	No	Yes
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Same	No	No	No	None
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	Same	No	No	No	None

**Discussion:** The SVSP EIR addressed construction noise, roadway noise, noise from non-residential land uses, and aircraft overflight noise. Overflight noise has already been addressed in the Land Use section of this Addendum. Construction noise in general was discussed, and addressed via mitigation. Noise was determined to be an issue for all of the major roadways in the SVSP area, such as Fiddymont Road. Mitigation was found to reduce noise volumes to levels within General Plan standards, and so impacts were found to be less than significant.

As part of project #2012PL-038, an environmental noise assessment was prepared by Bollard Acoustical Consultants, Inc. to evaluate noise levels associated with traffic on Fiddymont Road, Market Drive, Upland Drive, and Vista Grande Boulevard (Attachment 12). It was concluded that implementation of the mitigation measures would reduce noise volumes to levels within General Plan standards. Consistent with the mitigation measures, the project proposes masonry sound walls adjacent to the lots located along major roadways, which will ensure that noise on the residential properties is consistent with City standards. The project would not result in new or more severe impacts than described in the SVSP EIR, and the impact conclusions of the EIR are unchanged. Thus, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent FEIR have occurred” relative to noise.

**Mitigation Measures:** Mitigation Measures 4.1-3 (McClellan overflight disclosure), 4.6-1 (construction noise), and 4.6-4 (traffic noise attenuation) were applied in the SVSP EIR. Construction noise controls in the mitigation includes located fixed equipment away from noise sensitive uses and having a construction disturbance coordinator to address noise concerns. Traffic noise attenuation also calls for the use of masonry walls along major roadways. These mitigation measures remain applicable to the proposed project.

**XIII. Population and Housing**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, though extension of roads or other infrastructure)?	Section 4.2	No	No	No	None
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	Same	No	No	No	None

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	Same	No	No	No	None
<p><b>Discussion:</b> The SVSP EIR indicated the SVSP would increase the number of housing units above those which had been anticipated in the General Plan, and analysis the effect on supporting services, infrastructure, and other issues related to environmental impacts. It was concluded that impacts would be significant and unavoidable. The proposed project involves the same number of housing units as analyzed in the SVSP EIR, but the project increases the amount of MDR units and decreases the amount of LDR units. For the purpose of population estimates, LDR and MDR population rates are the same, so the project will not have a new or more severe impact on the population growth rate of the area. Thus, the project will result in the same previously identified impacts. There are no existing houses in the project area, so no displacement of housing or people would occur.</p> <p><b>Mitigation Measures:</b> None required for this project.</p>					

**XIV. Public Services**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any the public services:					
a) Fire protection?	Section 4.11	No	No	No	None
b) Police protection?	Same	No	No	No	None

c) Schools?	Same	No	No	No	Yes
d) Parks?	Same	No	No	No	None
e) Other public facilities?	Same	No	No	No	None

**Discussion:** The SVSP EIR concluded that fire and police protection services, and other public services would not be negatively affected by the project. Parkland dedications were required with the SVSP and therefore impacts to park facilities was less than significant. Although the project involves a change in land use for Parcel JM-01 from LDR to MDR and JM-21 from MDR to LDR, the student generation factor for these land uses is the same. In addition, the project will not change the overall number of housing units in the SVSP. Therefore, the conclusions of SVSP EIR remain applicable to the proposed project.

An analysis of impacts to schools was included in the SVSP EIR, which concluded that two new elementary schools and one new intermediate school would be required in the project area. The high school students generated from the SVSP were assumed in the nearby high schools located outside the plan area. A portion of the SVSP is located within the Center School District and a portion is located within the Roseville City School District, though the current project area is entirely within the Center School District. The project was routed to the School District for review, and the School District indicated that the proposed project would not have negative impacts. The project will be required to pay per-unit school fees, and the developer is required to work with the School District to identify a Safe Routes to School program. Impacts to public services were determined to be less than significant, with mitigation.

**Mitigation Measures:** Mitigation Measure 4.11-3 requires a Safe Routes to School program, which would be implemented at the time of school construction, and remains applicable to the proposed project.

**XV. Recreation**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated?	Section 4.11	No	No	No	None

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	Same	No	No	No	None
<p><b>Discussion:</b> The SVSP indicates that the required parkland dedication was met by dedication of parkland and through payment of park dedication in-lieu fees. As noted in the EIR, the payment of Citywide and neighborhood park fees will be required, and the payment of fees combined with the dedication of parkland will ensure that impacts to park services are less than significant. The project will not increase the number of residents anticipated for the SVSP nor decrease the amount of area dedicated to park and recreation uses; therefore, this conclusion remains applicable to the proposed project.</p> <p><b>Mitigation Measures:</b> None required for this project.</p>					

**XVI. Transportation/Traffic**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	Section 4.3	No	No	No	Yes

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	Same	No	No	No	Yes
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	Same	No	No	No	None
d) Substantially increase hazards due to a design feature(s) (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Same	No	No	No	None
e) Result in inadequate emergency access?	Same	No	No	No	None

f) Conflict with adopted policies, plans, or programs supporting public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	Same	No	No	No	None
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**Discussion:** The SVSP EIR evaluated the traffic impacts to existing and future roadways from traffic being generated by the anticipated uses within the plan area. The EIR concluded that with mitigation, impacts to City roadways would be less than significant. Impacts to adjacent agency roadways was identified as a significant and unavoidable impact, and mitigation to lessen the impact was accepted. For the proposed project, the City’s Engineering Division reviewed the scope of changes and concluded that an updated traffic study was not required. The LDR and MDR land uses have the same trip generation rate of one trip per unit (based on the Institute of Transportation Engineers trip rates), and the unit transfers among the parcels maintain the same overall number of units allocated to the project area. Therefore, the project would not cause new or more severe impacts than already described in the SVSP EIR.

The proposed project has no impact on air traffic patterns, and does not present substantial safety risks. The project design does not introduce hazards such as sharp curves or dangerous intersections. The project has been reviewed by the City Engineering Division and City Fire Department staff, and has been found to be consistent with the City’s Design Standards. Furthermore, standard conditions of approval added to all City project require compliance with Fire Codes and other design standards. Compliance with existing regulations ensure that impacts are less than significant.

The proposed uses are substantially consistent with the build out assumptions and would not increase the severity of already identified significant impacts; therefore, there would be no new significant impacts not previously identified in the SVSP EIR relative to transportation/traffic. Thus, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent FEIR have occurred” relative to transportation/traffic.

**Mitigation Measures:** None required for this project.

**XVII. Tribal Cultural Resources**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	Section 4.9	No	No	No	None
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 the lead agency shall consider the significance of the resource to a California Native American tribe.	Same	No	No	No	None

**Discussion:** In addition to archeological resources, tribal cultural resources are also given particular treatment. Tribal cultural resources are defined in Public Resources Code Section 21074, as either 1) a site, feature, place, geographically-defined cultural landscape, sacred place, or object with cultural value to a California Native American Tribe, that is listed or eligible for listing on the California Register or Historical Resources, or on a local register of historical resources or as 2) a resource determined by the lead agency, supported by substantial evidence, to be significant according to the historical register criteria in Public Resources Code section 5024.1(c), and considering the significance of the resource to a California Native American Tribe.

This section was added to the CEQA Guidelines after the publication of the prior environmental document to which this Addendum is attached, but cultural resources were addressed in that document. While the original SVSP EIR addressed cultural resources, no Tribal Cultural Resources were identified and the City of Roseville as CEQA Lead Agency is not aware of any Tribal Cultural Resources associated with project site. Previously applied mitigation should be adequate to address potential impacts of the project, which require cessation of work should any item of cultural interest be found, to ensure the project will have a less than significant impact on cultural resources. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent FEIR have occurred” relative to Tribal Cultural Resources.

**Mitigation Measures:** Mitigation Measure 4.9-1 (cease work and consult with archeologist) and 4.9-2 (cease work and consult with paleontologist) remain applicable to the proposed project.

**XVIII. Utilities and Service Systems**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	Section 4.12	No	No	No	None
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Section 4.12.1 & 4.12.3	No	No	No	None
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Section 4.12.3	No	No	No	None
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	Section 4.12.1	No	No	No	None
e) Result in a determination by the wastewater treatment provider which serves the project that it has adequate capacity to serve the project's projected demand in addition of the provider's existing commitments?	Section 4.12.3	No	No	No	None
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	Section 4.12.4	No	No	No	Yes
g) Comply with federal, state, and local statutes and regulations related to solid waste?	Same	No	No	No	None

**Discussion:** The SVSP EIR addressed water demand for the plan area and determined there was adequate supply to meet the anticipated water demands from development of the plan area. The project is converting some of the anticipated land uses with a lower water demand to a use with a higher demand (18.3 acres of MDR to LDR), but is also converting some land uses with a higher demand to a lower demand (17 acres of LDR to MDR). The City's Environmental Utilities Department determined that the proposed land use changes will result in a slight increase in water demand. However, this increase was determined to be a negligible amount when compared to the overall water demand of the project area. Additionally, staff determined the City has sufficient water supply to adequately serve the project. Therefore, the impact conclusions of the SVSP EIR with respect to water supply are still applicable to this project.

Development of the project area will require the construction of water lines and sewer lines and facilities, but these were previously identified through the infrastructure master plans developed for the SVSP. The project land use changes do not require any major changes or need for expanded facilities. Additionally, the project will have no effect on wastewater generation beyond that previously analyzed in the SVSP EIR. Environmental Utilities determined that the proposed project changes fell within the scope of the prior assessment. The SVSP EIR concluded that the Pleasant Grove Wastewater Treatment Plan was sized to accommodate flow from the plan area and that impacts would be less than significant. This conclusion remains applicable to the proposed project.

The SVSP EIR indicated that the Western Placer Waste Management Authority facilities would be used to dispose of solid waste, and that there was sufficient capacity to accept solid waste from the SVSP. Solid waste generation is based on population, and as the project will not change the estimated population for the plan area, the project falls within the scope of the prior analysis, and does not result in any new or expanded impacts to this previously-identified significant and unavoidable impact.

**Mitigation Measures:** Mitigation Measures 4.12.4-1 (expand the landfill) and 4.12.4-2 (diversion of construction debris) were included to require payment of fees to be used for landfill expansion and to require a 50% reduction in the construction waste stream. The landfill expansion measure has already been implemented, as fees are already in place that will apply to the proposed project. The remaining measure regarding diversion of construction debris remains applicable, as it is a project-level measure that applies during construction.

## XIX. Other Considerations

Since the publication of the FEIR and the subsequent 2017 Addendum, the Office of Planning and Research (OPR) has updated CEQA Guidelines Appendix G (Environmental Checklist Form). These updates address legislative changes to CEQA, clarify language, and update language consistent with case law. None of the changes to the checklist require new analysis related to impacts which were not known or which could not have been known at the time the MND was prepared. The majority of the checklist changes clarify language, reorganize existing language, or eliminate analysis

requirements. For analysis requirements which have been eliminated, this is in response to case law affirming that analysis must focus on impacts caused by the project, not impacts to the project. An example of each of these types of changes is included below:

- Cultural Resources (a): Cause a substantial adverse change in the significance of a historic resource ~~as defined in~~ pursuant to Section 15064.5?

The replacement of “as defined in” with “pursuant to” is a phrasing change which has no impact on required analysis.

- Cultural Resources (c) has been moved to Geology and Soils (f).

Moving the topical section of this analysis requirement (which is related to paleontological resources) from Cultural Resources to Geology and Soils has no impact on required analysis.

- Noise (b): ~~Exposure of persons to or g~~Generation of excessive ground borne vibration of ground borne noise levels?

The above changes redirect the analysis from considering overall exposure of persons to ground borne vibration, and focus the analysis on any ground borne vibration generated by a project. This same change is reflected in all other checklist questions related to noise. Therefore, the SVSP EIR includes more analysis than is currently required, because it included analysis related to exposing neighboring areas to noise, but also analyzed the effect of noise on the proposed uses; the latter analysis is no longer required.

The updated CEQA Guidelines Appendix G also includes two new sections (Energy and Wildfire) and includes new and modified requirements as part of the Transportation/Traffic section. The new Energy section was formerly included in CEQA Guidelines Appendix F, but has been moved into the Appendix G, so while it is new to the checklist, it is not new to the CEQA Guidelines. In regards to Wildfire, the California Department of Forestry and Fire Protection (CAL FIRE) is the state agency responsible for wildland fire protection and management. As part of that task, CAL FIRE maintains maps designating Wildland Fire Hazard Severity zones. The City is not located within a Very High Fire Hazard Severity Zone, and is not in a CAL FIRE responsibility area; fire suppression is entirely within local responsibility. Therefore, the Wildfire section does not apply because the project site is not within a Very High Fire Hazard Severity Zone and is not in a CAL FIRE responsibility area.

The changes to the Transportation/Traffic section—which is now called Transportation—refocuses the analysis on vehicle miles traveled (VMT). However, the legislation requiring the use of VMT in CEQA analysis specifies that the requirement for lead agencies to use VMT goes into effect on July 1, 2020. Therefore, a VMT analysis is not currently required, and has not been included in this Addendum.

Based on the foregoing, none of the modifications to CEQA Guidelines Appendix G require new analysis related to impacts which were not known or which could not have been known at the time the SVSP EIR was prepared. Therefore, an Addendum is the appropriate environmental document to describe the impacts of the proposed project.

**XX. Mandatory Findings of Significance**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, threatened or rare species, or eliminate important examples of the major periods of California history or prehistory?	SVSP EIR	No	No	No	None
b) Does the project have impacts which are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	SVSP EIR	No	No	No	None
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	SVSP EIR	No	No	No	None

**Discussion:** Long term environmental goals are not impacted by the proposed project. The cumulative impacts do not deviate beyond what was contemplated in the SVSP EIR, and mitigation measures have already been incorporated. With implementation of the City's Mitigating Ordinances, Guidelines, and Standards and best management practices, mitigation measures described in this chapter, and permit conditions, the proposed project will not have a significant impact on the habitat of any plant or animal species. Based on the foregoing, the proposed project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of any wildlife species, or create adverse effects on human beings. Thus, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that "none of the conditions described in Section 15162 calling for preparation of a subsequent FEIR have occurred" relative to the mandatory findings of significance.

## **ENVIRONMENTAL DETERMINATION:**

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*In reviewing the site specific information provided for this project and acting as Lead Agency, the City of Roseville, Development Services Department, Planning Division has analyzed the potential environmental impacts created by this project and determined that the findings of CEQA Section 15162 concerning the decision not to prepare a subsequent EIR or negative declaration and the findings of CEQA Section 15164 concerning the decision to prepare an Addendum can be made. As supported by substantial evidence within the Addendum to the Sierra Vista Specific Plan Environmental Impact Report (SCH # 2008032115, adopted on May 5, 2010), the Lead Agency makes the following findings:*

[ X ] No substantial changes are proposed in the project which would require major revisions of the previous EIR or Mitigated Negative Declaration.

[ X ] No substantial changes have occurred with respect to the circumstances under which the project is undertaken.

[ X ] There is no new information of substantial importance which was not known and could not have been known with the exercise of due diligence at the time the previous EIR was certified as complete or the Mitigated Negative Declaration was adopted.

[ X ] Only minor technical changes or additions are necessary in order to deem the adopted environmental document adequate.

Addendum Prepared by:

*Kinarik Shallow*

Kinarik Shallow, Associate Planner  
City of Roseville, Development Services–Planning Division

## **Attachments:**

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1. Environmental Document on which this Addendum relies: Sierra Vista Specific Plan Final Environmental Impact Report (this document can be found online at: <http://roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8775140>)
2. Applicable SVSP Mitigation Measures
3. General Plan/Specific Plan Map Exhibits
4. Specific Plan Amendment Redlines
5. Tentative Subdivision Map (Parcel FD-6)
6. Tentative Subdivision Map (Parcel FD-7)
7. Tentative Subdivision Map (Parcel FD-24 and a portion of JM-20)
8. Tentative Subdivision Map Modification Cover Sheet
9. Tentative Subdivision Map Modification (Parcel JM-1)
10. Tentative Subdivision Map Modification (Parcel JM-21)
11. Large Lot Tentative Subdivision Map Modification (Parcel FD-24 and a portion of JM-20)
12. Development Standards
13. Environmental Noise Assessment, Bollard Acoustical Consultants, Inc., dated August 22, 2018

**NOTE: Attachments 2-12 are not included with the Addendum as they are already included as Attachments/Exhibits to the January 9, 2020 Planning Commission Staff Report.**

Environmental Noise Assessment

# Sierra Vista Residential Development Phases A1, A2, and B

Roseville, California

BAC Job # 2018-138

Prepared For:

John Mourier Construction, Inc.

Attn: Mr. Steve Schnable  
1430 Blue Oaks Blvd., Ste. 190  
Roseville, CA 95747

Prepared By:

**Bollard Acoustical Consultants, Inc.**



Paul Bollard, President

August 22, 2018



## Introduction

Phases A1, A2, and B of the Sierra Vista Residential Development are located west of Fiddymment Road, north of Baseline Road, south of Pleasant Grove Boulevard, and east of the future Market Street extension in the City of Roseville, California. The project proposes the development of 1330 total residential lots on currently undeveloped land. The project area is provided as Figure 1. The site plan for Phases A1 and A2, consisting of Villages JM-01, JM-02, JM-03, JM-04, JM-20, JM-21, JM-30, JM-40, is provided as Figure 2. The site plan for Phase B, consisting of Villages FD-06 and FD-07, is provided as Figure 3.

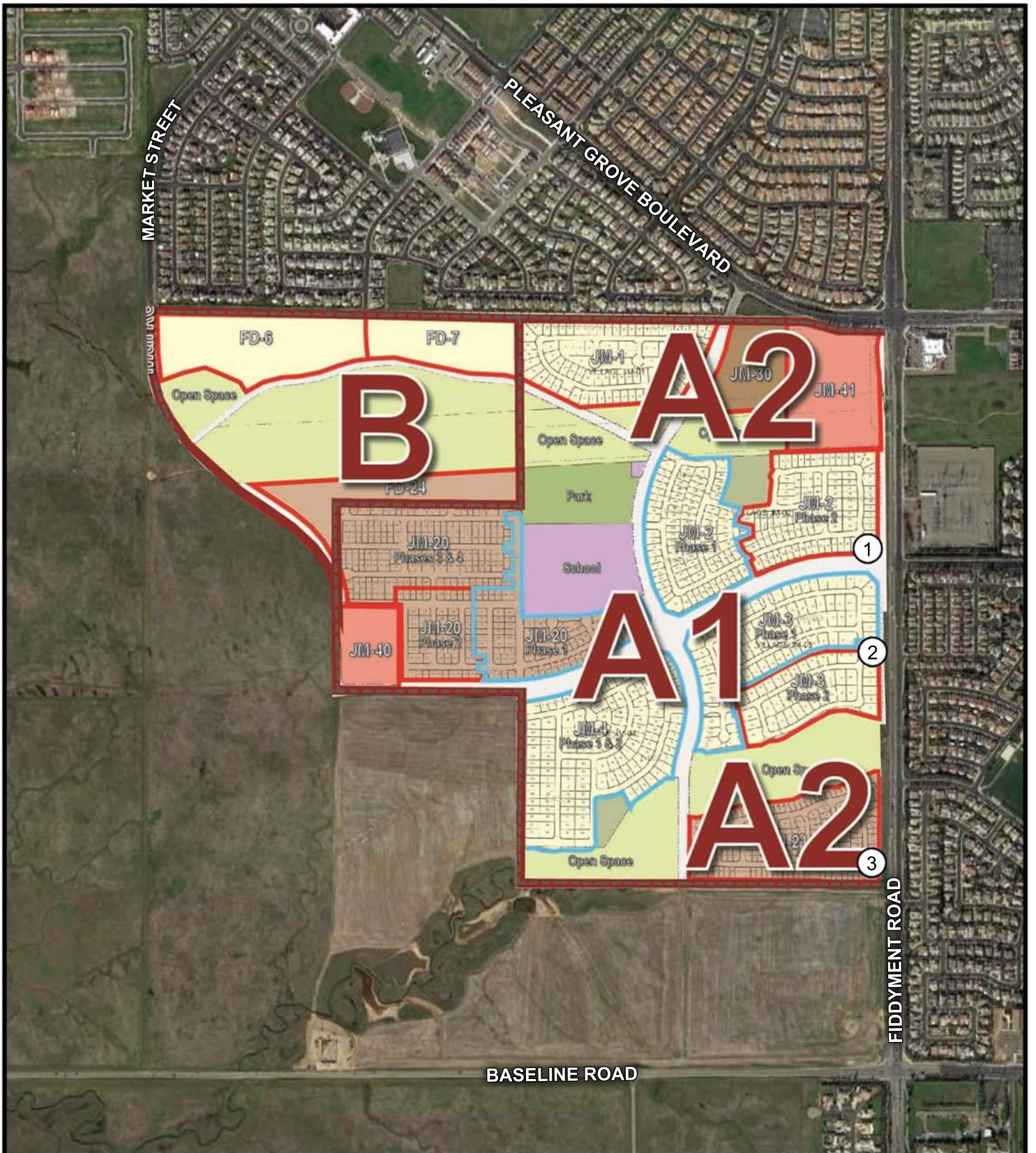
Due to the proximity of the residential uses of the proposed project to the existing and future (internal) roadways, BAC was retained by the project applicant to prepare this analysis. Specifically, the purposes of this analysis are to quantify noise levels associated with traffic on Fiddymment Road, Market Drive, Upland Drive, Vista Grande Boulevard, and compare those levels against the applicable City of Roseville and Sierra Vista Specific Plan noise standards for acceptable noise exposure.

## Noise Fundamentals and Terminology



Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard, and thus are called sound. Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness. Appendix A contains definitions of Acoustical Terminology. Figure 4 shows common noise levels associated with various sources.

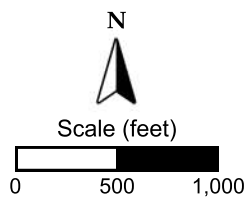
The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels in decibels.

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level ( $L_{eq}$ ) over a given time period (usually one hour). The  $L_{eq}$  is the foundation of the Day-Night Average Level noise descriptor,  $L_{dn}$ , and shows very good correlation with community response to noise.



**Legend**

-  Project Border (Approximate)
-  Short-Term Noise Level Measurement Locations



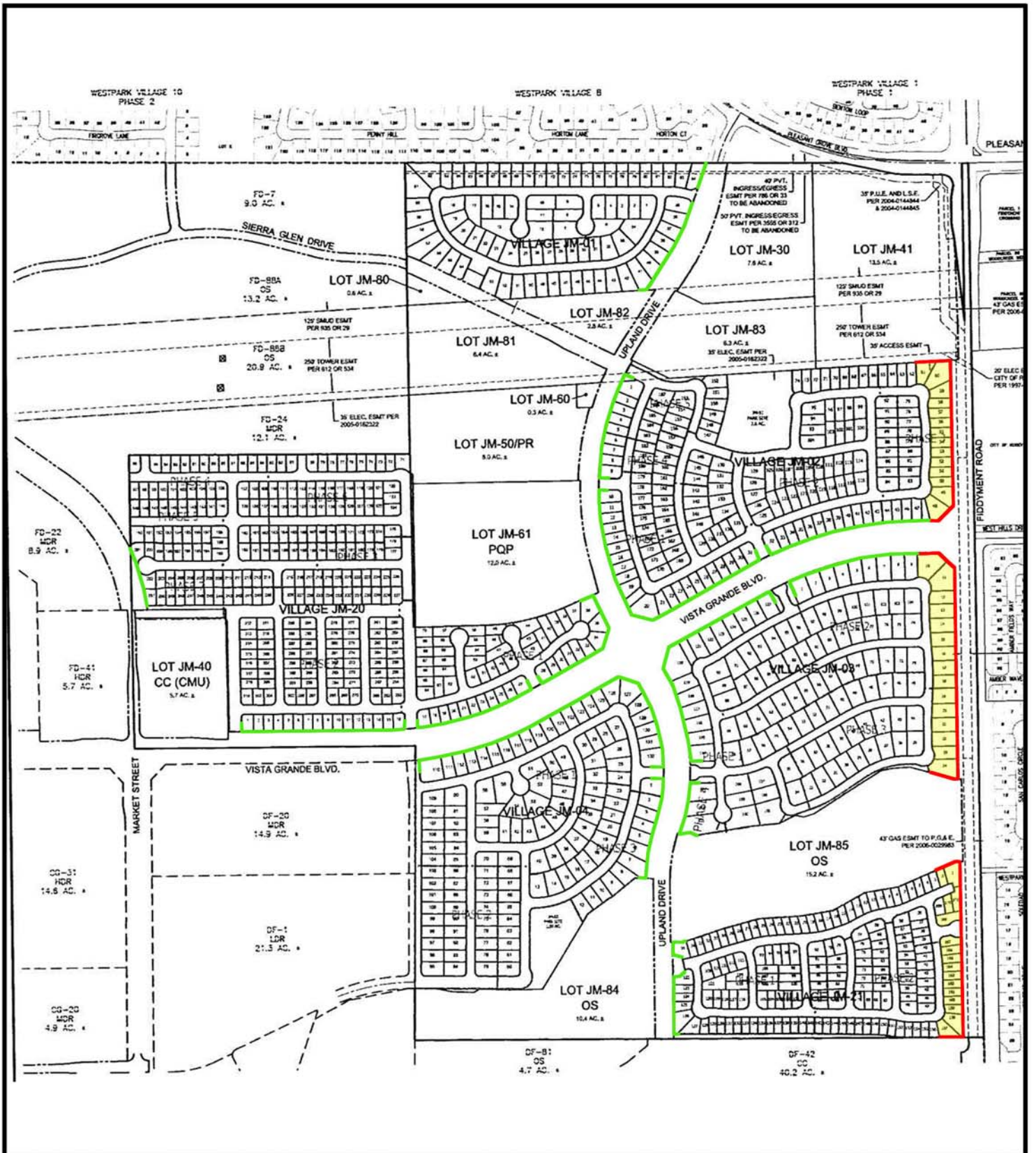
**Sierra Vista Residential Development  
Phases A1, A2, & B**

Roseville, California

Project Area

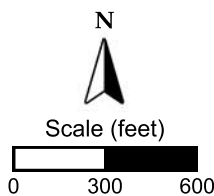
**Figure 1**





**Legend**

- Proposed 7-Foot Tall Noise Barriers
- Proposed 6-Foot Tall Noise Barriers
- Recommended Upper-Floor STC 32 Windows



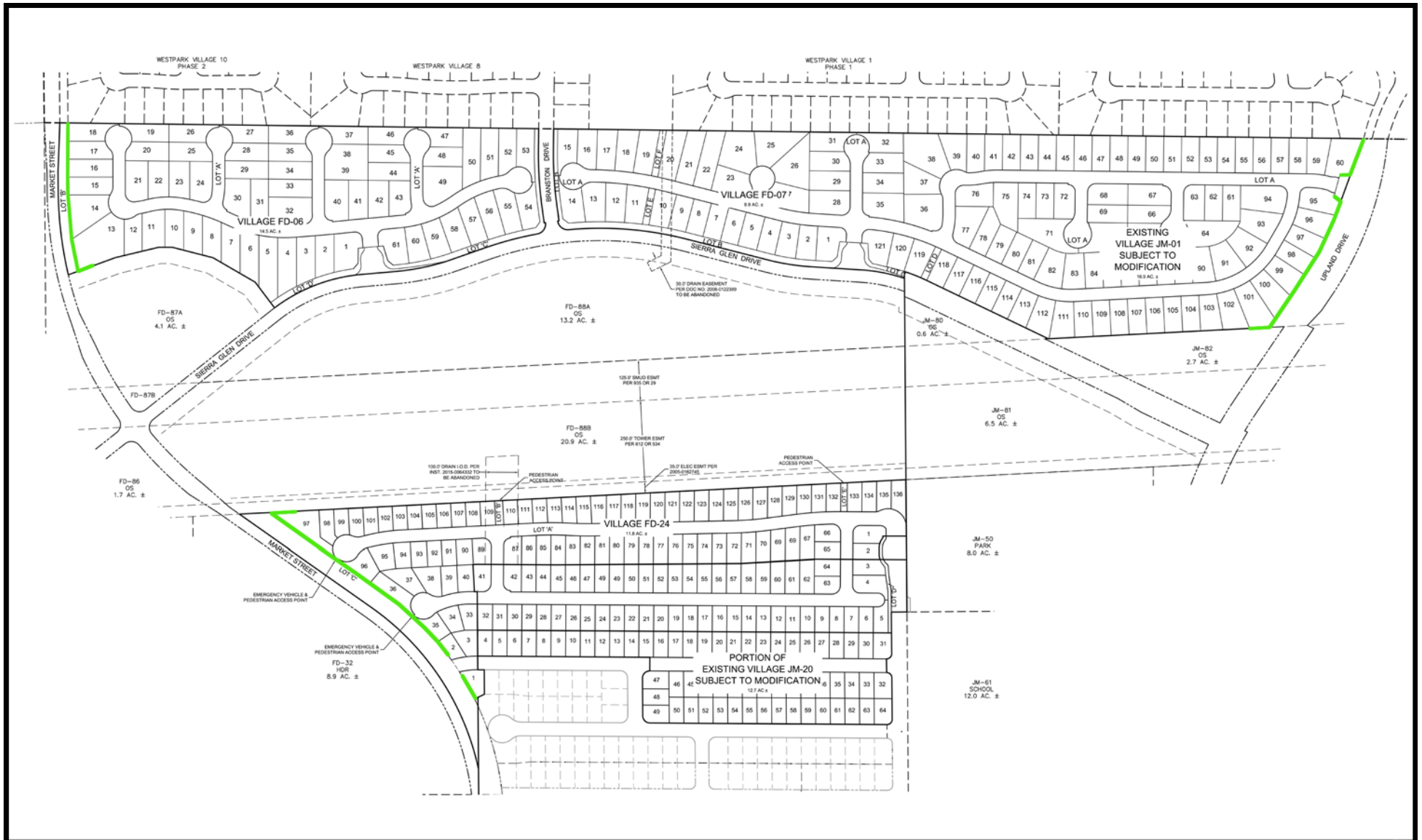
Sierra Vista Residential Development  
Phases A1, A2, & B

Roseville, California


Site Plan - Phases A1 & A2

Figure 2





**Legend**

 Proposed 6-Foot Tall Noise Barriers



Scale (feet)



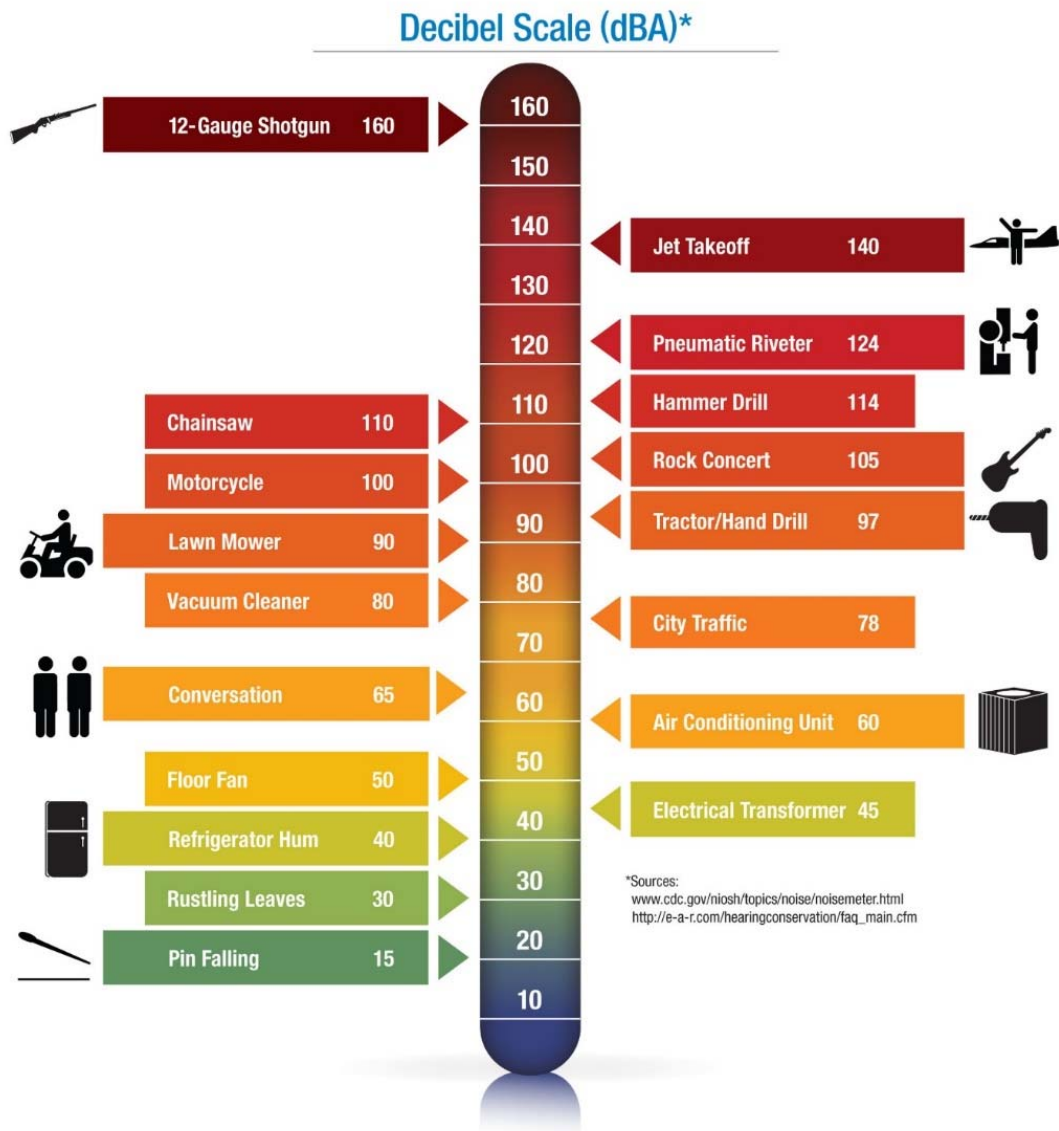
Sierra Vista Residential Development  
 Phases A1, A2, & B  
 Roseville, California  
 Site Plan - Phase B

**Figure 3**



The Day-Night Average Level ( $L_{dn}$ ) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because  $L_{dn}$  represents a 24-hour average, it tends to disguise short-term variations in the noise environment.  $L_{dn}$ -based noise standards are commonly used to assess noise impacts associated with traffic, railroad and aircraft noise sources.

**Figure 4**  
**Typical A-Weighted Sound Levels of Common Noise Sources**



## Criteria for Acceptable Noise Exposure

### City of Roseville General Plan 2035

The Noise Element of the Roseville General Plan 2035 contains goals and policies intended to protect city residents from the harmful and annoying effects of exposure to excessive noise. The General Plan policies which would be applicable to this project are reproduced below:

#### *Transportation Noise Sources*

- Policy 1 Allow the development of new noise-sensitive land uses (which include but are not limited to residential, schools, and hospitals) only in areas exposed to existing or projected levels of noise from transportation noise sources which satisfy the levels specified in Table 1. Noise mitigation measures may be required to reduce noise in outdoor activity areas and interior spaces to the levels specified in Table 1.

Recognizing that in increasingly urban areas it is difficult to maintain suburban noise standards, and in order to facilitate the City's goals to encourage reinvestment and economic development in the Riverside and Downtown Specific Plan areas, the City may elect to allow new noise-sensitive land uses on a case by case basis in proximity to transportation sources. Noise mitigation, including an acoustical analysis, would be required to reduce interior space noise levels to the standards specified in Table 1. Exterior noise levels would require mitigation to the extent feasible using building orientation, construction and design features; however ultimately, noise levels may exceed the noise standards identified in Table 1.

- Policy 2 Require new roadway improvement projects to be mitigated so as not to exceed the noise levels specified in Table 1 at outdoor activity areas or interior spaces of existing noise-sensitive land uses.
- Policy 3 Evaluate new transportation projects, such as light and heavy rail, using the standards contained in Table 1. However, noise from these projects may be allowed to exceed the standards contained in Table 1 if the City Council finds that there are special overriding circumstances.
- Policy 4 Require an acoustical analysis where:
- a. Noise sensitive land uses are proposed in areas exposed to existing or projected noise levels exceeding the levels specified in Table 1;
  - b. Proposed transportation noise source projects are likely to produce noise levels exceeding the levels specified in Table 1 at existing or planned noise-sensitive uses.

An acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be considered in the project design.

Policy 5 Work in cooperation with Caltrans and the Union Pacific Transportation Company to maintain noise level standards for both new and existing projects in compliance with Table 1.

<b>Table 1</b>			
<b>Maximum Allowable Noise Exposure - Transportation Noise Sources</b>			
<b>City of Roseville General Plan Noise Element</b>			
<b>Land Use</b>	<b>Outdoor Activity Areas<sup>1</sup></b>	<b>Interior Spaces</b>	
	<b>L<sub>dn</sub>/CNEL, dB</b>	<b>L<sub>dn</sub>/CNEL, dB</b>	<b>Leq, dB<sup>2</sup></b>
Residential	60 <sup>3</sup>	45	--
Transient lodging	60 <sup>3</sup>	45	--
Hospitals, nursing homes	60 <sup>3</sup>	45	--
Theaters, auditoriums, music halls	--	--	35
Churches, meeting halls	60 <sup>3</sup>	--	40
Office buildings	65	--	45
Schools, libraries, museums	--	--	45
Playgrounds, neighborhood parks	70	--	--

<sup>1</sup> Outdoor activity areas for residential developments are considered to be the back yard patios or decks of single family dwelling, and the patios or common areas where people generally congregate for multi-family development. Outdoor activity areas for non-residential developments are considered to be those common areas where people generally congregate, including pedestrian plazas, seating areas and outside lunch facilities. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

<sup>2</sup> As determined for a typical worst case hour during periods of use.

<sup>3</sup> Where it is not possible to reduce noise in outdoor activity areas to 60 dB L<sub>dn</sub>/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 75 dB L<sub>dn</sub>/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

**Note:** Where a proposed use is not specifically listed on this table, the use shall comply with the noise exposure standards for the nearest similar use as determined by the Planning Department. Commercial and industrial uses have not been listed because such uses are not considered to be particularly sensitive to noise exposure.

-- = not applicable

L<sub>dn</sub> = Day-Night Average Sound Level  
 CNEL = Community Noise Equivalent Level  
 dB = Decibels  
 Leq = Noise Equivalent Level  
 Source: City of Roseville General Plan

### Sierra Vista Specific Plan Final EIR

The Sierra Vista Specific Plan Final EIR (May 2010) contains mitigation measures intended to protect future city residents from the harmful and annoying effects of exposure to excessive noise. The transportation noise related mitigation measures of the specific plan are reproduced below:

**WMM 4.5-8     *On-site Traffic Noise Attenuation (Impact 4.6-6 SVSP and Urban Reserve)***

The project developer shall demonstrate through an acoustical study that residences along roadways will be subject to noise levels consistent with the City's standards. The standards could be achieved through a combination of setbacks, sound walls or other barriers, building orientation or other measures. An acoustical analysis shall be required to demonstrate that these measures will result in acceptable noise levels.

**WMM 4.5-10     *On-site Traffic Noise Policies (Impact 4.6-6 and 4.6-8 Urban Reserve)***

Specific Plans and/or other development proposals in the Remainder Area Urban Reserve shall include policies and/or conditions that require that residential development adjacent to roadways will be subject to traffic noise levels that fall within City standards. The standards could be achieved through a combination of setbacks, sound walls or other barriers, building orientation or other measures. An acoustical analysis shall be required to demonstrate that these measures will result in acceptable noise levels.

**MM 4.6- 4:     *Traffic Noise Attenuation (Impact 4.6-6 and 4.6-8 SVSP)***

**MM 4.6-4(a):** Masonry walls and/or landscaped berms shall be constructed along the major project-area roadways adjacent to proposed residential uses if acoustical studies warrant sound attenuation, otherwise standard wood fencing is acceptable. Draft EIR Table 4.6-10 data shall be consulted to determine appropriate barrier heights. If the assumptions shown in Table 4.6-10 vary considerably, a detailed analysis of exterior and interior mitigation measures should be conducted when tentative maps become available.

**MM 4.6-4(b):** In areas requiring sound attenuation, noise barrier walls shall be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials. Wood is not recommended for construction due to eventual warping and degradation of acoustical performance.

**MM 4.6-4(c):** Tentative map applications for residential uses located along Fiddymont Road would be required to include an analysis of interior noise levels. The report shall be conducted by a qualified acoustical engineer and shall specify the measures required to achieve compliance with the City of Roseville 45 dB L<sub>dn</sub> interior noise level standard.

## Evaluation of Future Traffic Noise Environment at Project Site

### **Traffic Noise Prediction Methodology**

The Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to predict traffic noise levels at the project site. The model is based upon the CALVENO noise emission factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly  $L_{eq}$  values for free flowing traffic conditions, and is considered to be accurate within 1.5 dB in most situations.

### **Traffic Noise Prediction Model Calibration (Fiddymment Road)**

The FHWA Model provides reasonably accurate traffic noise predictions under “ideal” roadway conditions. Ideal conditions are generally considered to be long straight roadway segments with uniform vehicle speeds, a flat roadway surface, good pavement conditions, a statistically large volume of traffic, and an unimpeded view of the roadway from the receiver location. Such conditions appeared to be in effect at this site. Nonetheless, Bollard Acoustical Consultants, Inc. conducted a calibration of the FHWA Model through site-specific traffic noise level measurements and concurrent traffic counts at three locations along Fiddymment Road.

The short-term traffic noise calibration sites are shown on Figure 1. The sites were selected to be representative of the noise exposure of the proposed lots nearest to Fiddymment Road. The detailed results of this procedure are provided in Appendix B. The FHWA Model was found to reasonably predict Fiddymment Road traffic noise levels. As a result, no calibration adjustment was applied to the FHWA Model for the prediction of future Fiddymment Road traffic noise levels at the project site.

### **Predicted Future Exterior Traffic Noise Levels at Proposed Residences**

The FHWA Model was used with future traffic volumes cited in the Sierra Vista Specific Plan FEIR to predict future Fiddymment Road, Market Drive, Upland Drive, and Vista Grande Boulevard traffic noise levels at the proposed residences. The FHWA Model inputs and predicted future traffic noise levels at the project site are shown in Appendix C. The predicted future traffic noise levels are summarized in Table 2. The Table 2 results take into consideration the shielding provided by the proposed 7-foot tall solid noise barriers along the backyards located adjacent to Fiddymment Road and the proposed 6-foot tall solid noise barriers along the backyards of the homes located adjacent to Market Drive, Upland Drive, and Vista Grande Boulevard. The noise barrier effectiveness worksheets for the project are provided in Appendix D.

<b>Table 2</b>				
<b>Predicted Future Exterior Traffic Noise Levels</b>				
<b>Sierra Vista Residential Development Phase A1, A2, B – Roseville, California</b>				
<b>Roadway</b>	<b>Description</b>	<b>Distance to Roadway Centerline (feet)</b>	<b>Offset (dB)<sup>1</sup></b>	<b>Noise Level (dB L<sub>dn</sub>)<sup>2,3</sup></b>
Fiddymment Road	Nearest backyards	80	0	65
	First-floor building facades	100	0	65
	Upper-level building facades	100	+3	74
Market Drive	Nearest backyards	60	0	50
	First-floor building facades	70	0	50
	Upper-level building facades	70	+3	59
Upland Drive	Nearest backyards	60	0	53
	First-floor building facades	70	0	53
	Upper-level building facades	70	+3	61
Vista Grande Boulevard	Nearest backyards	70	0	56
	First-floor building facades	80	0	56
	Upper-level building facades	80	+3	65
Notes:				
<sup>1</sup> A +3 dB offset was applied to the upper-floor facades due to reduced ground absorption at elevated floor levels.				
<sup>2</sup> Detailed FHWA Model inputs and results provided in Appendix C.				
<sup>3</sup> Predicted future traffic noise levels take into account 7-foot tall solid noise barriers along Fiddymment Road and 6-foot tall noise barriers along Marking Drive, Upland Drive, and Vista Grande Boulevard. Noise barrier effectiveness worksheets provided in Appendix D.				
Source: Bollard Acoustical Consultants, Inc. (2018)				

### Traffic Noise Mitigation for Outdoor Activity Areas

As indicated in Table 2, future traffic noise levels at the proposed outdoor activity areas (backyards) nearest to Market Drive, Upland Drive, and Vista Grande Boulevard are predicted to satisfy the City of Roseville normally acceptable noise level standard of 60 dB L<sub>dn</sub>. As a result, no further consideration of noise mitigation measures would be warranted for the proposed residences located nearest to Market Drive, Upland Drive and Vista Grande Boulevard.

The Table 2 results indicate that future traffic noise levels at the proposed outdoor activity areas nearest to Fiddymment Road are predicted to be 65 dB L<sub>dn</sub> after construction of the proposed 7-foot tall solid noise barriers. The proposed 7-foot tall noise barriers along Fiddymment would be compatible with existing noise barriers heights along Fiddymment Road and would result in future exterior traffic noise levels that are predicted to satisfy the City's conditionally acceptable exterior noise level standards.

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## **Predicted Future Interior Traffic Noise Levels within Proposed Residences**

Standard residential construction (stucco siding, STC-27 windows, door weather-stripping, exterior wall insulation, composition plywood roof), results in an exterior to interior noise reduction of at least 25 dB with windows closed and approximately 15 dB with windows open. Therefore, provided future traffic noise levels do not exceed 70 dB  $L_{dn}$  at exterior building facades, standard construction would be adequate to ensure compliance with the City of Roseville General Plan 45 dB  $L_{dn}$  interior noise level standard.

Future traffic noise levels at the first-floor building facades nearest to Fiddymment Road are not predicted to exceed 70 dB  $L_{dn}$ . Therefore, standard construction would be adequate to ensure compliance with the City of Roseville General Plan 45 dB  $L_{dn}$  interior noise level standard at the first-floor facades nearest to Fiddymment Road. However, at unshielded upper-floor facades, future exterior traffic noise levels are predicted to be 74 dB  $L_{dn}$ . In order to satisfy the City's 45 dB  $L_{dn}$  interior noise level standard, it is recommended that those upper-floor windows with a view of Fiddymment Road maintain a minimum STC rating of 32. The locations of the lots requiring upgraded upper-floor window STC ratings are illustrated on Figure 2.

As indicated in Table 2, future traffic noise levels at the building facades nearest to the interior project roadways (Market Drive, Upland Drive, and Vista Grande Boulevard) are not predicted to exceed 70 dB  $L_{dn}$ . Therefore, standard construction would be adequate to ensure compliance with the City of Roseville General Plan 45 dB  $L_{dn}$  interior noise level standard within the residences adjacent to the interior roadways. Nonetheless, mechanical ventilation (air conditioning) should be provided for all residences in this development to allow the occupants to close doors and windows as desired for additional acoustical isolation.

## **Conclusions**

Future exterior and interior traffic noise levels at Phases A1, A2, and B of the Sierra Vista Residential Development portions are predicted to be in compliance with the City of Roseville General Plan Noise Element and the Sierra Vista Specific Plan provided the following specific noise mitigation measures are implemented into the project design:

### *Exterior Noise Environment*

- 1) The construction, as proposed, of 6-foot tall solid noise barriers along the property boundaries of the lots adjacent to Market Drive, Upland Drive, and Vista Grande Boulevard would result in satisfaction of the City's 60 dB  $L_{dn}$  normally acceptable exterior noise standard. See Figures 2 and 3 for sound wall locations.
- 2) The construction, as proposed, of 7-foot tall solid noise barriers along the property boundaries of the lots adjacent to Fiddymment Road would result in satisfaction of the City's 75 dB  $L_{dn}$  conditionally acceptable exterior noise standard. See Figures 2 and 3 for sound wall locations.

*Interior Noise Environment*

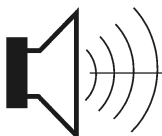
- 1) The upper-floor windows of the lots located nearest to Fiddymment Road should be upgraded to a minimum Sound Transmission Class rating of 32. The lots requiring window upgrades are highlighted on Figure 2.
- 2) A suitable form of forced-air mechanical ventilation shall be provided so that windows can be kept closed as desired for additional acoustical isolation.

These conclusions are based on the future traffic data cited in Appendix C, the project site plans shown on Figures 2 and 3, and on noise reduction data for standard residential dwellings and for typical STC rated window data. Deviations from the project site plan shown on Figures 2 and 3 could cause future traffic noise levels to differ from those predicted in this analysis. In addition, Bollard Acoustical Consultants, Inc. is not responsible for degradation in acoustic performance of the residential construction due to poor construction practices, failure to comply with applicable building code requirements, or for failure to adhere to the minimum building practices cited in this report.

This concludes BAC's noise assessment for the proposed Sierra Vista Residential Development (Phases A1, A2, and B) in Roseville, California. Please contact BAC at (916) 663-0500 or [paulb@bacnoise.com](mailto:paulb@bacnoise.com) with any questions regarding this assessment.

## Appendix A Acoustical Terminology

<b>Acoustics</b>	The science of sound.
<b>Ambient Noise</b>	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
<b>Attenuation</b>	The reduction of an acoustic signal.
<b>A-Weighting</b>	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
<b>Decibel or dB</b>	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
<b>CNEL</b>	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
<b>Frequency</b>	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
<b>L<sub>dn</sub></b>	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
<b>Leq</b>	Equivalent or energy-averaged sound level.
<b>L<sub>max</sub></b>	The highest root-mean-square (RMS) sound level measured over a given period of time.
<b>Loudness</b>	A subjective term for the sensation of the magnitude of sound.
<b>Masking</b>	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
<b>Noise</b>	Unwanted sound.
<b>Peak Noise</b>	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.
<b>RT<sub>60</sub></b>	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
<b>Sabin</b>	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
<b>SEL</b>	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.
<b>Threshold of Hearing</b>	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
<b>Threshold of Pain</b>	Approximately 120 dB above the threshold of hearing.



B O L L A R D

Acoustical Consultants

**Appendix B-1**  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Calibration Worksheet**

**Project Information:** Job Number: 2018-138  
Project Name: Sierra Vista Residential Development (A1, A2, B)  
Roadway Tested: Fiddymont Road  
Test Location: Site 1  
Test Date: July 30, 2018

**Weather Conditions:** Temperature (Fahrenheit): 96  
Relative Humidity: 25%  
Wind Speed and Direction: SSW 3 mph  
Cloud Cover: Partly Cloudy

**Sound Level Meter:** Sound Level Meter: LDL Model 820 (BAC #3)  
Calibrator: LDL Model CAL200  
Meter Calibrated: Immediately before  
Meter Settings: A-weighted, slow response

**Microphone:** Microphone Location: On project site  
Distance to Centerline (feet): 100  
Microphone Height: 5 feet above ground  
Intervening Ground (Hard or Soft): **Soft**  
Elevation Relative to Road (feet): 5

**Roadway Condition:** Pavement Type Asphalt  
Pavement Condition: Good  
Number of Lanes: 5  
Posted Maximum Speed (mph): 50

**Test Parameters:** Test Time: 3:46 PM  
Test Duration (minutes): 15  
Observed Number Automobiles: 500  
Observed Number Medium Trucks: 4  
Observed Number Heavy Trucks: 8  
Observed Average Speed (mph): 50

**Model Calibration:** Measured Average Level ( $L_{eq}$ ): 68.5  
Level Predicted by FHWA Model: 67.1  
**Difference: -1.4 dB**

**Conclusions:** Measured traffic noise levels within 1 dB of predicted traffic noise levels. No model offset warranted.

**Appendix B-2**  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Calibration Worksheet**

**Project Information:** Job Number: 2018-138  
Project Name: Sierra Vista Residential Development (A1, A2, B)  
Roadway Tested: Fiddymont Road  
Test Location: Site 2  
Test Date: July 30, 2018

**Weather Conditions:** Temperature (Fahrenheit): 96  
Relative Humidity: 25%  
Wind Speed and Direction: SSW 3 mph  
Cloud Cover: Partly Cloudy

**Sound Level Meter:** Sound Level Meter: LDL Model 820 (BAC #3)  
Calibrator: LDL Model CAL200  
Meter Calibrated: Immediately before  
Meter Settings: A-weighted, slow response

**Microphone:** Microphone Location: On project site  
Distance to Centerline (feet): 100  
Microphone Height: 5 feet above ground  
Intervening Ground (Hard or Soft): **Soft**  
Elevation Relative to Road (feet): 5

**Roadway Condition:** Pavement Type Asphalt  
Pavement Condition: Good  
Number of Lanes: 5  
Posted Maximum Speed (mph): 50

**Test Parameters:** Test Time: 4:03 PM  
Test Duration (minutes): 15  
Observed Number Automobiles: 537  
Observed Number Medium Trucks: 8  
Observed Number Heavy Trucks: 15  
Observed Average Speed (mph): 50

**Model Calibration:** Measured Average Level ( $L_{eq}$ ): 69.1  
Level Predicted by FHWA Model: 68.1  
**Difference: -1.0 dB**

**Conclusions:** Measured traffic noise levels within 1 dB of predicted traffic noise levels. No model offset warranted.

**Appendix B-3**  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Calibration Worksheet**

**Project Information:** Job Number: 2018-138  
Project Name: Sierra Vista Residential Development (A1, A2, B)  
Roadway Tested: Fiddymont Road  
Test Location: Site 3  
Test Date: July 30, 2018

**Weather Conditions:** Temperature (Fahrenheit): 96  
Relative Humidity: 25%  
Wind Speed and Direction: SSW 3 mph  
Cloud Cover: Partly Cloudy

**Sound Level Meter:** Sound Level Meter: LDL Model 820 (BAC #3)  
Calibrator: LDL Model CAL200  
Meter Calibrated: Immediately before  
Meter Settings: A-weighted, slow response

**Microphone:** Microphone Location: On project site  
Distance to Centerline (feet): 100  
Microphone Height: 5 feet above ground  
Intervening Ground (Hard or Soft): **Soft**  
Elevation Relative to Road (feet): 5

**Roadway Condition:** Pavement Type Asphalt  
Pavement Condition: Good  
Number of Lanes: 5  
Posted Maximum Speed (mph): 50

**Test Parameters:** Test Time: 4:25 PM  
Test Duration (minutes): 15  
Observed Number Automobiles: 527  
Observed Number Medium Trucks: 7  
Observed Number Heavy Trucks: 7  
Observed Average Speed (mph): 50

**Model Calibration:** Measured Average Level ( $L_{eq}$ ): 66.2  
Level Predicted by FHWA Model: 67.3  
**Difference: 1.1 dB**

**Conclusions:** Measured traffic noise levels within 1 dB of predicted traffic noise levels. No model offset warranted.

**Appendix C-1**

**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**

**Noise Prediction Worksheet**

**Project Information:**

Job Number: 2018-138  
 Project Name: Sierra Vista Residential Development (A1, A2, B)  
 Roadway Name: Fiddymment Road

**Traffic Data:**

Year: Future  
 Average Daily Traffic Volume: 44,300  
 Percent Daytime Traffic: 83  
 Percent Nighttime Traffic: 17  
 Percent Medium Trucks (2 axle): 2  
 Percent Heavy Trucks (3+ axle): 1  
 Assumed Vehicle Speed (mph): 50  
 Intervening Ground Type (hard/soft): **Soft**

**Traffic Noise Levels:**

Location	Description	Distance	Offset (dB)	-----L <sub>dn</sub> , dB-----			Total
				Autos	Medium Trucks	Heavy Trucks	
1	Nearest Backyards	80	0	71	62	63	72
2	Nearest 1st-Floor Facades	100	0	70	60	62	71
3	Nearest 2nd-Floor Facades	100	3	73	63	65	74

**Traffic Noise Contours (No Calibration Offset):**

L <sub>dn</sub> Contour, dB	Distance from Centerline, (ft)
75	51
70	110
65	238
60	513

**Notes:** Future average daily traffic volume was obtained from the Sierra Vista Specific Plan FEIR, Table 4.6-11 (Date: May, 2010; ADT: 44,300)

**Appendix C-2**

**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**

**Noise Prediction Worksheet**

**Project Information:**

Job Number: 2018-138  
 Project Name: Sierra Vista Residential Development (A1, A2, B)  
 Roadway Name: Market Drive

**Traffic Data:**

Year: Future  
 Average Daily Traffic Volume: 1,900  
 Percent Daytime Traffic: 83  
 Percent Nighttime Traffic: 17  
 Percent Medium Trucks (2 axle): 2  
 Percent Heavy Trucks (3+ axle): 1  
 Assumed Vehicle Speed (mph): 35  
 Intervening Ground Type (hard/soft): **Soft**

**Traffic Noise Levels:**

Location	Description	Distance	Offset (dB)	-----L <sub>dn</sub> , dB-----			Total
				Autos	Medium Trucks	Heavy Trucks	
1	Nearest Backyards	60	0	55	48	50	57
2	Nearest 1st-Floor Facades	70	0	54	47	49	56
3	Nearest 2nd-Floor Facades	70	3	57	50	52	59

**Traffic Noise Contours (No Calibration Offset):**

L <sub>dn</sub> Contour, dB	Distance from Centerline, (ft)
75	4
70	8
65	16
60	35

**Notes:** Future average daily traffic volume was obtained from the Sierra Vista Specific Plan FEIR, Table 4.6-11 (Date: May, 2010; ADT: 1,900)

**Appendix C-3**

**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**

**Noise Prediction Worksheet**

**Project Information:**

Job Number: 2018-138  
 Project Name: Sierra Vista Residential Development (A1, A2, B)  
 Roadway Name: Upland Drive

**Traffic Data:**

Year: Future  
 Average Daily Traffic Volume: 3,400  
 Percent Daytime Traffic: 83  
 Percent Nighttime Traffic: 17  
 Percent Medium Trucks (2 axle): 2  
 Percent Heavy Trucks (3+ axle): 1  
 Assumed Vehicle Speed (mph): 35  
 Intervening Ground Type (hard/soft): **Soft**

**Traffic Noise Levels:**

Location	Description	Distance	Offset (dB)	-----L <sub>dn</sub> , dB-----			Total
				Autos	Medium Trucks	Heavy Trucks	
1	Nearest Backyards	60	0	57	50	52	59
2	Nearest 1st-Floor Facades	70	0	56	49	51	58
3	Nearest 2nd-Floor Facades	70	3	59	52	54	61

**Traffic Noise Contours (No Calibration Offset):**

L <sub>dn</sub> Contour, dB	Distance from Centerline, (ft)
75	5
70	11
65	24
60	52

**Notes:** Future average daily traffic volume was obtained from the Sierra Vista Specific Plan FEIR, Table 4.6-11 (Date: May, 2010; ADT: 3,400)

**Appendix C-4**

**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)  
Noise Prediction Worksheet**

**Project Information:**

Job Number: 2018-138  
 Project Name: Sierra Vista Residential Development (A1, A2, B)  
 Roadway Name: Vista Grande Boulevard

**Traffic Data:**

Year: Future  
 Average Daily Traffic Volume: 9,500  
 Percent Daytime Traffic: 83  
 Percent Nighttime Traffic: 17  
 Percent Medium Trucks (2 axle): 2  
 Percent Heavy Trucks (3+ axle): 1  
 Assumed Vehicle Speed (mph): 35  
 Intervening Ground Type (hard/soft): **Soft**

**Traffic Noise Levels:**

Location	Description	Distance	Offset (dB)	-----L <sub>dn</sub> , dB-----			Total
				Autos	Medium Trucks	Heavy Trucks	
1	Nearest Backyards	70	0	61	54	56	63
2	Nearest 1st-Floor Facades	80	0	60	53	55	62
3	Nearest 2nd-Floor Facades	80	3	63	56	58	65

**Traffic Noise Contours (No Calibration Offset):**

L <sub>dn</sub> Contour, dB	Distance from Centerline, (ft)
75	10
70	22
65	48
60	103

**Notes:** Future average daily traffic volume was obtained from the Sierra Vista Specific Plan FEIR, Table 4.6-11 (Date: May, 2010; ADT: 9,500). Vista Grande Boulevard referred to as Road "B" in the FEIR.

**Appendix D-1**  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 2018-138  
 Project Name: Sierra Vista Residential Development (A1, A2, B)  
 Roadway Name: Fiddymont Road  
 Location(s): Nearest Backyards

**Noise Level Data:** Year: Future  
 Auto  $L_{dn}$ , dB: 70  
 Medium Truck  $L_{dn}$ , dB: 61  
 Heavy Truck  $L_{dn}$ , dB: 66

**Site Geometry:** Receiver Description: Nearest Backyards  
 Centerline to Barrier Distance ( $C_1$ ): 65  
 Barrier to Receiver Distance ( $C_2$ ): 15  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 0  
 Receiver Elevation<sup>1</sup>: 5  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

**Barrier Effectiveness:**

Top of Barrier Elevation (ft)	Barrier Height <sup>2</sup> (ft)	----- $L_{dn}$ , dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
6	6	64	55	61	<b>66</b>	Yes	Yes	Yes
7	7	62	54	60	<b>65</b>	Yes	Yes	Yes
8	8	61	53	59	<b>64</b>	Yes	Yes	Yes
9	9	60	51	58	<b>62</b>	Yes	Yes	Yes
10	10	59	50	57	<b>61</b>	Yes	Yes	Yes
11	11	58	50	56	<b>60</b>	Yes	Yes	Yes
12	12	57	48	55	<b>59</b>	Yes	Yes	Yes
13	13	56	48	54	<b>59</b>	Yes	Yes	Yes
14	14	56	47	53	<b>58</b>	Yes	Yes	Yes

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

**Appendix D-2**  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 2018-138  
 Project Name: Sierra Vista Residential Development (A1, A2, B)  
 Roadway Name: Market Drive  
 Location(s): Nearest Backyards

**Noise Level Data:** Year: Future  
 Auto L<sub>dn</sub>, dB: 55  
 Medium Truck L<sub>dn</sub>, dB: 48  
 Heavy Truck L<sub>dn</sub>, dB: 50

**Site Geometry:** Receiver Description: Nearest Backyards  
 Centerline to Barrier Distance (C<sub>1</sub>): 45  
 Barrier to Receiver Distance (C<sub>2</sub>): 15  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 0  
 Receiver Elevation<sup>1</sup>: 5  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

**Barrier Effectiveness:**

Top of Barrier Elevation (ft)	Barrier Height <sup>2</sup> (ft)	----- L <sub>dn</sub> , dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
6	6	48	41	45	<b>50</b>	Yes	Yes	Yes
7	7	47	40	44	<b>49</b>	Yes	Yes	Yes
8	8	45	39	43	<b>48</b>	Yes	Yes	Yes
9	9	44	38	42	<b>47</b>	Yes	Yes	Yes
10	10	43	37	40	<b>46</b>	Yes	Yes	Yes
11	11	42	36	39	<b>45</b>	Yes	Yes	Yes
12	12	41	35	38	<b>44</b>	Yes	Yes	Yes
13	13	41	34	37	<b>43</b>	Yes	Yes	Yes
14	14	40	33	36	<b>42</b>	Yes	Yes	Yes

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

**Appendix D-3**  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 2018-138  
 Project Name: Sierra Vista Residential Development (A1, A2, B)  
 Roadway Name: Upland Drive  
 Location(s): Nearest Backyards

**Noise Level Data:** Year: Future  
 Auto  $L_{dn}$ , dB: 57  
 Medium Truck  $L_{dn}$ , dB: 50  
 Heavy Truck  $L_{dn}$ , dB: 52

**Site Geometry:** Receiver Description: Nearest Backyards  
 Centerline to Barrier Distance ( $C_1$ ): 45  
 Barrier to Receiver Distance ( $C_2$ ): 15  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 0  
 Receiver Elevation<sup>1</sup>: 5  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

**Barrier Effectiveness:**

Top of Barrier Elevation (ft)	Barrier Height <sup>2</sup> (ft)	----- $L_{dn}$ , dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
6	6	50	44	47	<b>53</b>	Yes	Yes	Yes
7	7	49	43	47	<b>52</b>	Yes	Yes	Yes
8	8	48	41	46	<b>50</b>	Yes	Yes	Yes
9	9	47	40	44	<b>49</b>	Yes	Yes	Yes
10	10	46	39	43	<b>48</b>	Yes	Yes	Yes
11	11	45	38	42	<b>47</b>	Yes	Yes	Yes
12	12	44	37	41	<b>46</b>	Yes	Yes	Yes
13	13	43	36	40	<b>45</b>	Yes	Yes	Yes
14	14	43	36	39	<b>45</b>	Yes	Yes	Yes

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

**Appendix D-4**  
**FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)**  
**Noise Barrier Effectiveness Prediction Worksheet**

**Project Information:** Job Number: 2018-138  
 Project Name: Sierra Vista Residential Development (A1, A2, B)  
 Roadway Name: Vista Grande Boulevard  
 Location(s): Nearest Backyards

**Noise Level Data:** Year: Future  
 Auto L<sub>dn</sub>, dB: 61  
 Medium Truck L<sub>dn</sub>, dB: 54  
 Heavy Truck L<sub>dn</sub>, dB: 56

**Site Geometry:** Receiver Description: Nearest Backyards  
 Centerline to Barrier Distance (C<sub>1</sub>): 55  
 Barrier to Receiver Distance (C<sub>2</sub>): 15  
 Automobile Elevation: 0  
 Medium Truck Elevation: 2  
 Heavy Truck Elevation: 8  
 Pad/Ground Elevation at Receiver: 0  
 Receiver Elevation<sup>1</sup>: 5  
 Base of Barrier Elevation: 0  
 Starting Barrier Height 6

**Barrier Effectiveness:**

Top of Barrier Elevation (ft)	Barrier Height <sup>2</sup> (ft)	----- L <sub>dn</sub> , dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
6	6	54	48	51	<b>56</b>	Yes	Yes	Yes
7	7	53	46	50	<b>55</b>	Yes	Yes	Yes
8	8	52	45	49	<b>54</b>	Yes	Yes	Yes
9	9	50	44	48	<b>53</b>	Yes	Yes	Yes
10	10	49	43	46	<b>52</b>	Yes	Yes	Yes
11	11	48	42	45	<b>51</b>	Yes	Yes	Yes
12	12	48	41	44	<b>50</b>	Yes	Yes	Yes
13	13	47	40	43	<b>49</b>	Yes	Yes	Yes
14	14	46	39	43	<b>48</b>	Yes	Yes	Yes

**Notes:** 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)