
4th ADDENDUM TO THE SIERRA VISTA SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORT (SCH #2008032115, ADOPTED ON MAY 5, 2010)

Project Title/File Number:	SVSP PCL FD-08, FD-10, FD-21 & FD-23 – JMC TM#3; File #PL20-0119
Project Location:	2150 Vista Grande Boulevard, 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 Santucci Boulevard, west of Market Street, and north of Vista Grande Boulevard; Roseville, CA 95747; Placer County
Project Description:	The proposed project will create 613 single-family residential lots within the Sierra Vista Specific Plan (SVSP). The project entitlements include a General Plan Amendment to change the land use designation of Parcel FD-10 from Low Density Residential (LDR) to Medium Density Residential (MDR), a Specific Plan Amendment to reflect the land use change and to transfer units among several large lot parcels within the SVSP, a Tentative Subdivision Map to create 613 single-family lots on parcels FD-08, FD-10, FD-21 & FD-23, a Major Grading Plan to allow rough grading for FD-10, and a Design Review for Residential Subdivision for FD-10, FD-21, and FD-23 to establish unit designs and modify development standards. Lastly, two Development Agreement Amendments are included to reflect the land use changes and unit transfers, revise development obligations with respect to groundwater and recycled water facilities, and to clarify evaluation of water conservation goals.
Project Applicant:	David Cobbs, Baker Williams Engineering Group
Property Owner:	Steve Schnable, Mourier Investments LLC
Lead Agency Contact:	Kinarik Shallow, Associate Planner; Phone (916) 746-1309

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

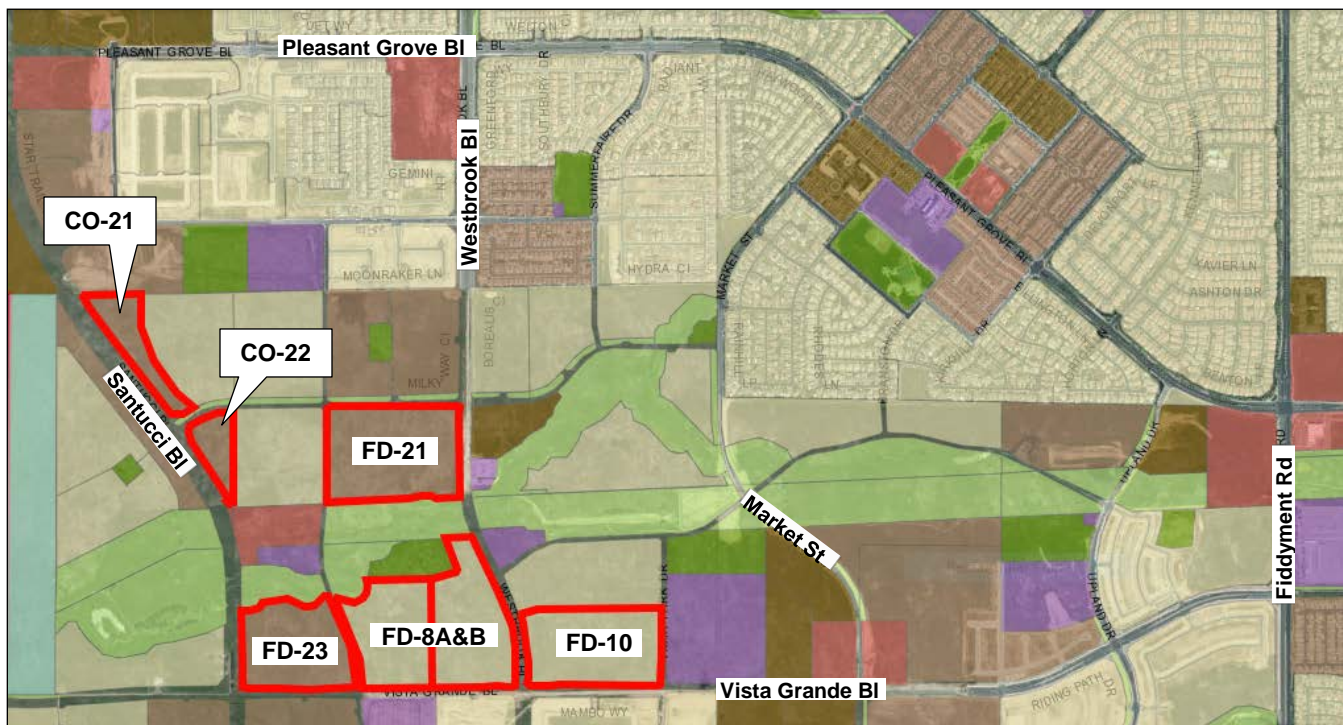
Project Description	3
Purpose and Scope of Addendum	4
Initial Study Checklist	
I. Aesthetics	9
II. Agricultural & Forestry Resources	10
III. Air Quality	11
IV. Biological Resources	12
V. Cultural Resources	14
VI. Energy	15
VII. Geology and Soils	15
VIII. Greenhouse Gases	17
IX. Hazards and Hazardous Materials	18
X. Hydrology and Water Quality	21
XI. Land Use and Planning	23
XII. Mineral Resources	25
XIII. Noise	25
XIV. Population and Housing	27
XV. Public Services	29
XVI. Recreation	30
XVII. Transportation / Traffic	31
XVIII. Tribal Cultural Resources	33
XIX. Utilities and Service Systems	35
XX. Mandatory Findings of Significance	37
Environmental Determination	38
Attachments	38

PROJECT DESCRIPTION

Project Location

The project address is 2150 Vista Grande Boulevard, within the western portion of the Sierra Vista Specific Plan (SVSP), south of Pleasant Grove Boulevard, east of Santucci Boulevard, west of Market Street, and north of Vista Grande Boulevard (see Figure 1).

Figure 1: Project Location (parcels bordered in red)



Background

The SVSP was approved on May 5, 2010 (file #2007PL-044). An Environmental Impact Report (EIR) was certified and a Mitigation Monitoring Program was adopted with the SVSP. The plan area includes 2,064 acres west of Fiddymet 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.

Environmental Setting

The project site is undeveloped, and is dominated by relatively flat topography supporting annual grasslands. There are no structures on the properties. No native oak trees or other trees are present on the subject parcels, as the area has historically been grazed and maintained. New subdivisions are currently under development east and southeast of the project area.

Proposed Project

The proposed project will create 613 single-family residential lots within the SVSP and includes the following entitlements:

- A. General Plan Amendment (GPA)** – The project includes a GPA to amend the land use designation of Parcel FD-10 from Low Density Residential (LDR) to Medium Density Residential (MDR). The proposed changes will add MDR acreage and decrease LDR 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.
- B. Specific Plan Amendment (SPA)** – 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-8 (A&B), FD-10, FD-21, FD-23, CO-21, and CO-22. The Specific Plan Amendment also includes changes to the text, tables, and figures to reflect the land use changes and unit transfers. The applicant has proposed a gated community for Parcel FD-10 and Parcel FD-23, which are not currently shown as gated within the SVSP. Therefore, the project will revise SVSP Figure B-25, which identifies the locations where gated communities are permitted.
- C. Development Agreement (DA) Amendments** – The project includes the amendment of two development agreements within the SVSP: 1.) Westpark Federico and 2.) Mourier Investments LLC. The amendments reflect the proposed land use changes and the change in the number of units within the affected development agreements. The amendment to the Westpark Federico DA includes updates to the parties' obligations with respect to groundwater production wells and recycled water facilities, and updates to the parties' evaluation of water conservation goals.
- D. Major Grading Plan** – The applicant requests a Major Grading Plan approval to allow rough grading of Parcel FD-10, with approximately 60,000 cubic yards of cut and 43,000 cubic yards of fill. Approximately 16,000 cubic yards of earth will be stockpiled on the future park parcel to the northwest of FD-10 (Parcel FD-52).
- E. Tentative Subdivision Map** – The applicant proposes new subdivisions on Parcels FD-8, FD-10, FD-21, and FD-23. Parcel FD-8 will be a 156-unit LDR subdivision; Parcel FD-10 will be a 143-unit MDR subdivision; Parcel FD-21 will be a 187-lot MDR subdivision; and Parcel FD-23 will be a 127-lot MDR subdivision. The Tentative Subdivision Maps are included as Attachment 1.
- F. Design Review for Residential Subdivision** – The project includes unit designs with modified development standards for the proposed subdivisions. The modified development standards are consistent with those approved for similar subdivisions within the SVSP.

PURPOSE AND SCOPE OF ADDENDUM

This Addendum has been prepared to identify and assess the anticipated environmental impacts of the above-described project. The document relies on previous environmental documents and site-specific studies prepared to address in detail the effects or impacts associated with the project as well as updated technical analyses, prepared by qualified consultants. This document has been prepared to satisfy the California Environmental Quality Act (CEQA), (Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (14 CCR 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects.

Where, as here, an EIR addressing an earlier version of the project has been previously prepared and certified, the lead agency considers the relevance of that prior EIR in light of the current modified version of the project and changed circumstances since the time of the preparation of the prior EIR. Pursuant to CEQA Guidelines

§15162-15163, if the lead agency determines, based on substantial evidence, that new information of substantial importance, or changes to the project or surrounding circumstances will require major revisions to the previous EIR due either to a new significant effect or a substantial increase in the severity of a previously identified significant effect on the environment, the lead agency is required to prepare a Subsequent EIR or an EIR Supplement to analyze the project at hand. Pursuant to CEQA Guidelines §15164, if the agency finds no basis for requiring the preparation of either a Subsequent EIR or an EIR Supplement, but some changes or additions are necessary, an Addendum shall be prepared.

The Sierra Vista Specific Plan EIR was adopted by City Council on May 5, 2010. The document analyzed the impacts that would occur as a result of development of the SVSP area. A copy of the SVSP EIR is available for review online at 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 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

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.

OTHER CONSIDERATIONS

Since the publication of the SVSP EIR, 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 SVSP EIR 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 an 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~~ 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 EIR included more analysis than is currently required, because they 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 three new sections (Tribal Cultural Resources, Energy, and Wildfire) and includes new and modified requirements as part of the Transportation/Traffic section. Although the Tribal Cultural Resources section is new, the analysis of this impact area was included in the SVSP EIR as part of the Cultural Resources 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 simply Transportation—refocuses the analysis on vehicle miles traveled (VMT). The General Plan Update (GPU) EIR¹ used the Roseville travel forecasting model to estimate VMT for the City. The VMT data was then normalized to residents as a “per capita” rate. As described in the GPU EIR, and consistent with the VMT reductions in OPR’s *Technical Advisory on Evaluating Transportation Impacts in CEQA*, the City has adopted a VMT significance threshold of 12.8 VMT/capita. This threshold represents a 15 percent reduction to baseline per capita VMT. The GPU EIR concluded that buildout of the remaining undeveloped areas of the City, consistent with existing land use designations and existing development agreements, would exceed the City’s adopted threshold resulting in a Significant Impact in both the constrained and unconstrained buildout scenarios; and that mitigation requiring land use changes was not feasible because of existing development agreements in place for the undeveloped areas of the City.

As stated in the GPU EIR and pursuant to the tiering provisions of CEQA, projects that are consistent with the General Plan do not require further VMT analysis. Quantitative analyses are not required if it can be demonstrated that a project would generate VMT which is equivalent to or less than what was assumed in the GPU EIR. The proposed project includes a General Plan Amendment to amend the land use designation of Parcel FD-10 from Low Density Residential (LDR) to Medium Density Residential (MDR) and a Specific Plan Amendment to allow the transfer of units between several large lot parcels located within the SVSP. The GPU EIR assumed a rate of 2.7 persons per unit when calculating VMT per capita. The proposed project will involve transferring of units, but does not change the total number of units anticipated for buildout of the SVSP or analyzed in the GPU EIR; therefore, it can be concluded that the project is consistent with GPU EIR analysis as it relates to VMT, and the project does not require further VMT analysis.

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.

¹ General Plan Update EIR: www.roseville.ca.us/GeneralPlan

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?	SVSP EIR 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	SVSP EIR MM 4.13-1

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 change 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 for commercial and office uses to have glare shields and all new buildings to be constructed with low-glare materials. However, MM 4.13-1 is inapplicable to the proposed project given that it is a residential subdivision. In any case, lighting is conditioned to comply with City standards (i.e., CDG) to limit the height of light standards and also require cut-off lenses and glare shields to minimize light and glare impacts. Based on the reasons listed in this section, there would be no new significant impacts not previously identified in the SVSP EIR. 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 EIR 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?	SVSP EIR Section 4.1	No	No	No	SVSP EIR MM 4.1-2
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. The project site is not used for agricultural purposes, does not include agricultural zoning, is not within or adjacent to one of the areas of the City designated as a protected farmland category on the Placer County Important Farmland map, is not within

or adjacent to land within a Williamson Act Contract, and is not considered forest land. For these reasons, no subsequent or supplemental EIR is required for the project with respect to agricultural and forestry resources.

Mitigation Measures: SVSP 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?	SVSP EIR 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	SVSP EIR MM 4.4-1, MM 4.5-1, and MM 4.5-2
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	SVSP EIR MM 4.4-1, MM 4.5-1, and MM 4.5-2
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.

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. These mitigation measures can be found in the table of applicable mitigation measures included with this Addendum (see Attachment 1).

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?	SVSP EIR Section 4.8	No	No	No	SVSP EIR MM 4.8-1 to 4.8-7
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	SVSP EIR MM 4.8-4 to 4.8-7
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	SVSP EIR MM 4.8-1 to 4.8-7

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	SVSP EIR MM 4.8-4 to 4.8-7
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 project would not result in any new or modified impacts to biological resources beyond what was previously analyzed in the SVSP EIR. In addition, it should be noted that there are no natural features present onsite. The project site is devoid of trees, vernal pools, and other water features. The site is primarily populated by non-native annual grasses and aerial photography shows evidence of previous ground disturbance on the site due to construction of the adjacent roadways. The mitigation measures adopted with certification of the SVSP EIR remain applicable and no additional impacts will occur. Impacts remain less than significant upon compliance with the applicable mitigation measures.

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 impacts to biological resources to less than significant. Not all of these measures are applicable to the currently proposed project, as the proposed development covers a smaller area within the SVSP project area. The Curry Creek open space is not within or adjacent to the proposed project, so none of the measures specific to the Curry Creek area apply to the current project. This includes portions of MM 4.8-3 dealing with bird species which nest in Curry Creek marsh habitat, and MM 4.14-3 to avoid light spillage into Curry Creek. The remaining adopted measures are 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?	SVSP EIR 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	SVSP EIR MM 4.9-1 to 4.9-2
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Same	No	No	No	SVSP EIR MM 4.9-1 to 4.9-2
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	Same	No	No	No	SVSP EIR MM 4.9-1 to 4.9-2
<p>Discussion: 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. Consistent with state law, notice of the proposed project was mailed on September 22, 2020 to tribes which had requested such notice pursuant to Assembly Bill 32 (AB32) and Senate Bill 18 (SB18). No request for consultation was received during the request for consultation period.</p> <p>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.</p>					

VI. Energy

	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 potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	SVSP EIR Section 4.12.5	No	No	No	None
b) Conflict with or obstruct a state or local plan for renewable energy or energy inefficiency?	SVSP EIR Section 4.12.5	No	No	No	None

Discussion: The SVSP EIR concluded that development and implementation of the SVSP would add land uses that would increase the demand for electrical services. However, Roseville Electric determined there were no constraints to providing a reliable energy source to serve the development proposed in the SVSP area. Electricity in the area is provided by Roseville Electric and natural gas is provided by Pacific Gas & Electric (PG&E). Impacts 4.12-5.1 and 4.12-5-2 in the SVSP EIR evaluated the potential for development of the SVSP to increase demands for electricity and natural gas and found these impacts to be less than significant.

The project would allow development of 614 single-family residential units. The project would consume energy both during project construction and during project operation. During construction, fossil fuels, electricity, and natural gas would be used by construction vehicles and equipment. However, the energy consumed during construction would be temporary, and would not represent a significant demand on available resources. There are no unusual project characteristics that would necessitate the use of construction equipment or methods that would be less energy-efficient or which would be wasteful.

The completed project would consume energy related to building operation, exterior lighting, landscape irrigation and maintenance, and vehicle trips to and from the use. In accordance with California Energy Code Title 24, the project would be required to meet the Building Energy Efficiency Standards. This includes standards for water and space heating and cooling equipment; insulation for doors, pipes, walls, and ceilings; and appliances, to name a few. The project would also be eligible for rebates and other financial incentives from both the electric and gas providers for the purchase of energy-efficient appliances and systems, which would further reduce the operational energy demand of the project. The project was distributed to both PG&E and Roseville Electric for comments, and was found to conform to the standards of both providers; energy supplies are available to serve the project.

The proposed project will not result in inefficient, wasteful, or unnecessary consumption of energy, nor would it conflict with or obstruct State or local plans for renewable energy or energy efficiency. Based on the reasons listed in this section, there would be no new significant impacts not

previously identified in the SVSP EIR. 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 EIR have occurred” relative to energy impacts.

Mitigation Measures: No mitigation measures are required for this Project.

VII. 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:	SVSP EIR 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>Discussion: 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>Mitigation Measures: None required for this project.</p>					

VIII. 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?	SVSP EIR Section 4.4	No	No	No	SVSP EIR MM 4.4-1, 4.5-1 and 4.5-2
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>Discussion: 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.</p>					

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. 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), 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.

IX. 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?	SVSP EIR 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	SVSP EIR MM 4.10-1
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

<p>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?</p>	<p>Same</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p>None</p>
<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.

Standard construction activities would require the use of hazardous materials such as fuels, oils, lubricants, glues, paints and paint thinners, soaps, bleach, and solvents. These are common household and commercial materials routinely used by both businesses and average members of the public. The materials only pose a hazard if they are improperly used, stored, or transported either through upset conditions (e.g. a vehicle accident) or mishandling. In addition to construction use, the operational project would result in the use of common hazardous materials as well, including bleach, solvents, and herbicides. Regulations pertaining to the transport of materials are codified in 49 Code of Federal Regulations 171–180, and transport regulations are enforced and monitored by the California Department of Transportation and by the California Highway Patrol. Specifications for storage on a construction site are contained in various regulations and codes, including the California Code of Regulations, the Uniform Fire Code, and the California Health and Safety Code. These same codes require that all hazardous materials be used and stored in the manner specified on the material packaging. Existing regulations and programs are sufficient to ensure that potential impacts as a result of the use or storage of hazardous materials are reduced to less than significant levels.

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 EIR 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.

X. 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?	SVSP EIR Section 4.13	No	No	No	None
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)?	Same	No	No	No	None
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?	Same	No	No	No	None
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?	Same	No	No	No	None
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?	Same	No	No	No	None

f) Otherwise substantially degrade water quality?	Same	No	No	No	SVSP EIR MM 4.13-1
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?	Same	No	No	No	None
h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?	Same	No	No	No	None
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 project falls within the development footprint of the SVSP, and does not result in any changes to the scope or scale of impacts, and the prior conclusions remain appropriate.

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.

XI. 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?	SVSP EIR 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	SVSP EIR MM 4.1-3, 4.6-1 and 4.6-2
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, construction noise, and commercial land use noise. The 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.

The project area has been planned for development, including adequate roads, pedestrian paths, and bicycle paths to provide connections within the community. The project involves frontage improvements including new driveways, sidewalks, and pedestrian connections. As such, the project will not physically divide an established community.

As described above, changes introduced by the project and/or new circumstances relevant to the project would not, as compared to the SVSP EIR, result in a new significant impact or significant impacts that are substantially more severe than significant impacts previously disclosed. In addition, there is no new information of substantial importance showing that the project would have one or more significant effects not previously discussed or that any previously examined significant effects would be substantially more severe than significant effects shown in the EIR. Nor is there new information of substantial importance showing (i) 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 (ii) that mitigation measures or alternatives considerably different from those analyzed in the EIR would substantially reduce one or more significant effects, but the proponents decline to adopt the mitigation measure or alternative.

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.

XII. 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?	SVSP EIR 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>Discussion: 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 that “none of the conditions described in Section 15162 calling for preparation of a subsequent FEIR have occurred” relative to mineral resources.</p> <p>Mitigation Measures: None required for this project.</p>					

XIII. 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?	SVSP EIR Section 4.6	No	No	No	SVSP EIR MM 4.1-3, 4.6-1 and 4.6-4
b) Exposure of persons to or generation of excessive ground borne vibration of ground borne noise levels?	Same	No	No	No	SVSP EIR MM 4.6-1 and 4.6-4
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	SVSP EIR MM 4.6-1 and 4.6-4
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, including Vista Grande Boulevard. Mitigation was found to reduce noise volumes to levels within General Plan standards, and so impacts were found to be less than significant.

An environmental noise assessment was prepared by Bollard Acoustical Consultants, Inc. to evaluate noise levels associated with traffic on the adjacent roadways (Attachment 4). 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 six-foot 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.

XIV. 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, through extension of roads or other infrastructure)?	SVSP EIR 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

Discussion: 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. No existing buildings or residents are present on the project site; therefore, no residences or communities would be displaced.

Mitigation Measures: None required for this project.

XV. 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?	SVSP EIR Section 4.11	No	No	No	None
b) Police protection?	Same	No	No	No	None
c) Schools?	Same	No	No	No	SVSP EIR MM 4.11-3
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. Existing City codes and regulations require adequate water pressure in the water lines, and construction must comply with the Uniform Fire and Building Codes used by the City of Roseville. Additionally, the applicant is required to pay a fire service construction tax, which is used for purchasing capital facilities for the Fire Department. Sales taxes and property taxes resulting from development will add revenue to the General Fund, which provides funding for police services. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

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. Although the project involves a change in land use for

Parcel FD-10 from LDR to MDR, 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.

The project was routed to the School District for review, and no issues were identified. The project will be required to pay per-unit school fees to mitigate any impacts. Under state law, such payments are deemed to constitute “full and complete mitigation” of impacts to school facilities (Gov. Code, § 65995, subd. (h)). In addition, 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.

The developer will be required to pay fees into a Community Facilities District, which provides funding for park services. Future park and recreation sites and facilities have already been identified as part of the Specific Plan process. The City charges fees for end-users for other services, such as garbage and greenwaste collection, in order to fund those services. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

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.

XVI. 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?	SVSP EIR 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

Discussion: 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 involves unit transfers

but will not change the total number of units anticipated for buildout of the SVSP area. As such, 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.

Mitigation Measures: None required for this project.

XVII. 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?	SVSP EIR Section 4.3	No	No	No	SVSP EIR MM 4.3-1 to 4.3-5
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	SVSP EIR MM 4.3-1 to 4.3-5
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

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: Mitigation was included for each impacted facility (see SVSP EIR MM 4.3-1 to 4.3-5), but these measures have already been incorporated into the City’s Capital Improvement Program and fee programs. The measures are no longer necessary to impose on individual projects, as a mechanism for their funding and construction is already implemented.

XVIII. 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)?	SVSP EIR 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. Notice of the proposed project was mailed to tribes which had requested such notice pursuant to Assembly Bill 52 (AB 52) and Senate Bill (SB 18) on September 22, 2020. No request for consultation was received during the request for consultation period. 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.

XIX. 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?	SVSP EIR 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?	SVS EIR 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?	SVSP EIR 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?	SVSP EIR 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?	SVSP EIR 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?	SVSP EIR Section 4.12.4	No	No	No	SVSP EIR MM 4.12.4-1 to 4.12.4-2
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 City's Environmental Utilities Department staff reviewed the proposed project and concluded it will be reducing the overall water demand for the project area because it will be converting some of the anticipated land uses with a higher water demand to a lower water demand (20.46 acres of LDR to MDR). 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.

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:

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.

[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.

[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:

1. Applicable SVSP Mitigation Measures
2. Tentative Subdivision Maps
3. Design Review Package
4. Environmental Noise Assessment

NOTE: Attachments 2 and 3 are not included with this Addendum as they are already exhibits to the Planning Commission Staff Report.

TABLE OF APPLICABLE MITIGATION MEASURES

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to City	Staff Use Only
<p>MM 4.4-1 Dust and Construction Control Measures</p> <p>In accordance with the PCAPCD, the applicant shall comply with all applicable rules and regulations as listed above (e.g., Rule 202, 218 and 228). In addition, at the time of tentative map the applicant(s) shall implement a minimum of five (5) of the following measures unless superseded by state or other more stringent standards:</p> <p>The following mitigation measures shall be implemented to reduce short-term construction-related air quality impacts. In addition, dust control measures are required to be implemented by all projects in accordance with the City of Roseville Grading Ordinance, and the PCAPCD Fugitive Dust Rule 228.</p> <ul style="list-style-type: none"> • Applicant shall submit to PCAPCD a Construction Emission / Dust Control Plan within 30 days prior to groundbreaking. If the PCAPCD does not respond within 20 days, the plan shall be considered approved. The plan must address the minimum requirements found in section 300 and 400 of District Rule 228, Fugitive Dust (www.placer.ca.gov/airpollution/airpolut.htm). The applicant shall keep a hard or electronic copy of Rule 228, Fugitive Dust on-site for reference. • The Construction Emission/Dust Control Plan shall include a comprehensive inventory (i.e. make, model, year, emission rating) of all heavy-duty off-road equipment (50 horsepower (HP) or greater) that will be used an aggregate of 40 or more hours for the construction project. If any new equipment is added after submission of the inventory, the prime contractor shall the prime contractor shall contact the APCD prior to the new equipment being utilized. The project representative shall provide PCAPCD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. The plan shall demonstrate that the heavy-duty (> 50 HP) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20% NO_x reduction and 45% particulate reduction compared to the most recent ARB fleet average. PCAPCD shall be contacted for average fleet emission data. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. Contractors can access the Sacramento Metropolitan Air Quality Management District's web site to determine if their off-road fleet meets the requirements listed in this measure (http://www.airquality.org/ceqa/Construction_Mitigation_Calculator.xls). <p>The following measures are also included to reduce construction-related ROG, NO_x, PM10 and PM2.5 emissions:</p> <ul style="list-style-type: none"> • All construction equipment shall be maintained in good operating condition. Contractor shall ensure that all construction equipment is being properly serviced and maintained as per the manufacturer's specifications. Maintenance records shall be available at the construction site for verification. This measure will reduce combustion emissions of all criteria air pollutants. • Prior to the issuance of any grading permits, all applicants shall submit construction plans denoting the proposed schedule and projected equipment use. Construction contractors shall provide evidence that low emission mobile construction will be used, or that their use was investigated and found to be infeasible for the project. Low emission equipment is defined as meeting the California Air Resources Board's Tier III standards. Contractors shall also conform to any construction measures imposed by the PCAPCD as well as City Planning Staff. This measure will primarily reduce ROG, NO_x, PM10, and PM2.5 exhaust emissions. • Paints and coating shall be applied either by hand or by high volume, low-pressure spray. This measure will reduce evaporative ROG emissions. • All construction shall comply with the following measures to reduce fugitive dust related emissions of PM10 and PM2.5: <ul style="list-style-type: none"> ○ Maintain a minimum 24-inch freeboard on soil haul trucks or cover payloads using tarps or other suitable means. ○ Suspend grading operations during high winds (greater than 15 mph). ○ Sweep streets as necessary if silt is carried off-site to adjacent public thoroughfares or occurs as a result of hauling. 	<p>The applicants shall submit construction management plans as part of the Grading Permit application.</p> <p>Engineering will review plans for inclusion of these measures prior to issuance of permits or approval of plans.</p>	<p><i>Pre-Construction:</i> Prior to issuance of Grading Permits or Improvement Plans.</p> <p>Add as note on Improvement Plans.</p>	<p>Engineering</p>	<p>Dust Control Plan and proof of submittal to PCAPCD</p>	

- Dispose of surplus excavated material in accordance with local ordinances and use sound engineering practices.
- Schedule activities to minimize the amounts of exposed excavated soil during and after the end of work periods.
- Phase grading into smaller areas to prevent the susceptibility of larger areas to erosion over extended periods of time.
- Pave or apply gravel to any on-site haul roads.
- Reestablish ground cover on the construction site through seeding and water.
- Clean earth moving construction equipment with water or sweep clean, once per day, or as necessary (e.g., when moving onsite), consistent with National Pollutant Discharge Elimination System Best Management Practices and the Roseville Grading Ordinance. Water shall be applied to control dust as needed to prevent dust impacts offsite. Operational water truck(s), shall be on-site, as required, to control fugitive dust. Construction vehicles leaving the site shall be cleaned, as needed, to prevent dust, silt, mud, and dirt from being released or tracked off-site.
- Spread soil binders on unpaved roads and employee/equipment parking areas. Soil binders shall be non-toxic in accordance with state and local regulations. Apply approved chemical soil stabilizers, or vegetated mats, etc. according to manufacturers' specifications, to all-inactive construction areas (previously graded areas which remain inactive for 96 hours).
- Minimize diesel idling time to a maximum of five minutes.
- Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary diesel power generators, if feasible.
- An applicant representative, ARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely (i.e., once per week) evaluate project related off-road and heavy-duty on-road equipment emissions for compliance with this requirement for projects grading more than 20 acres in size, regardless of how many acres are to be disturbed daily.
- Construction equipment exhaust emissions shall not exceed the PCAPCD Visible Emissions Rule 202. Fugitive dust is not to exceed 40% opacity and not go beyond property boundary at any time. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified and the equipment must be repaired within 72 hours.

The following measures will be required:

1. Include the following standard note on the Improvement/Grading Plan: *If required by the Public Works Department, the contractor shall hold a pre-construction meeting prior to grading activities. The contractor shall invite the Placer County APCD to the pre-construction meeting in order to discuss the construction emission/dust control plan with employees and/or contractors.*
2. Prior to building permit approval, the applicant shall show, on the plans submitted to the Building Department, that electrical outlets shall be installed on the exterior walls of both the front and back of all residences or all commercial buildings to promote the use of electric landscape maintenance equipment.
3. Prior to building permit approval, the applicant shall show, on the plans submitted to the Building Department, provisions for construction of new residences, and where natural gas is available, the installation of a gas outlet for use with outdoor cooking appliances, such as a gas barbecue or outdoor recreational fire pits.
4. Prior to building permit approval, in accordance with District Rule 225, only U.S. EPA Phase II certified wood burning devices shall be allowed in single-family residences. The emission potential from each residence shall not exceed a cumulative total of 7.5 grams per hour for all devices. Masonry fireplaces shall have either an EPA certified Phase II wood burning device or shall be a U.L. Listed Decorative Gas Appliance. (Rule 225)
5. Wood burning or Pellet appliances shall not be permitted in multi-family developments. Only natural gas or propane fired fireplace appliances are permitted. These appliances shall be clearly delineated on the Floor Plans submitted in conjunction with the Building Permit application. (Rule 225 / section 302.2)
6. Prior to the issuance of a Building Permit, the applicant shall show that all flat roofs with parapets shall include a white or silver cap sheet to reduce energy demands.
7. Diesel trucks shall be prohibited from idling more than five minutes. Prior to the issuance of a Building Permit, the applicant shall show that all truck loading and unloading docks shall be

<p>equipped with one 110/208 volt power outlet for every two dock doors. Diesel Trucks idling for more than five minutes shall be required to connect to the 110/208 volt power to run any auxiliary equipment. 2'x3' signage which indicates "Diesel engine Idling Limited to a Maximum of 5 Minutes" shall be shown on the building elevations and shall be submitted to the Placer County APCD prior to the issuance of Building Permits for the project.</p> <p>8. Prior to approval of Improvement Plans, an enforcement plan shall be established, and submitted to the APCD for review, in order to evaluate project-related on-and-off- road heavy-duty vehicle engine emission opacities on a weekly basis, using standards as defined in California Code of Regulations, Title 13, Sections 2180 – 2194. An Environmental Coordinator, hired by the prime contractor or property owner, and who is CARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project related off-road and heavy duty on-road equipment emissions for compliance with this requirement. Operators of vehicles and equipment found to exceed opacity limits will be notified by APCD and the equipment must be repaired within 72 hours. (California Code of Regulations, Title 13, Sections 2180 – 2194)</p> <p><i>The project shall comply with all applicable Placer County Air Pollution Control District rules and regulations, and shall obtain applicable permits and/or clearances from the District prior to the start of construction.</i></p> <ul style="list-style-type: none"> • The contractor shall use CARB ultra-low sulfur diesel fuel for all diesel-powered equipment. In addition, low sulfur fuel shall be utilized for all stationary equipment. (California Standards for Motor Vehicle Diesel Fuel, title 13, article 4.8, chapter 9, California Code of Regulations). • Processes that discharge 2 pounds per day or more of air contaminants, as defined by Health and Safety Code Section 39013, to the atmosphere may require a permit. Permits are required for both construction and operation. Developers/contractors should contact the District prior to construction and obtain any necessary permits prior to the issuance of a Building Permit. (Rule 501) • Pursuant to the Placer County Air Pollution Control District Rule 501, General Permit Requirements, the proposed project may need a permit from the District prior to construction. In general, any engine greater than 50 brake horsepower or any boiler with heat greater than 1,000,000 Btu per hour shall require a permit issued by the District. (Rule 501) • All on-site stationary equipment which is classified as 50 hp or greater shall either obtain a state issued portable equipment permit or a Placer County APCD issued portable equipment permit. (California Portable Equipment Registration Program, Section 2452). • The contractor shall utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary diesel power generators if feasible. • During construction, the contractor shall minimize idling time to a maximum of 5 minutes for all diesel powered equipment. • During construction, traffic speeds on all unpaved surfaces shall be limited to 15 miles per hour or less. (Rule 228 / section 401.2) 					
<p>MM 4.6-2 & 4.4-1 Commercial Noise Controls</p> <p>For all commercial uses within 150 feet of residential uses, the developer shall implement the following or equally effective measures:</p> <ul style="list-style-type: none"> • In general, where commercial land uses adjoin residential property lines, the following measures should be included in the design of the commercial use. If the primary noise sources are parking lot noise, HVAC equipment and light truck deliveries, then 6-7 foot tall masonry walls shall be constructed to provide adequate isolation of parking lot and delivery truck activities. HVAC equipment shall be located either at ground level, or when located on roof-tops the building facades shall include parapets for shielding. • Where commercial uses adjoin common residential property lines, and loading docks or truck circulation routes face the residential areas, the following mitigation measures shall be included in the project design: <ul style="list-style-type: none"> ○ Loading docks and truck delivery areas shall maintain a minimum distance of 30 feet from residential property lines; ○ Property line barriers shall be 6 to 8 feet in height. Circulation routes for trucks should be located a minimum of 30-feet from residential property lines; 	<p>Project plans will be reviewed for compliance.</p>	<p><i>Pre-Construction:</i> Prior to issuance of Improvement Plans and/or Building Permits Add as note on Improvement Plans and Building Plans</p>	<p><u>Engineering</u> will review Improvement Plans for compliance with wall requirements. <u>Building</u> will review Building Plans for compliance with HVAC requirements.</p>	<p>Acoustical Study if loading docks or truck delivery routes are less than 100 feet from residential property lines</p>	

<ul style="list-style-type: none"> o All heating, cooling and ventilation equipment shall be located within mechanical rooms where possible; o All heating, cooling and ventilation equipment shall be shielded from view with solid barriers; o Emergency generators shall comply with the local noise criteria at the nearest noise-sensitive receivers; <p>In cases where loading docks or truck delivery circulation routes are located less than 100 feet from residential property lines, an acoustical evaluation shall be submitted to verify compliance with the City of Roseville Noise Level Performance Standards.</p>					
<p>MM 4.6- 4: Traffic Noise Attenuation</p> <p>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.</p> <p>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.</p> <p>MM 4.6-4c: 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 Ldn interior noise level standard.</p>	<p>The developer shall construct walls in locations consistent with the walls exhibit of the Specific Plan, which shall be a minimum of six feet tall per the Draft EIR. The developer shall include wall and/or landscaped berm details as part of Improvement Plans which demonstrate consistency with the design requirements of the measure.</p>	<p><i>Pre-Construction:</i> Prior to issuance of Improvement Plans.</p> <p>Add as note on Improvement Plans and Building Plans</p>	<p>Engineering to review plans for consistency with measure.</p>	<p>An acoustical Study, if conditions or plans deviate from Specific Plan or EIR.</p>	
<p>WMM 4.7-13 Riparian Habitat Policies</p> <p>To protect riparian vegetation within the SOI Amendment Area SVSP and Urban Reserve areas, the following policies shall be implemented:</p> <ol style="list-style-type: none"> a) The project applicant shall provide for temporary fencing along the top of the bank during construction of those areas of the proposed project adjacent to riparian habitat to discourage access to the riparian habitat by humans and pets. b) The project applicant shall provide for permanent fencing and/or a landscape barrier to discourage access to the riparian habitat by humans and pets. The fencing and/or landscape barrier shall be placed at the top of the bank of the creeks along those portions of the site adjacent to riparian habitat. The proposed recreation trail shall be on the project site side of the fence/landscape barrier. The fencing and/or landscape barrier shall be constructed of wood or other natural materials and shall allow for the viewing of the riparian habitat while discouraging access. c) Interpretive signs and displays shall be posted along the border of the riparian area to educate the public and route access away from sensitive areas. These informative signs will be posted at intervals determined appropriate by the City of Roseville Parks and Recreation Director along the border with information regarding the objectives of creek and riparian habitat protection. Signs should also include information regarding the importance of restricting access to the riparian area by household pets. Such signs will be made of wood or similar natural material, and be maintained by the Applicant. d) Lighting adjacent to riparian buffers should be shielded away from the riparian areas. 	<p>The applicants shall design the project to avoid and preserve riparian vegetation.</p>	<p><i>Pre-Construction:</i> Temporary fencing shall be installed prior to construction. Permanent measures shall be shown on Improvement Plans.</p> <p>Add as note on Improvement Plans.</p>	<p>Engineering and Parks</p>	<p>None</p>	
<p>Use Low-Glare Materials for New Development</p> <p>In order to reduce the effects of daytime glare from development of commercial or office uses within the SVSP Area, building developers should make use, when feasible, of low-glare materials.</p> <p>MM 4.14-3 Avoid Light Spill Over into Curry Creek and Open Space Areas</p> <p>Outdoor lighting shall be placed, designed and directed so as to avoid light spillover into the habitat of Curry Creek and the Open Space Preserve areas located immediately adjacent to the open space, as shown on the Land Use Map as parcels KT-1, KT-40, KT-30, KT-41, DF-1, DF-2, DF-40, CG-1, CG-82m JM-21, JM-3, and JM-4.</p>	<p>Comply with the measure</p>	<p><i>Pre-Construction:</i> Ensure fixtures shown on Improvement Plans and Building Plans comply with the measure.</p> <p>Add as note on Improvement Plans and Building Plans</p>	<p>Engineering and Building</p>	<p>None</p>	

<p>MM 4.6-1 Construction Noise Reduction</p> <p>MM 4.6-1(a): Construction activities shall comply with the requirements of the City of Roseville Noise Ordinance.</p> <p>MM4.6-1(b): Locate fixed construction equipment such as compressors and generators as far as possible from sensitive receptors. Shroud or shield all impact tools, and muffle or shield all in-take and exhaust ports on power construction equipment.</p> <p>MM 4.6-1(c): Designate a construction disturbance coordinator and conspicuously post the Coordinator's contact information around the project site and in adjacent public spaces. The disturbance coordinator will receive all public complaints about construction noise disturbances, and will be responsible for determining the cause of the complaint, and implementing any feasible measures to be taken to alleviate the problem.</p> <p>MM 4.6-1(d): Well drilling shall occur prior to construction of the adjacent subdivision, to the extent feasible. If construction timing for the wells occurs after subdivision construction, then measures to reduce noise shall include; hanging flexible sound control curtains around the drilling apparatus, and the drill rig, to the degree feasible, as determined by the Environmental Utilities Director, if located within 1,000-feet of an occupied residence.</p>	<p>Discuss during pre-construction meeting and comply with the measure.</p>	<p><i>Pre-Construction and Construction:</i> During construction for MM 4.6-1(d), and prior to issuance of Improvement Plans and/or Building Permits for all others.</p> <p>Add as note on Improvement Plans and Building Plans</p>	<p>Engineering staff to discuss this measure during pre-construction meeting and ensure posting has occurred.</p> <p>Environmental Utilities to address well drilling.</p>	<p>None</p>	
<p>MM 4.8-3 Avoid Nesting Sites</p> <p>To ensure that fully protected bird and raptor species are not injured or disturbed by construction in the vicinity of nesting habitat, the project applicant shall implement the following measures:</p> <p><i>Raptors</i></p> <p>a) When feasible, all tree removal shall occur between August 30th and February 15th to avoid the breeding season of any raptor species that could be using the area, and to discourage hawks from nesting in the vicinity of an upcoming construction area.</p> <p>b) For Swainson's hawk, if avoidance of tree removal outside the breeding season is not feasible, and a nest is present, the applicants would be required to obtain a 2081 permit from CDFG to mitigate for potential "take" under CESA. If no nesting is occurring, a take permit would not be required.</p> <p>c) Prior to the beginning of mass grading, including grading for major infrastructure improvements, during the period between February 15th and August 30th, all trees and potential burrowing owl habitat within 350 feet of any grading or earthmoving activity shall be surveyed for active raptor nests or burrows by a qualified biologist no more than 30-days prior to disturbance. If active raptor nests or burrows are found, and the site is within 350-feet of potential construction activity, a highly visible temporary fence shall be erected around the tree or burrow(s) at a distance of up to 350-feet, depending on the species, from the edge of the canopy to prevent construction disturbance and intrusions on the nest area.</p> <p>d) Preconstruction and non-breeding season exclusion measures shall be developed in consultation with CDFG, and shall preclude burrowing owl occupation of the portions of the project site subject to disturbance such as grading. Burrowing owls may be passively excluded from burrows in construction areas by placing one-way doors in the burrows according to CDFG protocol. The one-way doors must be in place for a minimum of three days. All burrows that may be occupied by burrowing owls regardless of whether they exhibit signs of occupation must be cleared with the one way doors. Burrows that have been cleared through the use of the one-way doors shall then be closed or backfilled to prevent owls from entering the burrow.</p> <p>e) No construction vehicles shall be permitted within restricted areas (i.e., raptor protection zones) unless directly related to the management or protection of the legally protected species.</p> <p>f) If a legally protected species nest is located in a tree designated for removal, the removal shall be deferred until after August 30th or until the adults and young of the year are no longer dependent on the nest site as determined by a qualified biologist.</p> <p><i>Black Rails and Tri-colored Blackbirds</i></p> <p>Prior to earth moving that would disturb marsh habitat, a qualified biologist shall conduct surveys to determine the presence of the California black rail. If either of these species is found, all earth moving within 250 feet shall stop and measures, including establishing nest protection buffers along both sides of Curry Creek during the nesting season (generally February 1 through August 31st) shall be implemented.</p> <p><i>Rookeries</i></p> <p>No heron rookeries are present within the plan area. Prior to earthmoving that would disturb marsh habitat or tree removal of the eucalyptus grove, pre-construction surveys should be conducted to verify</p>	<p>Results of preconstruction surveys shall be submitted prior to the issuance of a grading permit or Improvement Plans. Applicable construction restrictions shall be reflected within plans. The applicants shall prepare annual reports on the status and success of mitigation and shall submit these reports to USFWS and CDFG. The applicants shall coordinate with USFWS and CDFG to modify as necessary any mitigation plans in an effort to attain mitigation success.</p>	<p><i>Pre-Construction and Construction:</i> Surveys required prior to construction. If surveys are positive for birds, then remainder of mitigation steps are required prior to construction.</p> <p>Add as note on Improvement Plans.</p>	<p>Engineering</p>	<p>Nesting bird surveys</p>	

that no rookeries have been established. If rookeries are present all earth moving within 250-feet shall stop, during the breeding season.					
<p>MM 4.13-1 Implementation of construction activity stormwater protection standards</p> <p>Prior to the issuance of a City grading permit and the commencement of construction activities, compliance with the State's General Construction permit, the City of Roseville's Construction Standards, and the City's Stormwater BMP Guidance Manual will be met. This includes the creation of a Storm Water Pollution Prevention Plan (SWPPP) that will identify the site, the location of sensitive habitats or watercourses, drainage areas, discharge locations, soil disturbance areas, and the locations of all runoff, erosion control, and sediment control Best Management Practices (BMPs). On-going monitoring and adjustments to the SWPPP will occur when needed to address changes in the field as construction activities evolve.</p>	The developer shall create a SWPPP, submit it to the City, and comply with its provisions.	<p><i>Pre-Construction and Construction:</i> Submit SWPPP and ensure that BMPs remain in place during construction.</p> <p>Add as note on Improvement Plans and Building Plans.</p>	Engineering	SWPPP	
<p>MM 4.9-1 Cease Work and Consult with Qualified Archaeologist</p> <p>Should any cultural resources, such as structural features, any amount of bone or shell, artifacts, human remains, or architectural remains, be encountered during any subsurface development activities, work shall be suspended within 100-feet of the find. The City of Roseville Planning and Public Works Staff shall be immediately notified. At that time, the City of Roseville shall coordinate any necessary investigation of the site with qualified archaeologists as needed, to assess the resource (i.e., whether it is an "historical resource" or a "unique archaeological resource") and provide proper management recommendations should potential impacts to the resources be found to be significant. Possible management recommendations for important resources could include resource avoidance or, where avoidance is infeasible in light of project design or layout or is unnecessary to avoid significant effects, data recovery excavations. The contractor shall implement any measures deemed feasible and necessary by City staff, in consultation with the archaeologists, to be to avoid or minimize significant effects to the cultural resources. In addition, pursuant to Section 5097.98 or the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.</p>	This condition shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.	<p><i>Construction:</i> Measure applies if resources are discovered during construction.</p> <p>Add as note on Improvement Plans and Building Plans.</p>	Engineering and Building	None	
<p>Mitigation Measure 4.9-3 Cease Work and Consult with Qualified Paleontologist</p> <p>Should any evidence of paleontological resources (e.g. fossils) be encountered during grading or excavation, work shall be suspended within 100 feet of the find, and the City of Roseville shall be immediately notified. At that time, the City shall coordinate any necessary investigation of the site with a qualified paleontologist to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance, if feasible in light of project design or layout, or data recovery excavations. The contractor shall implement any measures deemed feasible and necessary by City staff in consultation with the paleontologist for the protection of the paleontological resources.</p>	This condition shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.	<p><i>Construction:</i> Measure applies if resources are discovered during construction.</p> <p>Add as note on Improvement Plans and Building Plans.</p>	Engineering and Building	None	
<p>MM 4.10-1 Identify Potential Hazardous Materials (soil contamination, tank or well sites, lead based paint and/or asbestos)</p> <p>Prior to site development in the SVSP, recommended testing and remediation, if needed shall occur. Groundwater wells shall be properly closed.</p> <p>If evidence of soil contamination, septic tanks, or other underground storage tanks are encountered in previously unidentified locations in the SVSP area, work shall cease until the area can be tested, and if necessary remediated and/or properly removed or closed. Remediation activities could include removal of contaminated soil, and/or onsite treatment. As part of the process, the City shall ensure that any necessary investigation and/or remediation activities are coordinated with the Roseville Fire Department, Placer County Division of Environmental Health, and if needed, other appropriate federal, state and local agencies. Once a site is remediated, construction can continue.</p>	The applicants shall be responsible for conducting soil testing and/or recommendation of the Phase I environmental site assessments, if conditions are encountered which warrant such studies.	<p><i>Construction:</i> Applies if conditions found which warrant assessment (e.g. stained soils, underground tanks).</p> <p>Add as note on Improvement Plans.</p>	Engineering and Fire	Phase I environmental assessment, if conditions warrant	
<p>MM 4.12.4-2 Divert Construction Debris</p> <p>The applicants shall ensure a 50% reduction in the construction waste stream generated from development within the SVSP. In Developer contracts with construction contractors and their sub-contractors, the Developer shall require that construction waste be reduced by 50%. The Developer shall further require that contractors and sub-contractors submit records of diversion and disposal to the City's Environmental Utilities Department in order to verify compliance with this requirement.</p>	Comply with the measure	<p><i>Construction:</i> Contractor to ensure diversion occurs during construction.</p> <p>Add as note on Improvement Plans and Building Plans.</p>	Environmental Utilities	Records of diversion	

NOTE: This table is provided as a courtesy to the developer, to highlight the text of measures which are required to be placed on Improvement Plans and/or Building Plans. Refer to the applicable environmental document (e.g. Environmental Impact Report) for a full list of measures, and for context. Other measures may be applicable, but are not included here because they have already been completed or they are addressed via other mechanisms (e.g. development fees).

Traffic Noise Assessment

Sierra Vista TM3 Residential Development
Villages FD-8A, 8B, 10, 23

Roseville, California

BAC Job # 2020-148

Prepared For:

John Mourier Construction, Inc.

Mr. Ryan Biziewski
1430 Blue Oaks Blvd., Ste. 190
Roseville, CA 95747

Prepared By:

Bollard Acoustical Consultants, Inc.



Dario Gotchet, Senior Consultant

November 10, 2020



Introduction

The Sierra Vista TM3 Residential Development (project) is located west of Fiddymont Road, north of Baseline Road, south of Pleasant Grove Boulevard, and east of the future Watt Avenue extension (Santucci Boulevard) in the City of Roseville, California. The project consists of the Villages FD-8A, 8B, 10 and 23 subdivisions, located within the Sierra Vista Specific Plan. The project area and site plan are provided as Figures 1 and 2, respectively.

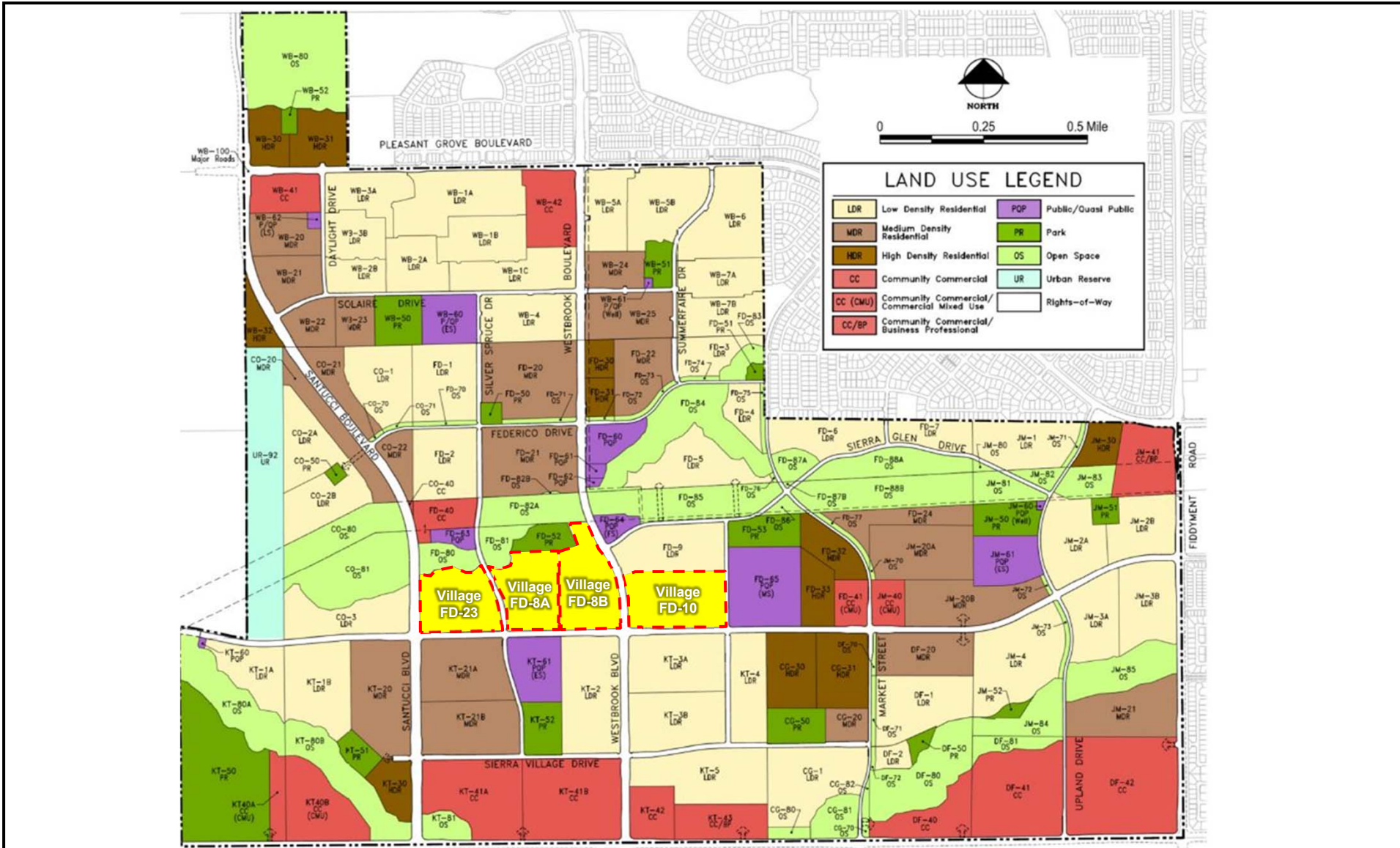
Due to the proximity of the residential uses of the proposed project to future Vista Grande Boulevard, BAC was retained by the project applicant to prepare this assessment. Specifically, the purposes of this assessment are to quantify noise levels associated with traffic on future Vista Grande Boulevard, and to 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 3 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} or DNL, and shows very good correlation with community response to noise.



Legend

Project Subdivision Boundaries (Approximate)

Sierra Vista TM3 Residential Development
 Villages FD-8A, 8B, 10 & 23
 Roseville, California

Project Site Location

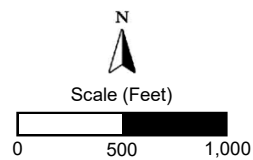
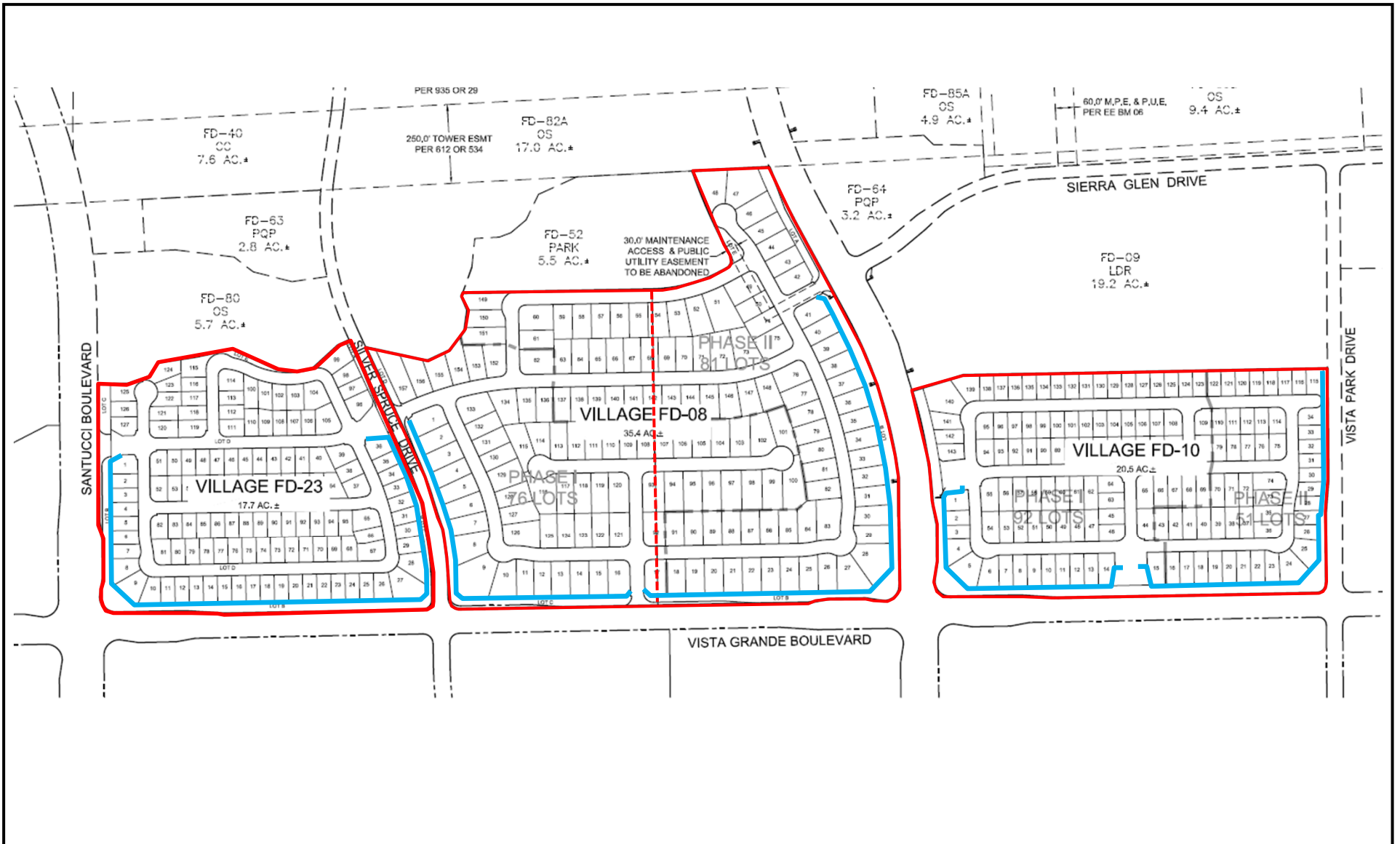


Figure 1





Legend

- Project Subdivision Boundaries (Approximate)
- Proposed Traffic Noise Barriers

Sierra Vista TM3 Residential Development
 Villages FD-8A, 8B, 10 & 23
 Roseville, California

Project Subdivisions – Site Plan

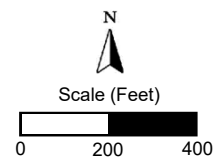
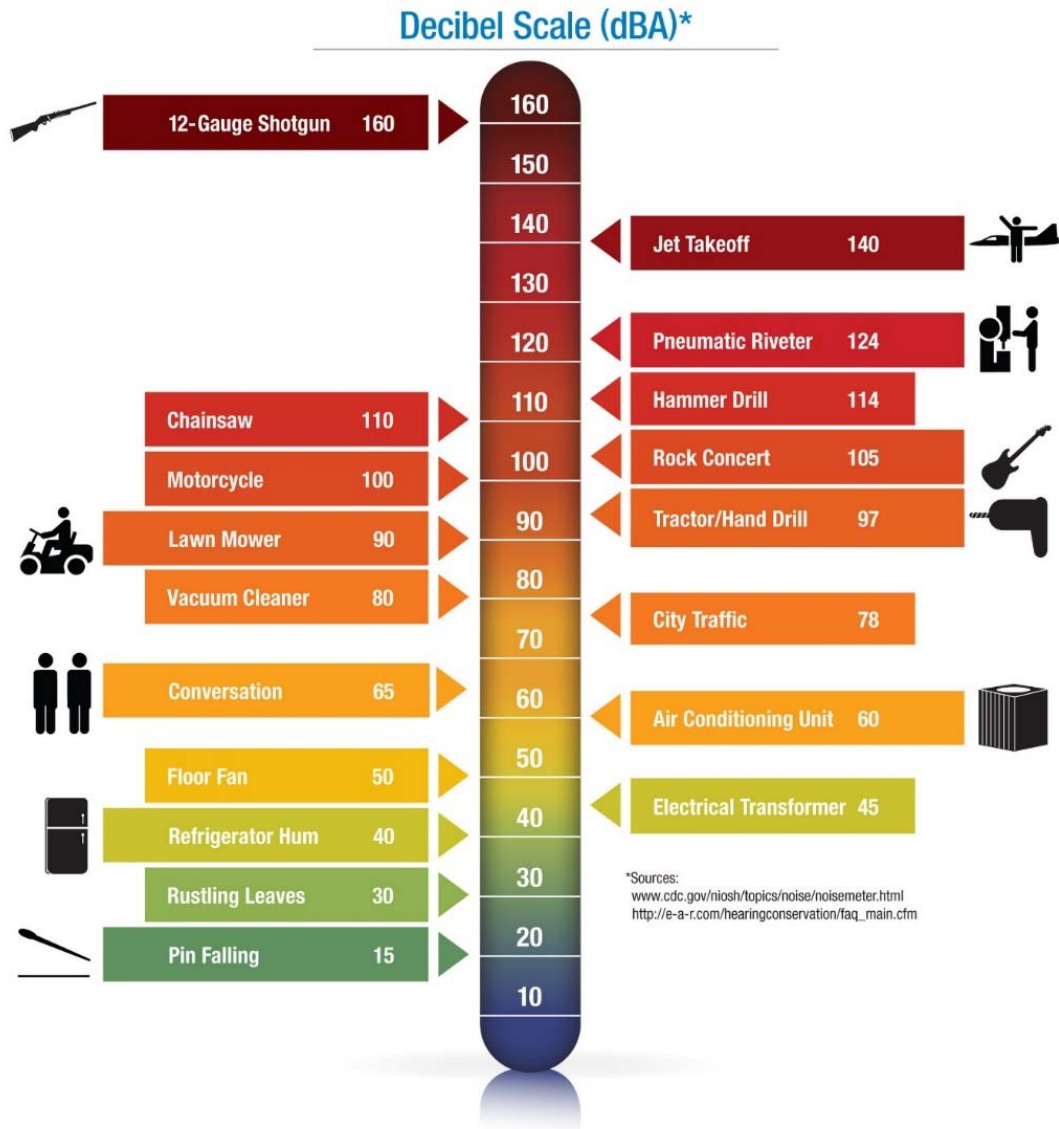


Figure 1



Figure 3
Typical A-Weighted Sound Levels of Common Noise Sources



The Day-Night Average Level (DNL) is based upon the average noise level over a 24-hour day, with a +10-decibel weighting 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 DNL represents a 24-hour average, it tends to disguise short-term variations in the noise environment. DNL-based noise standards are commonly used to assess noise impacts associated with traffic, railroad, and aircraft 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.

**Table 1
Maximum Allowable Noise Exposure - Transportation Noise Sources
City of Roseville General Plan Noise Element**

Land Use	Outdoor Activity Areas ¹	Interior Spaces	
	L _{dn} /CNEL, dB	L _{dn} /CNEL, dB	L _{eq} , dB ²
Residential	60 ³	45	--
Transient lodging	60 ³	45	--
Hospitals, nursing homes	60 ³	45	--
Theaters, auditoriums, music halls	--	--	35
Churches, meeting halls	60 ³	--	40
Office buildings	65	--	45
Schools, libraries, museums	--	--	45
Playgrounds, neighborhood parks	70	--	--

¹ Outdoor activity areas for residential developments are considered to be the backyard 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.

² As determined for a typical worst-case hour during periods of use.

³ Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 75 dB L_{dn}/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_{dn} = Day-Night Average Sound Level
 CNEL = Community Noise Equivalent Level
 dB = Decibels
 L_{eq} = 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_{dn} interior noise level standard.

Evaluation of Future Traffic Noise Environment at Project Subdivisions

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 project subdivisions. 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.

Predicted Future Exterior Traffic Noise Levels

The FHWA Model was used with future traffic volume data cited in the Sierra Vista Specific Plan FEIR to predict future Vista Grande Boulevard traffic noise levels at the project subdivisions (Villages FD-8A, 8B, 10 and 23). The FHWA Model inputs and predicted future traffic noise levels at the proposed subdivisions are shown in Appendix B and are summarized in Table 2.

Predicted future Vista Grande Boulevard traffic noise levels at first-floor locations take into consideration the shielding that would be provided by proposed retaining wall / sound wall combination noise barriers along the backyards of lots proposed adjacent to the roadway. The locations of the proposed noise barriers are shown on Figure 2. Noise barrier effectiveness worksheets for the noise barriers are provided in Appendix C. The results presented in Appendix C include consideration of barrier, lot, and roadway elevations as indicated in the provided site plans. Because upper-floor building facades of the residences constructed adjacent to Vista Grande Boulevard would not receive shielding from the proposed barriers, a barrier analysis was not conducted for those locations.

Table 2
Predicted Future Vista Grande Boulevard Exterior Traffic Noise Levels at Project Subdivisions¹

Subdivision	Lot	Predicted Noise Level, DNL (dB)		
		Backyard ²	First-Floors ²	Upper-Floors ³
FD-8A	9	49	49	64
	12	48	49	64
	16	48	49	64
FD-8B	17	48	49	64
	23	49	50	64
	28	53	54	64
FD-10	5	54	54	64
	9	54	53	64
	14	53	53	64
	19	55	54	64
FD-23	24	54	54	64
	9	51	51	64
	14	51	51	64
	19	50	51	64
	23	49	50	64
	27	50	51	64

¹ Detailed FHWA Model Inputs are provided as Appendix B.
² Predicted future traffic noise levels at first-floor locations include consideration the proposed noise barriers along the roadway. Figure 2 shows the locations of the proposed noise barriers. Noise barrier effectiveness worksheets are provided as Appendix C.
³ Because the upper-floor facades would not receive shielding from the proposed barriers, no barrier analysis was conducted for those locations. In addition, an offset of +3 dB was applied at upper-floor facades due to reduced ground absorption of sound at elevated positions.
Source: *Bollard Acoustical Consultants, Inc. (2020)*

Analysis of Future Exterior Traffic Noise Exposure at Outdoor Activity Areas

As indicated in Table 2, future Vista Grande Boulevard traffic noise levels at the proposed outdoor activity areas (backyards) nearest to the roadway are predicted to satisfy the City of Roseville General Plan exterior noise level standard of 60 dB DNL, including consideration of the screening provided by the proposed noise barriers. As a result, no further consideration of exterior Vista Grande Boulevard traffic noise mitigation measures would be warranted for the project.

Analysis of Future Interior Traffic Noise Exposure within Residences

As indicated in Table 2, future Vista Grande Boulevard traffic noise levels at the first-floor building facades nearest to the roadway are predicted to range from 49 to 55 dB DNL, including consideration of the screening that would be provided by the proposed noise barriers. Due to reduced ground absorption at elevated positions and lack of shielding by the proposed noise barriers, noise levels at the upper-floor facades of those residences are predicted to be

approximately 64 dB DNL. In order to satisfy the City of Roseville General Plan 45 dB DNL interior noise level standard, minimum noise reductions of 10 dB and 19 dB would be required of the first- and upper-floor building facades (respectively) of the residences constructed adjacent to the roadway.

Standard residential construction (stucco siding, STC-27 windows, door weather-stripping, exterior wall insulation, composition plywood roof), typically results in an exterior to interior noise reduction of at least 25 dB with windows closed and approximately 15 dB with windows open. This level of noise reduction would be adequate to reduce future Vista Grande Boulevard traffic noise levels within first- and upper-floors of all residences in this development to 45 dB DNL or less. As a result, consideration of additional building facade construction improvements for future Vista Grande Boulevard traffic noise exposure would not be required for residences of this development provided mechanical ventilation (air conditioning) is included to allow occupants to close doors and windows as desired for additional acoustical isolation.

Conclusions

The Sierra Vista TM3 Residential Development (Villages FD-8A, 8B, 10 and 23) is predicted to be exposed to future Vista Grande Boulevard traffic noise exposure in compliance with the applicable City of Roseville General Plan exterior and interior noise level standards for residential uses, including consideration of the screening provided proposed noise barriers. In addition, based on the analyses contained in this report, and after a review of the proposed noise barriers contained in the provided site plans, the project would also comply with applicable transportation noise related mitigation measures identified in the Sierra Vista Specific Plan Final EIR. Nonetheless, air conditioning should be provided for all residences of the development so that windows can be kept closed at the occupant's discretion to control interior noise.

These conclusions are based on the future traffic data cited in Appendix B, the project site plan shown on Figure 2, and on noise reduction data for standard residential dwellings and for typical STC rated window data. Deviations from the above-mentioned resources could cause future traffic noise levels to differ from those predicted in this assessment. 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 traffic noise assessment for the proposed Sierra Vista TM3 Residential Development (Villages FD-8A, 8B, 10 and 23) in Roseville, California. Please contact BAC at (916) 663-0500 or dariog@bacnoise.com with any questions regarding this assessment.

Appendix A Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	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.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	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.
CNEL	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.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
IIC	Impact Insulation Class (IIC): A single-number representation of a floor/ceiling partition's impact generated noise insulation performance. The field-measured version of this number is the FIIC.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	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.
RT₆₀	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
STC	Sound Transmission Class (STC): A single-number representation of a partition's noise insulation performance. This number is based on laboratory-measured, 16-band (1/3-octave) transmission loss (TL) data of the subject partition. The field-measured version of this number is the FSTC.

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

Project Information:

Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 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:

Subdivision	Description	Distance	Offset (dB)	----- DNL, dB -----			Total
				Autos	Medium Trucks	Heavy Trucks	
FD-8A	Nearest backyards	80		60	53	55	62
	Nearest first-floor facades	90		59	52	54	61
	Nearest upper-floor facades	90	3	62	55	57	64

Traffic Noise Contours (No Calibration Offset):

DNL Contour, dB	Distance from Centerline, (ft)
75	10
70	22
65	48
60	103

Notes:

1. Future average daily traffic volume (ADT) 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.
2. An offset of +3 dB was applied at upper-floor facades due to reduced ground absorption of sound at elevated positions.

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

Project Information:

Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 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:

Subdivision	Description	Distance	Offset (dB)	----- DNL, dB -----			Total
				Autos	Medium Trucks	Heavy Trucks	
FD-8B	Nearest backyards	80		60	53	55	62
	Nearest first-floor facades	90		59	52	54	61
	Nearest upper-floor facades	90	3	62	55	57	64

Traffic Noise Contours (No Calibration Offset):

DNL Contour, dB	Distance from Centerline, (ft)
75	10
70	22
65	48
60	103

Notes:

1. Future average daily traffic volume (ADT) 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.
2. An offset of +3 dB was applied at upper-floor facades due to reduced ground absorption of sound at elevated positions.

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

Project Information:

Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 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:

Subdivision	Description	Distance	Offset (dB)	----- DNL, dB -----			Total
				Autos	Medium Trucks	Heavy Trucks	
FD-10	Nearest backyards	80		60	53	55	62
	Nearest first-floor facades	90		59	52	54	61
	Nearest upper-floor facades	90	3	62	55	57	64

Traffic Noise Contours (No Calibration Offset):

DNL Contour, dB	Distance from Centerline, (ft)
75	10
70	22
65	48
60	103

Notes:

1. Future average daily traffic volume (ADT) 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.
2. An offset of +3 dB was applied at upper-floor facades due to reduced ground absorption of sound at elevated positions.

Appendix B-4
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 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:

Subdivision	Description	Distance	Offset (dB)	----- DNL, dB -----			Total
				Autos	Medium Trucks	Heavy Trucks	
FD-23	Nearest backyards	80		60	53	55	62
	Nearest first-floor facades	90		59	52	54	61
	Nearest upper-floor facades	90	3	62	55	57	64

Traffic Noise Contours (No Calibration Offset):

DNL Contour, dB	Distance from Centerline, (ft)
75	10
70	22
65	48
60	103

Notes:

1. Future average daily traffic volume (ADT) 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.
2. An offset of +3 dB was applied at upper-floor facades due to reduced ground absorption of sound at elevated positions.

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

Project Information: Job Number: 2020-148
Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
Roadway Name: Vista Grande Boulevard
Location(s): Roseville, CA

Noise Level Data: Year: Future
Auto DNL, dB: 60
Medium Truck DNL, dB: 53
Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-8A: Lot 9 - Backyard
Centerline to Barrier Distance (C₁): 70
Barrier to Receiver Distance (C₂): 10
Automobile Elevation: 98
Medium Truck Elevation: 100
Heavy Truck Elevation: 106
Pad/Ground Elevation at Receiver: 97
Receiver Elevation: 102
Base of Barrier Elevation: 97
Starting Barrier Height: 12

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
109	12	46	40	42	49	Yes	Yes	Yes
110	13	46	39	42	48	Yes	Yes	Yes
111	14	45	38	41	47	Yes	Yes	Yes
112	15	45	37	40	47	Yes	Yes	Yes
113	16	44	37	40	46	Yes	Yes	Yes
114	17	44	37	40	46	Yes	Yes	Yes
115	18	43	36	39	45	Yes	Yes	Yes
116	19	43	36	39	45	Yes	Yes	Yes
117	20	43	36	38	45	Yes	Yes	Yes

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

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

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 59
 Medium Truck DNL, dB: 52
 Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-8A: Lot 9 - First-Floor Facade
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 20
 Automobile Elevation: 98
 Medium Truck Elevation: 100
 Heavy Truck Elevation: 106
 Pad/Ground Elevation at Receiver: 97
 Receiver Elevation: 102
 Base of Barrier Elevation: 97
 Starting Barrier Height: 12

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
109	12	47	40	44	49	Yes	Yes	Yes
110	13	46	39	43	48	Yes	Yes	Yes
111	14	46	39	42	48	Yes	Yes	Yes
112	15	45	38	41	47	Yes	Yes	Yes
113	16	45	37	41	47	Yes	Yes	Yes
114	17	45	37	40	46	Yes	Yes	Yes
115	18	44	37	40	46	Yes	Yes	Yes
116	19	43	36	40	45	Yes	Yes	Yes
117	20	43	36	39	45	Yes	Yes	Yes

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



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

Project Information: Job Number: 2020-148
Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
Roadway Name: Vista Grande Boulevard
Location(s): Roseville, CA

Noise Level Data: Year: Future
Auto DNL, dB: 60
Medium Truck DNL, dB: 53
Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-8A: Lot 12 - Backyard
Centerline to Barrier Distance (C₁): 70
Barrier to Receiver Distance (C₂): 10
Automobile Elevation: 99
Medium Truck Elevation: 101
Heavy Truck Elevation: 107
Pad/Ground Elevation at Receiver: 99
Receiver Elevation: 104
Base of Barrier Elevation: 99
Starting Barrier Height: 12

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
111	12	46	39	42	48	Yes	Yes	Yes
112	13	46	39	42	48	Yes	Yes	Yes
113	14	45	38	41	47	Yes	Yes	Yes
114	15	45	37	40	47	Yes	Yes	Yes
115	16	44	37	40	46	Yes	Yes	Yes
116	17	44	37	39	46	Yes	Yes	Yes
117	18	43	36	39	45	Yes	Yes	Yes
118	19	43	36	39	45	Yes	Yes	Yes
119	20	43	36	38	45	Yes	Yes	Yes

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

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

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 59
 Medium Truck DNL, dB: 52
 Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-8A: Lot 12 - First-Floor Facade
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 20
 Automobile Elevation: 99
 Medium Truck Elevation: 101
 Heavy Truck Elevation: 107
 Pad/Ground Elevation at Receiver: 99
 Receiver Elevation: 104
 Base of Barrier Elevation: 99
 Starting Barrier Height: 12

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
111	12	47	40	43	49	Yes	Yes	Yes
112	13	46	39	43	48	Yes	Yes	Yes
113	14	45	39	42	48	Yes	Yes	Yes
114	15	45	38	41	47	Yes	Yes	Yes
115	16	45	37	40	47	Yes	Yes	Yes
116	17	44	37	40	46	Yes	Yes	Yes
117	18	44	37	40	46	Yes	Yes	Yes
118	19	43	36	39	45	Yes	Yes	Yes
119	20	43	36	39	45	Yes	Yes	Yes

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

**Appendix C-5
 FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
 Noise Barrier Effectiveness Prediction Worksheet**

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 60
 Medium Truck DNL, dB: 53
 Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-8A: Lot 16 - Backyard
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 10
 Automobile Elevation: 98
 Medium Truck Elevation: 100
 Heavy Truck Elevation: 106
 Pad/Ground Elevation at Receiver: 100
 Receiver Elevation: 105
 Base of Barrier Elevation: 100
 Starting Barrier Height: 12

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
112	12	46	39	42	48	Yes	Yes	Yes
113	13	45	38	41	47	Yes	Yes	Yes
114	14	45	38	41	47	Yes	Yes	Yes
115	15	45	37	40	47	Yes	Yes	Yes
116	16	44	37	40	46	Yes	Yes	Yes
117	17	44	36	39	45	Yes	Yes	Yes
118	18	43	36	39	45	Yes	Yes	Yes
119	19	43	36	38	45	Yes	Yes	Yes
120	20	43	36	38	45	Yes	Yes	Yes

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

**Appendix C-6
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet**

Project Information: Job Number: 2020-148
Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
Roadway Name: Vista Grande Boulevard
Location(s): Roseville, CA

Noise Level Data: Year: Future
Auto DNL, dB: 59
Medium Truck DNL, dB: 52
Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-8A: Lot 16 - First-Floor Facade
Centerline to Barrier Distance (C₁): 70
Barrier to Receiver Distance (C₂): 20
Automobile Elevation: 98
Medium Truck Elevation: 100
Heavy Truck Elevation: 106
Pad/Ground Elevation at Receiver: 100
Receiver Elevation: 105
Base of Barrier Elevation: 100
Starting Barrier Height: 12

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
112	12	47	40	43	49	Yes	Yes	Yes
113	13	46	39	42	48	Yes	Yes	Yes
114	14	45	38	41	47	Yes	Yes	Yes
115	15	45	38	41	47	Yes	Yes	Yes
116	16	45	37	40	46	Yes	Yes	Yes
117	17	44	37	40	46	Yes	Yes	Yes
118	18	43	37	40	45	Yes	Yes	Yes
119	19	43	36	39	45	Yes	Yes	Yes
120	20	43	36	38	45	Yes	Yes	Yes

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

Appendix C-7
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 60
 Medium Truck DNL, dB: 53
 Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-8B: Lot 17 - Backyard
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 10
 Automobile Elevation: 100
 Medium Truck Elevation: 102
 Heavy Truck Elevation: 108
 Pad/Ground Elevation at Receiver: 101
 Receiver Elevation: 106
 Base of Barrier Elevation: 101
 Starting Barrier Height: 12

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
113	12	46	39	42	48	Yes	Yes	Yes
114	13	45	38	41	47	Yes	Yes	Yes
115	14	45	38	40	47	Yes	Yes	Yes
116	15	45	37	40	47	Yes	Yes	Yes
117	16	44	37	40	46	Yes	Yes	Yes
118	17	44	36	39	45	Yes	Yes	Yes
119	18	43	36	39	45	Yes	Yes	Yes
120	19	43	36	38	45	Yes	Yes	Yes
121	20	43	36	38	45	Yes	Yes	Yes

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

**Appendix C-8
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet**

Project Information: Job Number: 2020-148
Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
Roadway Name: Vista Grande Boulevard
Location(s): Roseville, CA

Noise Level Data: Year: Future
Auto DNL, dB: 59
Medium Truck DNL, dB: 52
Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-8B: Lot 17 - First-Floor Facade
Centerline to Barrier Distance (C₁): 70
Barrier to Receiver Distance (C₂): 20
Automobile Elevation: 100
Medium Truck Elevation: 102
Heavy Truck Elevation: 108
Pad/Ground Elevation at Receiver: 101
Receiver Elevation: 106
Base of Barrier Elevation: 101
Starting Barrier Height: 12

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
113	12	46	39	43	49	Yes	Yes	Yes
114	13	46	39	42	48	Yes	Yes	Yes
115	14	45	38	41	47	Yes	Yes	Yes
116	15	45	38	41	47	Yes	Yes	Yes
117	16	45	37	40	46	Yes	Yes	Yes
118	17	44	37	40	46	Yes	Yes	Yes
119	18	43	37	40	45	Yes	Yes	Yes
120	19	43	36	39	45	Yes	Yes	Yes
121	20	43	36	38	45	Yes	Yes	Yes

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



**Appendix C-9
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet**

Project Information: Job Number: 2020-148
Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
Roadway Name: Vista Grande Boulevard
Location(s): Roseville, CA

Noise Level Data: Year: Future
Auto DNL, dB: 60
Medium Truck DNL, dB: 53
Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-8B: Lot 23 - Backyard
Centerline to Barrier Distance (C₁): 70
Barrier to Receiver Distance (C₂): 10
Automobile Elevation: 102
Medium Truck Elevation: 104
Heavy Truck Elevation: 110
Pad/Ground Elevation at Receiver: 102
Receiver Elevation: 107
Base of Barrier Elevation: 102
Starting Barrier Height: 11

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
113	11	47	40	43	49	Yes	Yes	Yes
114	12	46	39	42	48	Yes	Yes	Yes
115	13	46	39	42	48	Yes	Yes	Yes
116	14	45	38	41	47	Yes	Yes	Yes
117	15	45	37	40	47	Yes	Yes	Yes
118	16	44	37	40	46	Yes	Yes	Yes
119	17	44	37	39	46	Yes	Yes	Yes
120	18	43	36	39	45	Yes	Yes	Yes
121	19	43	36	39	45	Yes	Yes	Yes

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



Appendix C-10
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 59
 Medium Truck DNL, dB: 52
 Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-8B: Lot 23 - First-Floor Facade
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 20
 Automobile Elevation: 102
 Medium Truck Elevation: 104
 Heavy Truck Elevation: 110
 Pad/Ground Elevation at Receiver: 102
 Receiver Elevation: 107
 Base of Barrier Elevation: 102
 Starting Barrier Height: 11

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
113	11	48	41	44	50	Yes	Yes	Yes
114	12	47	40	43	49	Yes	Yes	Yes
115	13	46	39	43	48	Yes	Yes	Yes
116	14	45	39	42	48	Yes	Yes	Yes
117	15	45	38	41	47	Yes	Yes	Yes
118	16	45	37	40	47	Yes	Yes	Yes
119	17	44	37	40	46	Yes	Yes	Yes
120	18	44	37	40	46	Yes	Yes	Yes
121	19	43	36	39	45	Yes	Yes	Yes

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



Appendix C-11
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 60
 Medium Truck DNL, dB: 53
 Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-8B: Lot 28 - Backyard
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 10
 Automobile Elevation: 109
 Medium Truck Elevation: 111
 Heavy Truck Elevation: 117
 Pad/Ground Elevation at Receiver: 105
 Receiver Elevation: 110
 Base of Barrier Elevation: 105
 Starting Barrier Height: 8

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
113	8	51	44	47	53	Yes	Yes	Yes
114	9	50	43	46	52	Yes	Yes	Yes
115	10	49	42	45	51	Yes	Yes	Yes
116	11	47	41	44	50	Yes	Yes	Yes
117	12	47	40	43	49	Yes	Yes	Yes
118	13	46	39	42	48	Yes	Yes	Yes
119	14	45	38	41	47	Yes	Yes	Yes
120	15	45	38	40	47	Yes	Yes	Yes
121	16	45	37	40	47	Yes	Yes	Yes

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

Appendix C-12
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 59
 Medium Truck DNL, dB: 52
 Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-8B: Lot 28 - First-Floor Facade
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 20
 Automobile Elevation: 109
 Medium Truck Elevation: 111
 Heavy Truck Elevation: 117
 Pad/Ground Elevation at Receiver: 105
 Receiver Elevation: 110
 Base of Barrier Elevation: 105
 Starting Barrier Height: 8

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
113	8	51	45	48	54	Yes	Yes	Yes
114	9	50	43	47	53	Yes	Yes	Yes
115	10	49	42	46	51	Yes	Yes	Yes
116	11	48	41	45	51	Yes	Yes	Yes
117	12	47	41	44	50	Yes	Yes	Yes
118	13	47	40	43	49	Yes	Yes	Yes
119	14	46	39	42	48	Yes	Yes	Yes
120	15	45	38	42	47	Yes	Yes	Yes
121	16	45	38	41	47	Yes	Yes	Yes

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

Appendix C-13
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 60
 Medium Truck DNL, dB: 53
 Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-10: Lot 5 - Backyard
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 10
 Automobile Elevation: 107
 Medium Truck Elevation: 109
 Heavy Truck Elevation: 115
 Pad/Ground Elevation at Receiver: 107
 Receiver Elevation: 112
 Base of Barrier Elevation: 107
 Starting Barrier Height: 7

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
114	7	52	45	49	54	Yes	Yes	Yes
115	8	50	44	47	53	Yes	Yes	Yes
116	9	49	42	46	51	Yes	Yes	Yes
117	10	48	41	44	50	Yes	Yes	Yes
118	11	47	40	43	49	Yes	Yes	Yes
119	12	46	39	42	48	Yes	Yes	Yes
120	13	46	39	42	48	Yes	Yes	Yes
121	14	45	38	41	47	Yes	Yes	Yes
122	15	45	37	40	47	Yes	Yes	Yes

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

Appendix C-14
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 59
 Medium Truck DNL, dB: 52
 Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-10: Lot 5 - First-Floor Facade
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 20
 Automobile Elevation: 107
 Medium Truck Elevation: 109
 Heavy Truck Elevation: 115
 Pad/Ground Elevation at Receiver: 107
 Receiver Elevation: 112
 Base of Barrier Elevation: 107
 Starting Barrier Height: 7

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
114	7	52	45	49	54	Yes	Yes	Yes
115	8	51	44	48	53	Yes	Yes	Yes
116	9	49	43	46	52	Yes	Yes	Yes
117	10	49	42	45	51	Yes	Yes	Yes
118	11	48	41	44	50	Yes	Yes	Yes
119	12	47	40	43	49	Yes	Yes	Yes
120	13	46	39	43	48	Yes	Yes	Yes
121	14	45	39	42	48	Yes	Yes	Yes
122	15	45	38	41	47	Yes	Yes	Yes

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

Appendix C-15
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data:

Year: Future
 Auto DNL, dB: 60
 Medium Truck DNL, dB: 53
 Heavy Truck DNL, dB: 55

Site Geometry:

Receiver Description: FD-10: Lot 9 - Backyard
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 10
 Automobile Elevation: 105
 Medium Truck Elevation: 107
 Heavy Truck Elevation: 113
 Pad/Ground Elevation at Receiver: 108
 Receiver Elevation: 113
 Base of Barrier Elevation: 108
 Starting Barrier Height: 7

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
115	7	51	45	48	54	Yes	Yes	Yes
116	8	50	43	47	52	Yes	Yes	Yes
117	9	49	42	45	51	Yes	Yes	Yes
118	10	48	41	44	50	Yes	Yes	Yes
119	11	47	40	43	49	Yes	Yes	Yes
120	12	46	39	42	48	Yes	Yes	Yes
121	13	45	38	41	47	Yes	Yes	Yes
122	14	45	38	41	47	Yes	Yes	Yes
123	15	45	37	40	47	Yes	Yes	Yes

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

Appendix C-16
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 59
 Medium Truck DNL, dB: 52
 Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-10: Lot 9 - First-Floor Facade
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 20
 Automobile Elevation: 105
 Medium Truck Elevation: 107
 Heavy Truck Elevation: 113
 Pad/Ground Elevation at Receiver: 108
 Receiver Elevation: 113
 Base of Barrier Elevation: 108
 Starting Barrier Height: 7

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
115	7	51	44	48	53	Yes	Yes	Yes
116	8	50	43	47	52	Yes	Yes	Yes
117	9	49	42	46	51	Yes	Yes	Yes
118	10	48	41	45	50	Yes	Yes	Yes
119	11	47	40	44	49	Yes	Yes	Yes
120	12	46	39	43	49	Yes	Yes	Yes
121	13	46	39	42	48	Yes	Yes	Yes
122	14	45	38	41	47	Yes	Yes	Yes
123	15	45	38	41	47	Yes	Yes	Yes

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

Appendix C-17
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 60
 Medium Truck DNL, dB: 53
 Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-10: Lot 14 - Backyard
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 10
 Automobile Elevation: 108
 Medium Truck Elevation: 110
 Heavy Truck Elevation: 116
 Pad/Ground Elevation at Receiver: 108
 Receiver Elevation: 113
 Base of Barrier Elevation: 108
 Starting Barrier Height: 8

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
116	8	51	44	47	53	Yes	Yes	Yes
117	9	49	42	46	52	Yes	Yes	Yes
118	10	48	41	44	50	Yes	Yes	Yes
119	11	47	40	43	49	Yes	Yes	Yes
120	12	46	39	42	48	Yes	Yes	Yes
121	13	46	39	42	48	Yes	Yes	Yes
122	14	45	38	41	47	Yes	Yes	Yes
123	15	45	37	40	47	Yes	Yes	Yes
124	16	44	37	40	46	Yes	Yes	Yes

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



**Appendix C-18
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet**

Project Information: Job Number: 2020-148
Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
Roadway Name: Vista Grande Boulevard
Location(s): Roseville, CA

Noise Level Data: Year: Future
Auto DNL, dB: 59
Medium Truck DNL, dB: 52
Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-10: Lot 14 - First-Floor Facade
Centerline to Barrier Distance (C₁): 70
Barrier to Receiver Distance (C₂): 20
Automobile Elevation: 108
Medium Truck Elevation: 110
Heavy Truck Elevation: 116
Pad/Ground Elevation at Receiver: 108
Receiver Elevation: 113
Base of Barrier Elevation: 108
Starting Barrier Height: 8

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
116	8	51	44	48	53	Yes	Yes	Yes
117	9	49	43	46	52	Yes	Yes	Yes
118	10	49	42	45	51	Yes	Yes	Yes
119	11	48	41	44	50	Yes	Yes	Yes
120	12	47	40	43	49	Yes	Yes	Yes
121	13	46	39	43	48	Yes	Yes	Yes
122	14	45	39	42	48	Yes	Yes	Yes
123	15	45	38	41	47	Yes	Yes	Yes
124	16	45	37	40	47	Yes	Yes	Yes

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

Appendix C-19
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 60
 Medium Truck DNL, dB: 53
 Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-10: Lot 19 - Backyard
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 10
 Automobile Elevation: 113
 Medium Truck Elevation: 115
 Heavy Truck Elevation: 121
 Pad/Ground Elevation at Receiver: 111
 Receiver Elevation: 116
 Base of Barrier Elevation: 111
 Starting Barrier Height: 7

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
118	7	52	46	49	55	Yes	Yes	Yes
119	8	51	44	47	53	Yes	Yes	Yes
120	9	50	43	46	52	Yes	Yes	Yes
121	10	49	42	45	51	Yes	Yes	Yes
122	11	47	41	44	50	Yes	Yes	Yes
123	12	47	40	43	49	Yes	Yes	Yes
124	13	46	39	42	48	Yes	Yes	Yes
125	14	45	38	41	47	Yes	Yes	Yes
126	15	45	38	40	47	Yes	Yes	Yes

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

Appendix C-20
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 59
 Medium Truck DNL, dB: 52
 Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-10: Lot 19 - First-Floor Facade
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 20
 Automobile Elevation: 113
 Medium Truck Elevation: 115
 Heavy Truck Elevation: 121
 Pad/Ground Elevation at Receiver: 111
 Receiver Elevation: 116
 Base of Barrier Elevation: 111
 Starting Barrier Height: 7

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
118	7	52	46	49	54	Yes	Yes	Yes
119	8	51	44	48	53	Yes	Yes	Yes
120	9	50	43	47	52	Yes	Yes	Yes
121	10	49	42	46	51	Yes	Yes	Yes
122	11	48	41	45	50	Yes	Yes	Yes
123	12	47	40	44	49	Yes	Yes	Yes
124	13	47	40	43	49	Yes	Yes	Yes
125	14	46	39	42	48	Yes	Yes	Yes
126	15	45	38	41	47	Yes	Yes	Yes

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

**Appendix C-21
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet**

Project Information: Job Number: 2020-148
Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
Roadway Name: Vista Grande Boulevard
Location(s): Roseville, CA

Noise Level Data: Year: Future
Auto DNL, dB: 60
Medium Truck DNL, dB: 53
Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-10: Lot 24 - Backyard
Centerline to Barrier Distance (C₁): 70
Barrier to Receiver Distance (C₂): 10
Automobile Elevation: 114
Medium Truck Elevation: 116
Heavy Truck Elevation: 122
Pad/Ground Elevation at Receiver: 113
Receiver Elevation: 118
Base of Barrier Elevation: 113
Starting Barrier Height: 7

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
120	7	52	45	48	54	Yes	Yes	Yes
121	8	50	43	47	52	Yes	Yes	Yes
122	9	49	42	45	51	Yes	Yes	Yes
123	10	48	41	44	50	Yes	Yes	Yes
124	11	47	40	43	49	Yes	Yes	Yes
125	12	46	39	42	48	Yes	Yes	Yes
126	13	45	39	41	47	Yes	Yes	Yes
127	14	45	38	41	47	Yes	Yes	Yes
128	15	45	37	40	47	Yes	Yes	Yes

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

Appendix C-22
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 59
 Medium Truck DNL, dB: 52
 Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-10: Lot 24 - First-Floor Facade
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 20
 Automobile Elevation: 114
 Medium Truck Elevation: 116
 Heavy Truck Elevation: 122
 Pad/Ground Elevation at Receiver: 113
 Receiver Elevation: 118
 Base of Barrier Elevation: 113
 Starting Barrier Height: 7

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
120	7	52	45	49	54	Yes	Yes	Yes
121	8	50	44	47	53	Yes	Yes	Yes
122	9	49	43	46	52	Yes	Yes	Yes
123	10	49	42	45	51	Yes	Yes	Yes
124	11	48	41	44	50	Yes	Yes	Yes
125	12	47	40	43	49	Yes	Yes	Yes
126	13	46	39	43	48	Yes	Yes	Yes
127	14	45	39	42	48	Yes	Yes	Yes
128	15	45	38	41	47	Yes	Yes	Yes

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

Appendix C-23
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 60
 Medium Truck DNL, dB: 53
 Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-23: Lot 9 - Backyard
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 10
 Automobile Elevation: 97
 Medium Truck Elevation: 99
 Heavy Truck Elevation: 105
 Pad/Ground Elevation at Receiver: 95
 Receiver Elevation: 100
 Base of Barrier Elevation: 95
 Starting Barrier Height: 10

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
105	10	48	42	45	51	Yes	Yes	Yes
106	11	47	40	44	49	Yes	Yes	Yes
107	12	46	39	42	48	Yes	Yes	Yes
108	13	46	39	42	48	Yes	Yes	Yes
109	14	45	38	41	47	Yes	Yes	Yes
110	15	45	37	40	47	Yes	Yes	Yes
111	16	44	37	40	46	Yes	Yes	Yes
112	17	44	37	40	46	Yes	Yes	Yes
113	18	43	36	39	45	Yes	Yes	Yes

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

Appendix C-24
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 59
 Medium Truck DNL, dB: 52
 Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-23: Lot 9 - First-Floor Facade
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 20
 Automobile Elevation: 97
 Medium Truck Elevation: 99
 Heavy Truck Elevation: 105
 Pad/Ground Elevation at Receiver: 95
 Receiver Elevation: 100
 Base of Barrier Elevation: 95
 Starting Barrier Height: 10

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
105	10	49	42	46	51	Yes	Yes	Yes
106	11	48	41	45	50	Yes	Yes	Yes
107	12	47	40	44	49	Yes	Yes	Yes
108	13	46	39	43	49	Yes	Yes	Yes
109	14	46	39	42	48	Yes	Yes	Yes
110	15	45	38	41	47	Yes	Yes	Yes
111	16	45	38	41	47	Yes	Yes	Yes
112	17	45	37	40	46	Yes	Yes	Yes
113	18	44	37	40	46	Yes	Yes	Yes

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

Appendix C-25
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 60
 Medium Truck DNL, dB: 53
 Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-23: Lot 14 - Backyard
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 10
 Automobile Elevation: 96
 Medium Truck Elevation: 98
 Heavy Truck Elevation: 104
 Pad/Ground Elevation at Receiver: 95
 Receiver Elevation: 100
 Base of Barrier Elevation: 95
 Starting Barrier Height: 10

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
105	10	48	42	45	51	Yes	Yes	Yes
106	11	47	40	44	49	Yes	Yes	Yes
107	12	46	40	42	49	Yes	Yes	Yes
108	13	46	39	42	48	Yes	Yes	Yes
109	14	45	38	41	47	Yes	Yes	Yes
110	15	45	37	40	47	Yes	Yes	Yes
111	16	44	37	40	46	Yes	Yes	Yes
112	17	44	37	40	46	Yes	Yes	Yes
113	18	43	36	39	45	Yes	Yes	Yes

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



Appendix C-26
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 59
 Medium Truck DNL, dB: 52
 Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-23: Lot 14 - First-Floor Facade
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 20
 Automobile Elevation: 96
 Medium Truck Elevation: 98
 Heavy Truck Elevation: 104
 Pad/Ground Elevation at Receiver: 95
 Receiver Elevation: 100
 Base of Barrier Elevation: 95
 Starting Barrier Height: 10

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
105	10	49	42	46	51	Yes	Yes	Yes
106	11	48	41	44	50	Yes	Yes	Yes
107	12	47	40	44	49	Yes	Yes	Yes
108	13	46	39	43	48	Yes	Yes	Yes
109	14	46	39	42	48	Yes	Yes	Yes
110	15	45	38	41	47	Yes	Yes	Yes
111	16	45	37	41	47	Yes	Yes	Yes
112	17	45	37	40	46	Yes	Yes	Yes
113	18	44	37	40	46	Yes	Yes	Yes

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



Appendix C-27
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 60
 Medium Truck DNL, dB: 53
 Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-23: Lot 19 - Backyard
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 10
 Automobile Elevation: 99
 Medium Truck Elevation: 101
 Heavy Truck Elevation: 107
 Pad/Ground Elevation at Receiver: 96
 Receiver Elevation: 101
 Base of Barrier Elevation: 96
 Starting Barrier Height: 11

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
107	11	48	41	44	50	Yes	Yes	Yes
108	12	47	40	43	49	Yes	Yes	Yes
109	13	46	39	42	48	Yes	Yes	Yes
110	14	45	38	41	47	Yes	Yes	Yes
111	15	45	38	40	47	Yes	Yes	Yes
112	16	45	37	40	47	Yes	Yes	Yes
113	17	44	37	40	46	Yes	Yes	Yes
114	18	44	36	39	45	Yes	Yes	Yes
115	19	43	36	39	45	Yes	Yes	Yes

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



**Appendix C-28
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet**

Project Information: Job Number: 2020-148
Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
Roadway Name: Vista Grande Boulevard
Location(s): Roseville, CA

Noise Level Data: Year: Future
Auto DNL, dB: 59
Medium Truck DNL, dB: 52
Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-23: Lot 19 - First-Floor Facade
Centerline to Barrier Distance (C₁): 70
Barrier to Receiver Distance (C₂): 20
Automobile Elevation: 99
Medium Truck Elevation: 101
Heavy Truck Elevation: 107
Pad/Ground Elevation at Receiver: 96
Receiver Elevation: 101
Base of Barrier Elevation: 96
Starting Barrier Height: 11

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
107	11	48	41	45	51	Yes	Yes	Yes
108	12	47	41	44	50	Yes	Yes	Yes
109	13	47	40	43	49	Yes	Yes	Yes
110	14	46	39	42	48	Yes	Yes	Yes
111	15	45	38	42	47	Yes	Yes	Yes
112	16	45	38	41	47	Yes	Yes	Yes
113	17	45	37	40	46	Yes	Yes	Yes
114	18	44	37	40	46	Yes	Yes	Yes
115	19	43	37	40	45	Yes	Yes	Yes

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

Appendix C-29
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 60
 Medium Truck DNL, dB: 53
 Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-23: Lot 23 - Backyard
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 10
 Automobile Elevation: 98
 Medium Truck Elevation: 100
 Heavy Truck Elevation: 106
 Pad/Ground Elevation at Receiver: 97
 Receiver Elevation: 102
 Base of Barrier Elevation: 97
 Starting Barrier Height: 11

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
108	11	47	40	43	49	Yes	Yes	Yes
109	12	46	39	42	48	Yes	Yes	Yes
110	13	45	39	41	48	Yes	Yes	Yes
111	14	45	38	41	47	Yes	Yes	Yes
112	15	45	37	40	47	Yes	Yes	Yes
113	16	44	37	40	46	Yes	Yes	Yes
114	17	44	36	39	45	Yes	Yes	Yes
115	18	43	36	39	45	Yes	Yes	Yes
116	19	43	36	39	45	Yes	Yes	Yes

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

Appendix C-30
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data:

Year: Future
 Auto DNL, dB: 59
 Medium Truck DNL, dB: 52
 Heavy Truck DNL, dB: 54

Site Geometry:

Receiver Description: FD-23: Lot 23 - First-Floor Facade
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 20
 Automobile Elevation: 98
 Medium Truck Elevation: 100
 Heavy Truck Elevation: 106
 Pad/Ground Elevation at Receiver: 97
 Receiver Elevation: 102
 Base of Barrier Elevation: 97
 Starting Barrier Height: 11

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
108	11	48	41	44	50	Yes	Yes	Yes
109	12	47	40	43	49	Yes	Yes	Yes
110	13	46	39	43	48	Yes	Yes	Yes
111	14	45	39	42	48	Yes	Yes	Yes
112	15	45	38	41	47	Yes	Yes	Yes
113	16	45	37	40	47	Yes	Yes	Yes
114	17	44	37	40	46	Yes	Yes	Yes
115	18	44	37	40	46	Yes	Yes	Yes
116	19	43	36	39	45	Yes	Yes	Yes

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

Appendix C-31
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 60
 Medium Truck DNL, dB: 53
 Heavy Truck DNL, dB: 55

Site Geometry: Receiver Description: FD-23: Lot 27 - Backyard
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 10
 Automobile Elevation: 101
 Medium Truck Elevation: 103
 Heavy Truck Elevation: 109
 Pad/Ground Elevation at Receiver: 97
 Receiver Elevation: 102
 Base of Barrier Elevation: 97
 Starting Barrier Height: 11

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
108	11	47	41	44	50	Yes	Yes	Yes
109	12	47	40	43	49	Yes	Yes	Yes
110	13	46	39	42	48	Yes	Yes	Yes
111	14	45	38	41	47	Yes	Yes	Yes
112	15	45	38	40	47	Yes	Yes	Yes
113	16	45	37	40	47	Yes	Yes	Yes
114	17	44	37	40	46	Yes	Yes	Yes
115	18	44	36	39	45	Yes	Yes	Yes
116	19	43	36	39	45	Yes	Yes	Yes

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



Appendix C-32
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information: Job Number: 2020-148
 Project Name: Sierra Vista TM3 Residential Development - Villages FD-8A, 8B, 10, 23
 Roadway Name: Vista Grande Boulevard
 Location(s): Roseville, CA

Noise Level Data: Year: Future
 Auto DNL, dB: 59
 Medium Truck DNL, dB: 52
 Heavy Truck DNL, dB: 54

Site Geometry: Receiver Description: FD-23: Lot 27 - First-Floor Facade
 Centerline to Barrier Distance (C₁): 70
 Barrier to Receiver Distance (C₂): 20
 Automobile Elevation: 101
 Medium Truck Elevation: 103
 Heavy Truck Elevation: 109
 Pad/Ground Elevation at Receiver: 97
 Receiver Elevation: 102
 Base of Barrier Elevation: 97
 Starting Barrier Height: 11

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	----- DNL, dB -----				Barrier Breaks Line of Sight to...		
		Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
108	11	48	41	45	51	Yes	Yes	Yes
109	12	47	41	44	50	Yes	Yes	Yes
110	13	47	40	43	49	Yes	Yes	Yes
111	14	46	39	42	48	Yes	Yes	Yes
112	15	45	38	42	47	Yes	Yes	Yes
113	16	45	38	41	47	Yes	Yes	Yes
114	17	45	37	40	46	Yes	Yes	Yes
115	18	44	37	40	46	Yes	Yes	Yes
116	19	43	37	40	45	Yes	Yes	Yes

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