

# SANTA CRUZ ROUTE 1

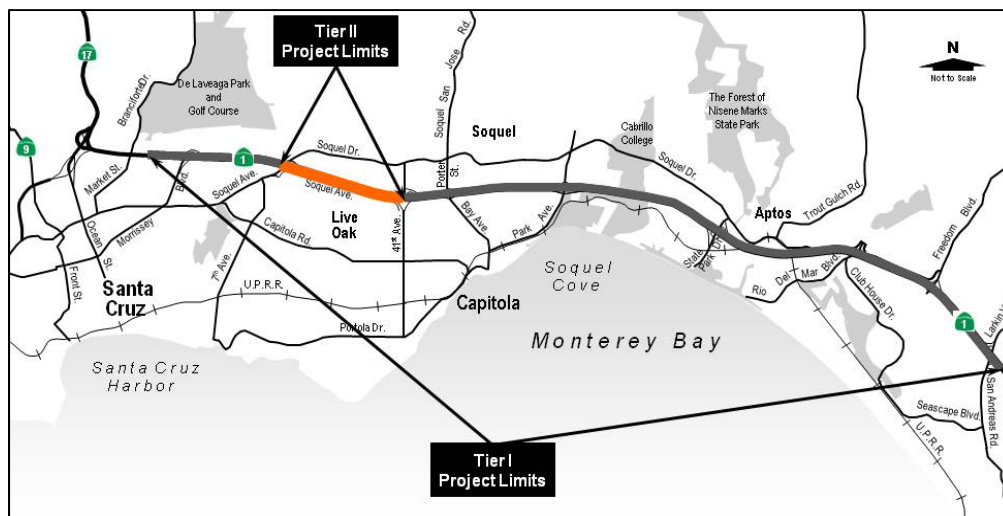
## TIER I – CORRIDOR ANALYSIS OF HIGH OCCUPANCY VEHICLE (HOV) LANES AND TRANSPORTATION SYSTEM MANAGEMENT ALTERNATIVES AND

## TIER II – BUILD PROJECT ANALYSIS OF 41ST AVENUE TO SOQUEL AVENUE/DRIVE AUXILIARY LANES AND CHANTICLEER AVENUE PEDESTRIAN-BICYCLE OVERCROSSING

SANTA CRUZ COUNTY, CALIFORNIA  
DISTRICT 5 – SCr – 1, (R7.24/16.13)  
EA 0C7300 / PI 05-0000-0023

### Tier I and Tier II Draft Environmental Impact Report/ Environmental Assessment

# APPENDICES



Prepared by the  
Federal Highway Administration and  
State of California Department of Transportation

November 2015



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## **Appendix A**

### **California Environmental Quality Act Checklist**



## CEQA Environmental Checklist – Tier I Corridor Project

Supporting documentation for all California Environmental Quality Act (CEQA) checklist determinations is provided in Chapters 2 and 3 of this Environmental Impact Report/Environmental Assessment (EIR/EA). Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapters 2 and 3.

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<b>I. AESTHETICS:</b> Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**II. AGRICULTURE AND FOREST RESOURCES:** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

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 nonagricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to nonforest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to nonforest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**III. AIR QUALITY:** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**IV. BIOLOGICAL RESOURCES:** Would the project:

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**V. CULTURAL RESOURCES:** Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**VI. GEOLOGY AND SOILS:** Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**VII. GREENHOUSE GAS EMISSIONS:** Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

**VIII. HAZARDS AND HAZARDOUS MATERIALS:** Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**IX. HYDROLOGY AND WATER QUALITY:** Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**X. LAND USE AND PLANNING:** Would the project:

a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**XI. MINERAL RESOURCES:** Would the project:

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**XII. NOISE:** Would the project result in:

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**XIII. POPULATION AND HOUSING:** Would the project:

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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**XIV. PUBLIC SERVICES:**

a) 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 of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<b>XV. RECREATION:</b>				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XVI. TRANSPORTATION/TRAFFIC:</b> Would the project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XVII. UTILITIES AND SERVICE SYSTEMS:</b> Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that 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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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## CEQA Environmental Checklist – Tier II Auxiliary Lanes Project

Supporting documentation for all California Environmental Quality Act (CEQA) checklist determinations is provided in Chapters 2 and 3 of this Environmental Impact Report/Environmental Assessment (EIR/EA). Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapters 2 and 3.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<b>I. AESTHETICS:</b> Would the project:				
a) Have a substantial adverse effect on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>II. AGRICULTURE AND FOREST RESOURCES:</b> In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**III. AIR QUALITY:** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**IV. BIOLOGICAL RESOURCES:** Would the project:

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**V. CULTURAL RESOURCES:** Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**VI. GEOLOGY AND SOILS:** Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**VII. GREENHOUSE GAS EMISSIONS:** Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans' determination that, in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

**VIII. HAZARDS AND HAZARDOUS MATERIALS:** Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**IX. HYDROLOGY AND WATER QUALITY:** Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**X. LAND USE AND PLANNING:** Would the project:

a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**XI. MINERAL RESOURCES:** Would the project:

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**XII. NOISE:** Would the project result in:

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**XIII. POPULATION AND HOUSING:** Would the project:

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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**XIV. PUBLIC SERVICES:**

a) 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 of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<b>XV. RECREATION:</b>				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XVI. TRANSPORTATION/TRAFFIC:</b> Would the project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XVII. UTILITIES AND SERVICE SYSTEMS:</b> Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that 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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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## **Appendix B**

### **Resources Evaluated Relative to the Requirements of Section 4(f)**





## **Resources Evaluated Relative to the Requirements of Section 4(f)**

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 United States Code 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project...requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer is also needed.

This appendix discusses parks, recreational facilities, wildlife refuges, and historic properties found within or adjacent to the project area that do not trigger Section 4(f) protection either because (1) they are not publicly owned, (2) they are not open to the public, (3) they are not eligible historic properties, (4) the project does not permanently use the property and does not hinder the preservation of the property, or (5) the proximity impacts do not result in constructive use.

### **Proposed Project**

The California Department of Transportation (Caltrans), in cooperation with the Federal Highway Administration and the Santa Cruz County Regional Transportation Commission (RTC), proposes to improve Route 1 in Santa Cruz County for a distance of approximately 8.9 miles, from approximately 0.4 mile south of the San Andreas/Larkin Valley Road interchange to 0.3 mile north of the Morrissey Boulevard interchange. This stretch of Route 1 is subject to recurrent congestion. Proposed improvements under consideration include the following major features: mainline high-occupancy vehicle (HOV) lanes, ramp metering and HOV on-ramp bypass lanes, auxiliary lanes, pedestrian/bicycle overcrossings, and reconstructed interchanges to accommodate project features and improve highway access to and from local roads.

This project has been evaluated as a combined Tier I/Tier II Draft Environmental Impact Report/Environmental Assessment (Tier I/II DEIR/EA). Three Tier I Corridor Alternatives are evaluated in the Tier I/II DEIR/EA: Tier I Corridor HOV Lane Alternative, Tier I Corridor Transportation System Management (TSM) Alternative, and No Build Alternative. Two Tier II alternatives are also analyzed: Tier II Auxiliary Lane Alternative and No Build Alternative.

## **Section 4(f) Resources**

### *Tier I Corridor Alternatives*

Nineteen park and recreational facilities are located within 0.5 mile of the Tier 1 Corridor Alternatives. Table 1 lists the 19 park and recreational facilities, the agency of jurisdiction for each, and the distance of the facility from the proposed project.

No designated wildlife refuges are located within or adjacent to the project limits of any of the Tier I Corridor Alternatives or the Tier II Auxiliary Lane Alternative.

No National Register of Historic Places-eligible historic architectural properties are within the architectural Area of Potential Effect for the Tier I and Tier II Corridor Alternatives. Thirteen archaeological sites were identified within the archaeological Area of Potential Effect; ten of those were determined not eligible for the National Register of Historic Places. The remaining three sites will require archaeological investigations that will be conducted as components of the Tier I Corridor Alternatives when they are programmed as future tiered projects. Each of those projects will be subject to separate environmental review. At that time, the sites will be evaluated to determine their National Register of Historic Places eligibility and evaluated to determine if there would be a Section 4(f) use.

## **Section 4(f) Effects**

### **Public Parks and Recreation Areas**

#### *Tier I Corridor Alternatives*

Neither of the Tier I Corridor Alternatives would incorporate or use land from the 19 facilities listed in Table 1; in addition, no indirect impacts on these facilities are anticipated that would constitute a constructive use. Based on these factors, the provisions of Section 4(f) are not triggered for these properties.

#### *Tier II Auxiliary Lane Alternative*

The Tier II Auxiliary Lane Alternative would not incorporate or use land from the facilities listed below. Indirect impacts that would constitute a constructive use include noise, access restrictions, vibration, ecological intrusions, and visual impacts. The Tier II Auxiliary Lane Alternative would not change the access of any parks or recreational facilities, nor would any vibration impacts or ecological intrusions occur. Noise impacts would occur at some

sensitive receptors, as described in Section 2.2.7, but the parks and recreational facilities are located far enough from Route 1 that the increase would be barely perceptible over existing levels. Visual impacts would also occur along Route 1, but due to the distance between Route 1 and the parks and recreational facilities, there would be no visual change at those facilities. Therefore, there would be no indirect impacts on these facilities that would constitute a constructive use and the provisions of Section 4(f) would not be triggered for the properties listed in Table 1.

### ***Wildlife Refuges***

Because no designated wildlife refuges are in the project area, the provisions of Section 4(f) are not triggered.

### ***Historic Properties***

Because no historic properties are in the project area, the provisions of Section 4(f) are not triggered.

**Table 1: Parks and Recreation Facilities within 0.5 Mile of the Tier I and Tier II Corridor Alternatives**

<b>No.</b>	<b>Park Name/ Agency of Jurisdiction</b>	<b>Address</b>	<b>Distance from Project (miles)</b>	<b>Description</b>
1	De Laveaga Park City of Santa Cruz Recreation and Parks Department	Branciforte Avenue, Santa Cruz	0.29	A 35-acre park that includes bocce ball courts, volleyball courts, a soccer area, softball diamonds, picnic areas, barbeque pits, trails, and horseshoe pits. Natural features in the park include Branciforte Creek, Meadow and George Washington Grove.
2	Forest of Nisene Marks State Park California Department of Parks and Recreation	Aptos Creek Road/ Soquel Drive, Aptos	0.22	A State park that contains more than 40 miles of hiking trails and fire roads through approximately 10,000 acres of variable terrain. It offers running, hiking, horseback riding, camping (backpacking), and mountain biking facilities. Picnic tables and barbecue pits are available.
3	Grant Park City of Santa Cruz Recreation and Parks Department	Grant Street, Santa Cruz	0.29	A 2.4-acre park with picnic tables and barbecues, playground equipment, youth baseball court, and children's play area.
4	East Side Park City of Santa Cruz Recreation and Parks Department	Water Street/Soquel Avenue, Santa Cruz	0.49	Small neighborhood park for passive recreation.
5	John Franks Park Santa Cruz County Parks Department	Marnell Street, Santa Cruz	0.12	A small park with playground, field, and picnic tables.
6	Arana Gulch Open Space City of Santa Cruz Recreation and Parks Department	Agnes Street, Santa Cruz	0.45	A landform and greenbelt area that includes open meadows, California oak woodland, and the riparian zone of Arana Creek. A set of trails is used to access the park, with accommodation to hikers and bicyclists. Arana Gulch supports a variety of vegetation and wildlife, and it provides habitat for Santa Cruz tarplant, endangered species, and other special-status species.
7	Perry Park The City of Capitola Parks Department	Bay Avenue/Center Street, Capitola	0.2	Perry Park is a 1-acre park with bicycle and pedestrian paths and picnic tables.
8	Nobel Gulch Park The City of Capitola Parks Department	Bay Avenue/ Monterey Avenue, Capitola	0.46	A 0.5-acre park with picnic tables and lawn area.

**Table 1: Parks and Recreation Facilities within 0.5 Mile of the Tier I and Tier II Corridor Alternatives**

<b>No.</b>	<b>Park Name/ Agency of Jurisdiction</b>	<b>Address</b>	<b>Distance from Project (miles)</b>	<b>Description</b>
9	Monterey Avenue Park The City of Capitola Parks Department	Monterey Avenue, Capitola	0.28	A small community park with softball field, playground, picnic tables, and lawn areas.
10	Cortez Park The City of Capitola Parks Department	Cortez Street, Capitola	0.21	Cortez Park includes children's playground equipment and benches on 0.75-acre.
11	Winkle Farm Park Santa Cruz County Parks Department	Winkle Avenue, Santa Cruz	0.41	A 1.5-acre park with walking paths, a lawn area, picnic tables, playground equipment, barbeque, and horseshoe pits.
12	Coffee Lane Park Santa Cruz County Parks Department	Coffee Lane, Live Oak	0.31	A 2.7-acre park with a basketball court, picnic tables, a lawn area, and playground equipment.
13	Soquel Lions Park Santa Cruz County Parks Department	Main Street, Soquel	0.19	A 0.5-acre park with picnic tables, a barbeque pit, playground equipment, and a pedestrian bridge.
14	Richard Vessey Park Santa Cruz County Parks Department	Maplethorpe Lane, Soquel	0.41	A 1-acre park with a lawn area, playground equipment, picnic tables, and barbeque pits.
15	Willowbrook Park Santa Cruz County Parks Department	Willowbrook Lane, Soquel	0.27	A 6.3-acre neighborhood park with basketball and tennis courts, picnic areas with barbeque pits, and a playground.
16	Aptos Village Park Santa Cruz County Parks Department	Aptos Creek Road, Aptos	0.17	A 10.3-acre park tucked into old Aptos Village. It is the site of weekend music festivals, family picnics, weddings, company picnics, Renaissance Camp, and other special events. The park has a gazebo, picnic tables, and a lawn area that is open to the public.
17	Chanticleer Ave Park Santa Cruz County Redevelopment Agency	Chanticleer Avenue, Live Oak	0.48	Chanticleer Park is a 2.5-acre park consisting of lawn area, playground equipment, historical structure, picnic areas, tennis court, off-leash dog walking area, community garden, bicycle track area, walking path, skateboarding area, bocce ball court, benches, drinking fountain, and restrooms.

**Table 1: Parks and Recreation Facilities within 0.5 Mile of the Tier I and Tier II Corridor Alternatives**

<b>No.</b>	<b>Park Name/ Agency of Jurisdiction</b>	<b>Address</b>	<b>Distance from Project (miles)</b>	<b>Description</b>
18	Seacliff State Beach California Department of Parks and Recreation	State Park Drive, Aptos	0.4	This public beach provides recreational vehicle facilities, picnic tables, and fire pits. It is also a popular place for surfing and fishing. The beach's most notable feature is the concrete ship SS <i>Palo Alto</i> lying at the end of a pier. The ship was hauled to Seacliff Beach in 1929 and sank and turned into an amusement center, complete with a dance floor, cafe, pool, and carnival booths. The ship is now permanently closed to the public.
19	New Brighton State Beach California Department of Parks and Recreation	McGregor Drive, Capitola	0.028	The beach features picnic areas, swimming, fishing, and a nearby forest of Monterey pine and Coastal live oak. The camping area is on a bluff overlooking northern Monterey Bay.
Source: Community Impact Assessment, 2015.				

### **Archaeological Resources**

The Federal Highway Administration's Section 4(f) Policy Paper (Federal Highway Administration, 2012) states that Section 4(f) applies to archaeological sites that are listed or eligible for listing in the National Register of Historic Places and that warrant preservation in place. Section 4(f) does not apply if the Federal Highway Administration determines, after consultation with the State Historic Preservation Officer (or if on tribal lands, the Tribal Historic Preservation Officer), federally recognized Indian tribes, and the Advisory Council on Historic Preservation (if participating), that the archaeological resource is important chiefly because of what can be learned by data recovery (even if it is agreed not to recover the resource); that it has minimal value for preservation in place; and that the State Historic Preservation Officer/Tribal Historic Preservation Officer and Advisory Council on Historic Preservation (if participating) do not object to this determination.

The guidance provided in the Section 4(f) Policy Paper is based on Title 23 of the Code of Federal Regulations, Section 774.13(b), which specifically provides an exception to Section 4(f) requirements for archaeological resources for which the Federal Highway Administration concludes are important chiefly because of what can be learned by data recovery and that it has minimal value for preservation in place. This exception applies both to situations where data recovery is undertaken, and to where the Administration decides, with the agreement of the official(s) with jurisdiction (the State Historic Preservation Officer or Tribal Historic Preservation Officer, and the Advisory Council on Historic Preservation, if participating), not to recover the resource. Additionally, the officials with jurisdiction over the Section 4(f) resource must have been consulted and must not have objected to this finding by the Administration. Because the archaeological Area of Potential Effects does not fall under the jurisdiction of a Tribal Historic Preservation Officer, the State Historic Preservation Officer is the official with jurisdiction over any archaeological resources associated with this project.

As described in Section 2.1.7, there are three archaeological sites within the archaeological Area of Potential Effects that have not been evaluated for eligibility in the National Register of Historic Places. The other known archaeological sites have been determined to either be Exempt from Evaluation, in accordance with Attachment 4 of the January 2014 Programmatic Agreement, Properties Exempt from Evaluation, or they have been found ineligible for listing in the National Register. None of the three known sites are located in the Tier II study area; therefore, the Tier II Auxiliary Lane Alternative would not result in the use of archaeological resources protected under Section 4(f).

As stated in Section 2.1.7, the Tier I Corridor HOV Lane Alternative and the Tier I Corridor TSM Alternative may adversely affect portions of the three unevaluated archaeological sites and their potential buried archaeological deposits within the archaeological Area of Potential

Effects. There is insufficient information to determine whether the Tier I Corridor Build Alternatives would result in the use of archaeological resources. As future Tier II projects are programmed and funded, Caltrans will conduct subsurface investigations to evaluate the archaeological sites and buried deposits to determine if they are eligible for listing in the National Register. Additionally, a Section 4(f) statement will be prepared as part of each future Tier II environmental document. If any of the previously unevaluated sites are determined eligible, the Federal Highway Administration will determine, after consultation with the State Historic Preservation Officer and the Advisory Council on Historic Preservation (if participating), whether the exception to Section 4(f) requirements for archaeological resources in Title 23 of the Code of Federal Regulations Section 774.13(b) is applicable, or whether approval of the use of the resource is required. The determination(s), as applicable, will be documented in the future Section 4(f) statement(s).

For the current Tier II Auxiliary Lane Alternative, or any future Tier II project, in the event that a previously unidentified archaeological site is discovered during construction, the Federal Highway Administration will determine if an approval of use from the agencies with jurisdiction is necessary, or if an exception applies under Title 23 Code of Federal Regulations Section 774.13(c). This section of the Code of Federal Regulations allows the Federal Highway Administration to permit a project to proceed without consideration under Section 4(f) if the property interest in the Section 4(f) land was acquired for transportation purposes prior to the designation or change in the determination of significance if adequate effort was made to identify properties protected by Section 4(f) prior to acquisition.



## **Appendix C**

### **Title VI Policy Statement**



**DEPARTMENT OF TRANSPORTATION**

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March 2013

**NON-DISCRIMINATION  
POLICY STATEMENT**

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, please visit the following web page: [http://www.dot.ca.gov/hq/bep/title\\_vi/t6\\_violated.htm](http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm).

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14<sup>th</sup> Street, MS-79, Sacramento, CA 95811. Telephone: (916) 324-0449, TTY: 711, or via Fax: (916) 324-1949.

A handwritten signature in blue ink, appearing to read "Malcolm Dougherty".

MALCOLM DOUGHERTY  
Director



## **Appendix D**

### **Summary of Relocation Benefits**



## Appendix D. Summary of Relocation Benefits

### California Department of Transportation Relocation Assistance Program

#### RELOCATION ASSISTANCE ADVISORY SERVICES

This appendix is general in nature and is not intended to be a complete statement of federal and state relocation laws and regulations. Any questions concerning relocation should be addressed to Caltrans Right-of-Way. This section provides some general descriptive information on Public Law (PL) 91-646, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. This is often referred to simply as the “Uniform Act.” The information in this appendix is provided only as background and is not intended as a complete statement of all the state or federal laws and regulations; for specific details, the environmental planner should contact the appropriate Caltrans District or Regional Right-of-Way Relocation Branch. After presenting an outline of the basic legal foundation for relocation policy, the appendix looks at important relocation assistance information, including advisory services and the payment program. Refer to the Caltrans Right-of-Way Manual Chapter 10 for more detailed and specific information regarding relocation and housing programs.

#### **DECLARATION OF POLICY**

“The purpose of this title is to establish a **uniform policy for fair and equitable treatment** of persons displaced as a result of federal and federally assisted programs in order that such persons **shall not suffer disproportionate injuries** as a result of programs designed for the benefit of the public as a whole.”

The Fifth Amendment to the United States Constitution states, “No Person shall be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use without just compensation.” The Uniform Act sets forth in statute the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in Title 49 *Code of Federal Regulations* Part 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments, as discussed below.

#### **FAIR HOUSING**

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) sets forth the policy of the United States to provide, within constitutional limitations, for fair housing. This Act, and as amended, makes discriminatory practices in the purchase and rental of most residential units illegal. Whenever possible, minority persons shall be given reasonable opportunities to relocate to any available housing regardless of neighborhood, as long as the replacement dwellings are decent, safe, and sanitary and are within their financial means. This policy, however, does not require the Department to provide a person a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee to see that all payments and benefits are fully utilized, and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments. At the time of the initiation of negotiations

(usually the first written offer to purchase), owner-occupants are given a detailed explanation of the state's relocation services. Tenant occupants of properties to be acquired are contacted soon after the initiation of negotiations and also are given a detailed explanation of the Caltrans Relocation Assistance Program. To avoid loss of possible benefits, no individual, family, business, farm, or nonprofit organization should commit to purchase or rent a replacement property without first contacting a Department relocation advisor.

### **RELOCATION ASSISTANCE ADVISORY SERVICES**

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, the Department will provide relocation advisory assistance to any person, business, farm, or nonprofit organization displaced as a result of the acquisition of real property for public use, provided that they are legally present in the United States. The Department will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that are "decent, safe, and sanitary." Nonresidential displacees will receive information on comparable properties for lease or purchase (for business, farm, and nonprofit organization relocation services, see below).

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, national origin, and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning federal- and state-assisted housing programs, and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days' written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable "decent, safe, and sanitary" replacement dwelling, available on the market, is offered to them by the Department.

### **RESIDENTIAL RELOCATION PAYMENTS**

The Relocation Assistance Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of a replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Assistance Program can be summarized as follows:

#### **Moving Costs**

Any displaced person, who lawfully occupied the acquired property, regardless of the length of occupancy in the property acquired, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles, or a fixed payment based on a fixed moving cost schedule. To be eligible for relocation payments, lawful occupants who move into the displacement property after the initiation of negotiations must wait until the Department obtains control of the property.



### Purchase Differential

In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Homeowners who have owned and occupied their property for 180 days or more prior to the date of the initiation of negotiations (usually the first written offer to purchase the property) may qualify to receive a price differential payment and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based on the replacement property interest rate. The maximum combination of these three supplemental payments that the owner-occupant can receive is \$22,500. If the total entitlement (without the moving payments) exceeds \$22,500, the Last Resort Housing Program will be used (see the explanation of the Last Resort Housing Program below).

### Rent Differential

Tenants and certain owner-occupants (based on length of ownership) who have occupied the property to be acquired by the Department prior to the date of the initiation of negotiations may qualify to receive a rent differential payment. This payment is made when the Department determines that the cost to rent a comparable “decent, safe, and sanitary” replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitations noted under the *Down Payment* section below. The maximum amount payable to any eligible tenant and any owner-occupant of less than 180 days, in addition to moving expenses, is \$5,250. If the total entitlement for rent supplement exceeds \$5,250, the Last Resort Housing Program will be used.

To receive any relocation benefits, the displaced person must buy or rent and occupy a “decent, safe, and sanitary” replacement dwelling within 1 year from the date the Department takes legal possession of the property, or from the date the displacee vacates the displacement property, whichever is later.

### Down Payment

The down payment option has been designed to aid owner-occupants of less than 180 days and tenants in legal occupancy prior to Caltrans’ initiation of negotiations. The down payment and incidental expenses cannot exceed the maximum payment of \$5,250. The 1-year eligibility period in which to purchase and occupy a “decent, safe, and sanitary” replacement dwelling will apply.

### Last Resort Housing

Federal regulations (49 Code of Federal Regulations 24) contain the policy and procedure for implementing the Last Resort Housing Program on federal-aid projects. Last Resort Housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard residential relocation as explained above. Last Resort Housing has been designed primarily to cover situations where a displacee cannot be relocated because of lack of available comparable replacement housing, or when the anticipated replacement housing payments exceed the \$22,500 and \$5,250 limits of the standard relocation procedure, because either the displacee lacks the financial ability or other valid circumstances apply.

After the initiation of negotiations, the Department will, within a reasonable length of time, personally contact the displacees to gather important information, including the following:

- Number of people to be displaced;
- Specific arrangements needed to accommodate any family member(s) with special needs;
- Financial ability to relocate into comparable replacement dwelling that will adequately house all members of the family;
- Preferences in area of relocation; and
- Location of employment or school.

### ***NONRESIDENTIAL RELOCATION ASSISTANCE***

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms, and nonprofit organizations in locating suitable replacement property and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program will provide current lists of properties offered for sale or rent, suitable for a particular business' specific relocation needs. The types of payments available to eligible businesses, farms, and nonprofit organizations are searching and moving expenses and possibly re-establishment expenses; or a fixed in lieu payment instead of any moving, searching, and re-establishment expenses. The payment types are summarized as follows:

#### **Moving Expenses**

Moving expenses may include the following actual, reasonable costs:

- The moving of inventory, machinery, equipment, and similar business-related property, including dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property. Items acquired in the right-of-way contract may not be moved under the Relocation Assistance Program. If the displacee buys an Item Pertaining to the Realty back at salvage value, the cost to move that item is borne by the displacee.
- Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move.
- Expenses related to searching for a new business site, up to \$2,500, for reasonable expenses actually incurred.

#### **Re-establishment Expenses**

Re-establishment expenses related to the operation of the business at the new location, up to \$10,000 for reasonable expenses actually incurred.

#### **Fixed In Lieu Payment**

A fixed payment in lieu of moving, searching, and re-establishment payments may be available to businesses that meet certain eligibility requirements. This payment is an amount equal to half the average annual net earnings for the last 2 taxable years prior to the relocation and may not be less than \$1,000 or more than \$20,000.

### ***ADDITIONAL INFORMATION***

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security

Act, or any other law, except for any federal law providing local “Section 8” Housing Programs.

Any person, business, farm, or nonprofit organization that has been refused a relocation payment by the Department relocation advisor or believes that the payment(s) offered by the agency are inadequate, may appeal for a special hearing of the complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

California law allows for the payment for lost goodwill that arises from the displacement for a public project. A list of ineligible expenses can be obtained from Caltrans Right-of-Way. California’s law and the federal regulations covering relocation assistance provide that no payment shall be duplicated by other payments being made by the displacing agency.

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## **Appendix E**

### **Glossary of Technical and Abbreviated Terms**



## Glossary of Technical and Abbreviated Terms

AADT	Annual Average Daily Traffic represents an average 24-hour period of traffic on a facility in both directions averaged over 1 year, or the total of all traffic counted for 1 year, divided by 365 days.
ADT	Average Daily Traffic, total traffic on a facility in both directions, for one 24-hour day, averaged over a given time period.
APE	Area of Potential Effects, the area within which archaeological or historical resources may be affected by a project.
Auxiliary Lane	The auxiliary lanes allow traffic entering and exiting the freeway to accelerate or decelerate outside of the through traffic lanes.
Beneficial Use	Use of a natural water resource that enhances the social, economic, and environmental well-being of the user. Twenty-one beneficial uses are defined for the waters of California, ranging from municipal and domestic supply to fisheries and wildlife habitat.
BSA - Biological Study Area	Line area within which biological resources may be permanently and/or temporarily be impacted by project-related activities.
Cortese	Hazardous Waste and Substances Site List (or Cortese List) is named after State Assemblyman Dominic Cortese. PRC § 65962.5 requires Cal EPA to develop an updated Cortese list at least annually.
dB	Decibel: a measurement unit for noise.
dBA	A-weighted decibel: the measurement unit for noise that best represents human perception.
HOV Lane	High-occupancy vehicle lane: a lane reserved for vehicles with a driver and one or more passengers. Also known as carpool lanes and diamond lanes.
ISA	Initial Site Assessment, a review of all published data sources on hazardous waste sites and hazardous waste releases in the vicinity of a project.
Lead Agency	Public agency that has primary responsibility for carrying out or approving a project that may have a significant effect on the environment and preparing the environmental document.
LOS - Level of Service	Measure used to rate roadway facilities and based on their traffic conditions. It varies from LOS A (free flow conditions) to LOS F (stop-and-go conditions).
Maintenance Area	A federal term to describe any geographic region of the United States designated as a nonattainment area pursuant to the CAA and subsequently redesignated as an attainment area subject to the requirement to develop a maintenance plan under Section 175A of the CAA.
MIS	Major Investment Study, a study prepared during the early planning phase to analyze the range of modal alternatives and cost/benefits of “major metropolitan transportation investments,” which are defined as highway or transit improvements of substantial cost that are expected to have a significant effect on capacity, traffic flow, level of service, or mode share at the transportation corridor or subarea scale. TEA-21 eliminated the requirement for a separate MIS document, but the analysis still must be conducted.
MPO	Metropolitan Planning Organization, a federal designation for the forum for cooperative transportation decision-making for an urbanized area with population of more than 50,000.

MTP	Metropolitan Transportation Plan, the official intermodal transportation plan that is developed and adopted through the metropolitan transportation planning process for the metropolitan planning area.
Nonattainment Area	Any geographic region of the United States that EPA has designated as not attaining the applicable National Ambient Air Quality Standard (NAAQS) or a transportation related pollutant(s) for which an NAAQS exists.
NOP	Notice of Preparation: the CEQA notice that an Environmental Impact Report will be prepared for a project.
NPDES Permit	National Pollutant Discharge Elimination System Permit: required for facilities and activities that discharge waste into surface waters from a confined pipe or channel.
OHWL	Ordinary high water mark: a distinguishing characteristic of other waters of the United States. ("Other waters" refers to waters of the United States, other than wetlands, that are subject to the jurisdiction of the Army Corps of Engineers under Section 404 of the Clean Water Act.)
PDT	Project Development Team: a multidisciplinary advisory group assembled to review and provide direction on project development.
PM <sub>10</sub>	Particulate matter less than 10 microns in diameter (one micron equals one-millionth of a meter).
PM <sub>2.5</sub>	Particulate matter less than 2.5 microns in diameter, considered to be fine particulate matter (one micron is equal to one-millionth of meter)
Profile	The vertical alignment and elevation of the roadway surface along a designated line, typically the center of the roadway or median.
PSR	Project Study Report, a Caltrans document establishing consensus among state and local decision makers regarding the viability and appropriateness of a project. Approval of this report initiates preliminary engineering and environmental review phase of project development.
PSR/PDS	Project Study Report/Project Development Support, a California Department of Transportation project initiation document.
Recurrent Congestion	Average travel speeds at 35 mph or less on incident-free weekdays, during rush hours, for a duration of at least 15 minutes.
Responsible Agency	A "public agency, other than the lead agency that has responsibility for carrying out or approving a project" (PRC 21069). The CEQA Guidelines further explain the statutory definition by stating that a "responsible agency" includes "all public agencies other than the Lead Agency which have discretionary approval power over the project" (14 CCR 15381). State and local public agencies that have discretionary authority to issue permits, for example, fall into this category.
Scoping	A process for determining the scope of issues to be addressed in an Environmental Assessment and Environmental Impact Statement (EIS) and for identifying significant issues to be analyzed in depth in an EIS.



Significance	<p>The California Environmental Quality Act (CEQA) defines a “significant effect on the environment” as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant” (Title 14 California Code of Regulations Section 15382).</p> <p>CEQA requires that the lead agency identify each “significant effect on the environment” resulting from the project and avoid or mitigate it.</p> <p>The CEQA Guidelines include mandatory findings of significance for certain effects, thus requiring the preparation of an Environmental Impact Report.</p>
SIP	State Implementation Plan, the portion (or portions) of an applicable implementation plan approved or promulgated, or the most recent revision thereof, under Sections 110, 301(d) and 175A of CAA.
Sole Source Aquifer	An aquifer upon which a community depends exclusively for its fresh water supply.
Special-status Species	Selected for protection because they are rare and/or subject to population and habitat declines. These species are afforded varying levels of regulatory protection.
STIP	Statewide Transportation Improvement Program, a staged, multiyear, statewide, intermodal program of transportation projects that is consistent with the statewide transportation plan and planning processes and metropolitan plans, transportation improvement programs, and processes.
STP	Statewide Transportation Plan: the official statewide, intermodal transportation plan that is developed through the statewide transportation planning process.
SWRCB	California State Water Resources Control Board: the principal authority for regulating the quantity and quality of waters in the state, established by act of the California legislature in 1967.
TCM	Transportation Control Measure: any measure specifically identified and committed to in the applicable implementation plan that is either one of the types listed in § 108 of the CAA, or any other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Notwithstanding the above, vehicle technology-based, fuel-based, and maintenance-based measures that control the emissions from vehicles under fixed traffic conditions are not TCMs for the purposes of project-level conformity.
TIP	Transportation Improvement Program, a staged, multiyear, intermodal program of transportation projects that is consistent with the metropolitan transportation plan. TIP is a federal term.
TMP	Transportation Management Plan, used to maintain and manage traffic and transportation in a project’s vicinity during construction.
Traffic Study Area	The area for which traffic conditions are reported in this document.
TSCA	Toxic Substances Control Act of 1976, federal law enacted to give EPA the ability to track industrial chemicals produced in or imported into the United States.
WET-DI	A waste extraction procedure using deionized water as a leaching agent.
Wetland	Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (US Army Corps of Engineers and EPA definition).

WH&SP	Worker Health and Safety Plan, a plan designed to prevent exposure of workers to potentially hazardous excavated soils and to comply with applicable waste handling and disposal regulations.
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## **Appendix F**

### **Minimization and/or Mitigation Summary**



## **Environmental Commitments Record**

### **Introduction**

This section comprises a summary of the minimization, avoidance, and mitigation measures described in their respective environmental categories in this Environmental Impact Report/Environmental Assessment. As stated in Chapters 1 and 2, because no actual construction would take place as a result of selecting a Tier I Corridor Alternative, no avoidance, minimization, and/or mitigation measures are proposed for implementation at this time. No project actions requiring permits or approvals from any state, federal, or local agency are required at this time for the Tier I Corridor Project.

As segments of the Tier I corridor are programmed as future Tier II construction-level projects, they will be subject to a separate environmental review that will identify environmental commitments. The avoidance, minimization, and mitigation measures presented in Chapter 2 are conceptual based on program-level information about the Tier I Corridor Alternatives, and these measures are subject to revision based on the changes in the setting, project design, or regulatory requirements in place when individual project segments undergo environmental review.

The measures recommended below comprise the Environmental Commitments Record for the Tier II Auxiliary Lane Alternative.

### **Background**

Both California Environmental Quality Act and/or National Environmental Policy Act regulations require an enforceable mitigation monitoring program be developed for the Tier II Auxiliary Lane Alternative. Per California Environmental Quality Act Guideline 15907(a), to ensure that the mitigation measures identified in the Environmental Impact Report are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions that it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. Under National Environmental Policy Act regulations, a monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation (Section 1505.2(c)). The project proponents have committed to implementing several measures as part of the project to minimize and avoid impacts associated with construction of the Tier II Auxiliary Lane Alternative. These measures include, but are not limited to, elements that would be designed into the new facility and implementation of best management practices during construction.

Additional measures are proposed to mitigate the impacts associated with project implementation. Mitigation is defined by both the California Environmental Quality Act and National Environmental Policy Act as a measure which:

- Avoids the impact altogether by not taking a certain action or parts of an action;
- Minimizes impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifies the impact by repairing, rehabilitating, or restoring the impacted environment;
- Reduces or eliminates the impact over time by preservation and maintenance operations during the life of the project; and
- Compensates for the impacts by replacing or providing substitute resources or environments.

### Environmental Commitments Summary

Table F-1 presents the measures committed to by the project proponents to mitigate significant impacts associated with the proposed Tier II Auxiliary Lane Alternative, while Table F-2 presents the measures committed to by the project proponents to avoid or minimize impacts associated with the proposed Tier II Auxiliary Lane Alternative. Only environmental resources for which such measures are proposed are included in Tables F-1 and F-2.

<b>Table F-1: Summary of Proposed Mitigation Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Mitigation Measures</b>
<b>Visual/ Aesthetics</b>	2.1.6 Permanent Impacts	<p><u>Mitigation Measures:</u></p> <p>Measures to Preserve Existing Vegetation:</p> <ul style="list-style-type: none"> <li>• Beginning with preliminary design and continuing through final design and construction, save and protect as much existing vegetation as feasible, especially eucalyptus and other skyline trees.</li> <li>• Survey the exact locations for trees and include in plan set.</li> <li>• Protect the drip zone of isolated trees with temporary fencing.</li> <li>• Protect large infield areas of existing plantings to be preserved with temporary fencing.</li> </ul> <p>Measures for Retaining Walls:</p> <ul style="list-style-type: none"> <li>• Beginning with preliminary design and continuing through final design and construction, develop construction plans that apply aesthetic treatments to the retaining walls.</li> </ul> <p>Measures for Bridge Aesthetics:</p> <ul style="list-style-type: none"> <li>• Beginning with preliminary design and continuing through final design and construction, develop construction plans that apply aesthetic treatments to the proposed bridges.</li> </ul> <p>Measures for Landscape Plantings:</p> <ul style="list-style-type: none"> <li>• Beginning with preliminary design and continuing through final design and construction, landscape and revegetate disturbed areas to the greatest extent feasible.</li> <li>• Include skyline trees in the planting palette to bring down the scale of the new freeway elements.</li> <li>• Include infill shrub planting between Route 1 and Soquel Avenue to the maximum extent possible.</li> <li>• Include vines on a minimum of 20 percent of the fencing between eastbound Route 1 and Soquel Avenue.</li> <li>• Where horticulturally appropriate, provide a permanent irrigation system</li> </ul>

<b>Table F-1: Summary of Proposed Mitigation Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Mitigation Measures</b>
		<p>to all plantings.</p> <ul style="list-style-type: none"> <li>• Include an extended 3-year maintenance period as part of the construction period to provide a single source of maintenance through the establishment period.</li> </ul>
	2.4.11 Construction Phase Impacts	<ul style="list-style-type: none"> <li>• The project will be designed to protect as much existing vegetation as feasible, especially eucalyptus and other skyline trees (Visual Impact Assessment Report, Measure VA-1).</li> <li>• Disturbed areas will be revegetated to the greatest extent feasible (Visual Impact Assessment Report, Measure VA-12).</li> <li>• The landscaping and revegetation for the project will include a 3-year plant establishment period to ensure adequate revegetation of the areas impacted by the project (Visual Impact Assessment Report, Measure VA-17).</li> </ul>
<b>Cultural Resources</b>	2.1.7 Permanent Impacts	No mitigation measures required.
	2.4.7 Construction Phase Impacts	<p><u>Mitigation Measures:</u></p> <ul style="list-style-type: none"> <li>• If human remains are inadvertently discovered, disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner will be contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, then the coroner will notify the Native American Heritage Commission, who will then notify the most likely descendent. At this time, the person who discovered the remains will contact Caltrans District 5's Office of Cultural Resources so that they may work with the most likely descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code 5097.98 will be followed, as applicable.</li> <li>• In the unlikely event that buried cultural resources are inadvertently discovered during any ground-disturbing activities, the project sponsor and Federal Highway Administration would comply with 36 Code of Federal Regulations 800.13 (b)(3), and if applicable, (c), as stipulated in the 2004 Section 106 Programmatic Agreement for Federal-aid Highway Programs in California regarding post-review discoveries. All earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist could assess the nature and significance of the find.</li> </ul>
<b>Paleontology</b>	2.2.4 Permanent Impacts	<u>No mitigation measures required.</u>
	2.4.8 Construction Phase	<p><u>Mitigation Measures:</u></p> <ul style="list-style-type: none"> <li>• <b>Assessment Before Construction Starts:</b> This may include a field survey to delimit the specific boundaries of sensitive areas and pre-excavation meetings with contractors and developers. In some cases, it may be necessary to conduct field surveys and/or a salvage program prior to grading to prevent damage to known resources and to avoid delays to construction schedules. Such a program may involve surface collection and/or quarry excavations. A review of the initial assessment and proposed mitigation program by the Lead Agency before operations begin will confirm the adequacy of the proposed program.</li> <li>• <b>Adequate Monitoring:</b> An excavation project will retain a qualified project paleontologist. In areas of known high potential, the project paleontologist shall designate a paleontologic monitor to be present during 100% of the earth-moving activities. If, after 50% of the grading is completed, it can be</li> </ul>

**Table F-1: Summary of Proposed Mitigation Measures  
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Environmental Category	EA/EIR Section	Mitigation Measures
		<p>demonstrated that the level of monitoring should be reduced, the project paleontologist shall so amend the mitigation program. Paleontologists who monitor excavations must be qualified and experienced in salvaging fossils and authorized to divert equipment temporarily while removing fossils. They shall be properly equipped with tools and supplies to allow rapid removal of specimens. Provision shall be made for additional assistants to monitor or help in removing large or abundant fossils to reduce potential delays to excavation schedules. If many pieces of heavy equipment are in use simultaneously but at diverse locations, each location shall be individually monitored.</p> <ul style="list-style-type: none"> <li> <b>Macrofossil Salvage:</b> Many specimens recovered from paleontological excavations are easily visible to the eye and are large enough to be easily recognized and removed. Some may be fragile and require hardening before moving. Others may require encasing within a plaster jacket for later preparation and conservation in a laboratory. Occasionally specimens encompass all or much of a skeleton and will require moving either as a whole or in blocks for eventual preparation. Such specimens require time to excavate and strengthen before removal and the patience and understanding of the contractor to recover the specimens properly. It is thus important that the contractors and developers are fully aware of the importance and fragility of fossils for their recovery to be undertaken with the optimum chances of successful extraction. The monitor must be empowered to temporarily halt or redirect the excavation equipment away from the fossils to be salvaged. </li> <li> <b>Microfossil Salvage:</b> Many significant vertebrate fossils (e.g., small mammal, bird, reptile, or fish remains) are too small to be visible within the sedimentary matrix. Fine-grained sedimentary horizons and paleosols most often contain such fossils. They are recovered through concentration by screen washing. If the sediments are fossiliferous, bulk samples are taken for later processing to recover any fossils. An adequate sample comprises 12 cubic meters (6,000 lb or 2,500 kg) of matrix for each site horizon or paleosol, or as determined by the supervising paleontologist. The uniqueness of the recovered fossils may dictate salvage of larger amounts. To avoid construction delays, samples of matrix shall be removed from the site and will be processed elsewhere. </li> <li> <b>Preservation of Samples:</b> Oriented samples must be preserved for paleo-magnetic analysis. Samples of fine matrices shall be obtained and stored for pollen analysis. Other matrix samples shall be retained with the samples for potential analysis by later workers for clast source analysis, as a witness to the source rock unit and possibly for procedures that are not yet envisioned. </li> <li> <b>Preparation:</b> Recovered specimens are prepared for identification (not exhibition) and stabilized. Sedimentary matrix with microfossils is screen washed and sorted to identify the contained fossils. Removal of excess matrix during the preparation process reduces storage space. </li> <li> <b>Identification:</b> Specimens are identified by competent qualified specialists to a point of maximum specificity. Ideally, identification is of individual specimens to element, genus, and species. Batch identification and batch numbering (e.g., "mammals, 75 specimens") shall be avoided. </li> <li> <b>Analysis:</b> Specimens shall be analyzed by stratigraphic occurrence and by size, taxa, or taphonomic conditions. This results in a faunal list, a stratigraphic distribution of taxa, or evolutionary, ecological, or depositional deductions. </li> <li> <b>Storage:</b> Adequate storage in a recognized repository institution for the recovered specimens is an essential goal of the program. Specimens will be cataloged and a complete list will be prepared of specimens introduced into the collections of a repository by the curator of the museum or university. Adequate storage includes curation of individual specimens into the </li> </ul>



Table F-1: Summary of Proposed Mitigation Measures for the Tier II Auxiliary Lanes Project		
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		<p>collections of a recognized, nonprofit paleontologic specimen repository with a permanent curator, such as a museum or a university. A complete set of field notes, geologic maps, and stratigraphic sections accompany the fossil collections. Specimens are stored in a fashion that allows retrieval of specific, individual specimens by researchers in the future.</p> <ul style="list-style-type: none"> <li>• <b>Site Protection:</b> In exceptional instances, the process of construction may reveal a fossil occurrence of such importance that salvage or removal is unacceptable to all concerned parties. In such cases, the design concept may be modified to protect and exhibit the occurrence with the project's design, e.g., as an exhibit in a basement mall. Under such circumstances, the site may be declared and dedicated as a protected resource of public value. Associated fragments recovered from such a site will be placed in an approved institutional repository.</li> <li>• <b>Final Report:</b> A report is prepared by the project paleontologist includes a summary of the field and laboratory methods, site geology and stratigraphy, faunal list, and a brief statement of the significance and relationship of the site to similar fossil localities. A complete set of field notes, geological maps, stratigraphic sections, and a list of identified specimens accompany the report. The report is finalized only after all aspects of the program are completed. The Final Report, together with its accompanying documents, constitutes the goals of a mitigation project. Full copies of the Final Report are deposited with the Lead Agency and the repository institution.</li> <li>• <b>Compliance:</b> The Lead Agency assures compliance with measures to protect fossil resources from the beginning of the project by: <ol style="list-style-type: none"> <li>1. Requesting an assessment and program for impact mitigation which includes salvage and protection during the initial planning phases;</li> <li>2. Arranging for recovered specimens to be housed in an institutional paleontologic repository; and</li> <li>3. Requiring the Final Report.</li> </ol> <p>The supervising paleontologist is responsible for:</p> <ol style="list-style-type: none"> <li>1. Assessment and development of the program for impact mitigation during initial planning phases;</li> <li>2. The repository agreement;</li> <li>3. The adequacy and execution of the mitigation measures; and</li> <li>4. The Final Report.</li> </ol> <p>Acceptance of the Final Report for the project by the Lead Agency signifies completion of the program of mitigation for the project. Review of the Final Report by a vertebrate paleontologist designated by the Lead Agency will establish the effectiveness of the program and adequacy of the report. Inadequate performances in either field comprise noncompliance, and may result in the Lead Agency removing the paleontologist from its list of qualified consultants.</p> </li> </ul>
<b>Hazardous Waste Materials</b>	2.2.5 Permanent Impacts	<p><u>Mitigation Measures:</u></p> <ul style="list-style-type: none"> <li>• Remediation monitoring would be conducted at the following Recognized Environmental Conditions sites. These sites are adjacent to the project area. All other sites require no remedial action. <ul style="list-style-type: none"> <li>○ Former Exxon 7-3604 facility (also listed as Pit Stop Service, Inc.), located at 836 Bay Avenue in Capitola;</li> <li>○ Redtree Properties, located at 819 Bay Avenue in Capitola;</li> <li>○ Unocal Station No. 6193, located at 1500 Soquel Drive in Santa Cruz; and</li> <li>○ BP 11240 facility, located at 2178 41<sup>st</sup> Avenue in Capitola.</li> </ul> </li> <li>• During the final design phase, an asbestos-containing materials investigation will be performed by an inspector certified in accordance</li> </ul>

**Table F-1: Summary of Proposed Mitigation Measures  
for the Tier II Auxiliary Lanes Project**

Environmental Category	EA/EIR Section	Mitigation Measures
		<p>with Asbestos Hazardous Emergency Response Act under Toxic Substance Control Act Title II and by California Occupational Safety and Health Administration under State of California rules and regulations (Title 8, California Code of Regulations, Section 1529). Residential and commercial structures being acquired should be tested for asbestos-containing materials and lead-based paint prior to demolition. Asbestos-containing materials will be abated by using a contractor certified to perform such work. Asbestos-containing materials that may be disturbed during construction activities will be managed according to California Occupational Safety and Health Administration regulations (Title 8, California Code of Regulations, Section 1529). The contractor will be required to be certified to perform this work and will comply with all applicable local and state requirements for the removal and disposal of such materials, thus mitigating the impacts.</p> <ul style="list-style-type: none"> <li>• Those sites meeting the definition of a Recognized Environmental Condition will require soil and groundwater sampling for petroleum products and heavy metals, as applicable, along the sites' borders with the project area during the design phase. Final design specifications will require the proper management, removal, and disposal of wooden utility poles along the roadside containing creosote.</li> <li>• Soil sampling shall be conducted for aerially deposited lead in areas along the shoulders and median of Route 1. In addition to testing for the presence of aerially deposited lead, the contractor would be required to manage all excavated soils in accordance with all pertinent laws and regulations.</li> <li>• Soil and groundwater sampling shall be conducted within the project area for petroleum products.</li> <li>• During the final design phase, surveys for lead-based paint will be conducted to plan for the demolition of existing structures within the right-of-way. Lead-based paint will be abated by using a contractor certified to perform such work.</li> <li>• During the final design phase, a work plan for the investigation of aerially deposited lead will be prepared for characterizing the extent of aerially deposited lead, and investigative sampling work will be performed according to the approved Worker Health and Safety Plan.</li> </ul>
	2.4.9 Construction Phase Impacts	<p><u>Mitigation Measures:</u></p> <ul style="list-style-type: none"> <li>• The construction contractor will prepare a Worker Health and Safety Plan for use during construction. The Worker Health and Safety Plan will address any hazardous materials handling during construction activities pursuant to Title 8 of the California Code of Regulations regarding workers' safety and the use of protective equipment during excavation, moving, or handling of contaminated soil or water. The Worker Health and Safety Plan will establish measures to avoid or minimize potential worker and public exposure to airborne contaminant migration by incorporating dust suppression techniques in construction procedures. The plan will also address avoidance and minimization of worker and environmental exposure to contaminant migration via surface water runoff pathways by implementation of comprehensive measure to control drainage from excavations. In addition, the Worker Health and Safety Plan will address handling, storage, and disposal of any hazardous materials used in the construction process. Because construction workers are in the closest proximity to potential hazards, a plan that avoids impacts to construction workers will provide adequate protection for surrounding residents, workers, and the traveling public.</li> <li>• Advanced consultation with representatives of the Soquel Creek Water District, Santa Cruz Environmental Health Department, and Central</li> </ul>

Table F-1: Summary of Proposed Mitigation Measures for the Tier II Auxiliary Lanes Project		
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		<p>Coast Regional Water Quality Control Board will be conducted if any dewatering is to be performed during project construction activities. This consultation will be helpful in determining the degree of water treatment and water disposal options during dewatering activities, as well as groundwater investigation/sampling requirements prior to dewatering activities.</p> <ul style="list-style-type: none"> <li>• Paint exceeding hazardous waste criteria under Title 22, California Code of Regulations, will require disposal in a Class I disposal site. Paint used for lane striping of the existing roadway will be tested for lead-based paint prior to removal to determine proper disposal methods.</li> <li>• Wooden poles within the project footprint would be properly managed if removed and disposed of.</li> <li>• If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), work shall cease in the vicinity of the suspect material, the area shall be secured as necessary, and all appropriate measures shall be taken to protect human health and the environment. Appropriate measures shall include notification of regulatory agency(ies) and compliance with the various regulatory agencies' laws, regulations, and policies.</li> <li>• Soil generated by construction activities shall be stockpiled onsite in a secure and safe manner. All contaminated soils determined to be hazardous or nonhazardous waste shall be adequately profiled (sampled and analyzed) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state, and federal agencies laws, in particular, the Regional Water Quality Control Board, the Department of Toxic Substances Control, and County of Santa Cruz Environmental Health Services. Groundwater pumped from the subsurface shall be contained onsite in a secure and safe manner prior to treatment and disposal to ensure that environmental and health issues are resolved pursuant to applicable local, state, and federal laws, regulations, and policies. Material from structures that are removed or modified by the project will be handled and disposed of in accordance with all local, state, and federal requirements.</li> </ul>
<b>Natural Communities</b>	2.3.1 Permanent and Construction Impacts <sup>1</sup>	<p><u>Mitigation Measures:</u></p> <p>The following measures are required to mitigate impacts on wetland habitats:</p> <ol style="list-style-type: none"> <li>1. A qualified biological monitor(s) will ensure compliance with mitigation measures within the project environmental documents. Monitoring shall occur throughout the length of construction or as directed by the regulatory agencies. Full-time monitoring shall occur during vegetation removal, water diversion and temporary erosion control installation. Monitoring may be reduced to part time once construction activities are under way and the potential for additional impacts are reduced.</li> <li>2. During project activities, the biological monitor(s) shall coordinate with federal, state, and local agencies and the construction contractor to ensure that construction schedules comply with biological mitigation requirements.</li> <li>3. Prior to project implementation, the project site shall be clearly flagged or fenced so that the contractor is aware of the limits of allowable site access</li> </ol>

<sup>1</sup> Permanent and construction measures have been combined in the biology section to be consistent with Section 2.3.

**Table F-1: Summary of Proposed Mitigation Measures  
for the Tier II Auxiliary Lanes Project**

Environmental Category	EA/EIR Section	Mitigation Measures
		<p>and disturbance. Areas within the designated project site that do not require regular access shall be clearly flagged as off-limit areas to avoid unnecessary damage to sensitive habitats or existing vegetation within the project site.</p> <ol style="list-style-type: none"> <li>4. Prior to project implementation, a project Erosion Control Plan shall be prepared.</li> <li>5. During project activities, erosion control measures shall be implemented. Silt fencing, fiber rolls, and barriers (e.g., hay bales) shall be installed between the project site and adjacent wetlands and other waters. At a minimum, silt fencing shall be checked and maintained daily throughout the construction period. The contractor shall also apply adequate dust control techniques, such as site watering, during construction.</li> <li>6. To control erosion during and after project implementation, standard Caltrans Best Management Practices shall be implemented.</li> <li>7. During project activities, work occurring within stream channels shall be conducted during the dry season if possible (April 15 – October 15). If in-stream work will be necessary a Diversion and Dewatering Plan shall be prepared and implemented.</li> <li>8. Before work begins, a Hazardous Materials Response Plan shall be prepared and shall be implemented during construction to allow a prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take if a spill occurs.</li> <li>9. During project activities, the cleaning and refueling of equipment and vehicles shall occur only within a designated staging area and at least 20 meters (~66 feet) from wetlands, other waters, or other aquatic areas. This staging area shall conform to best management practices applicable to attaining zero discharge of stormwater runoff. At a minimum, all equipment and vehicles will be checked and maintained on a daily basis to ensure proper operation and avoid potential leaks or spills.</li> <li>10. During project activities, all project-related hazardous materials spills within the project site shall be cleaned up immediately. Spill prevention and clean-up materials shall be onsite at all times during construction.</li> <li>11. The biological monitor(s) shall ensure that the spread or introduction of invasive exotic plant species will be avoided to the maximum extent possible. When practicable, invasive exotic plants in the project site will be removed and properly disposed.</li> <li>12. During construction, trash shall be contained, removed from the worksite, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.</li> <li>13. During project activities, no pets shall be allowed on the construction site.</li> </ol> <p><b>Riparian Forest</b></p> <p>In addition to the measures 1 through 12 described above under the Tier II Auxiliary Lane Alternative, the following measures are specific to riparian forest:</p> <ol style="list-style-type: none"> <li>1. Impacts to riparian vegetation will be offset by replacement planting on-site using a 3:1 ratio for each individual riparian tree removed that is greater than 6 inches in diameter at breast height (defined as 4.5 feet above the ground, on the uphill side of the tree), and for all riparian habitat acreage that is lost. It should be noted that regulatory agencies may require a higher ratio for replacement planting.</li> <li>2. Compensatory mitigation for Tier II Auxiliary Lane Alternative impacts shall include in-kind, on-site replacement of riparian vegetation. Regulatory agencies may require a higher ratio for compensatory</li> </ol>

<b>Table F-1: Summary of Proposed Mitigation Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Mitigation Measures</b>
		<p>mitigation. At a minimum, restoration and/or enhancement efforts shall achieve a 75% success ratio at the end of a 5-year period and shall require no further maintenance for survival. All mitigation activities will be conducted within the watershed that is being impacted. The compensatory mitigation will be implemented immediately following project completion. Compensatory mitigation plantings shall be monitored quarterly. Any required maintenance shall also occur quarterly. Maintenance activities include weeding, debris removal, replanting (if necessary), repair of any vandalism, fertilizing, and/or pest control. Maintenance activities will be dictated by the results of the quarterly monitoring effort. Quarterly reports and annual monitoring reports shall be submitted to Caltrans, the Regional Transportation Commission, and the affected regulatory agencies. The annual monitoring report submitted at Year 5 shall serve as a final completion report if the mitigation is successful.</p>
<b>Wetlands and Other Waters</b>	2.3.2 Permanent and Construction Impacts	<p><u>Mitigation Measures:</u></p> <p>The measures identified above for natural communities also apply to jurisdictional wetlands and waters impacts, in addition to the following measures:</p> <ol style="list-style-type: none"> <li>1. During project activities, work occurring within stream channels will shall be conducted during the dry season if possible (April 15 – October 15), if possible. If in-stream work will be is necessary, a Diversion and Dewatering Plan will be prepared and implemented.</li> <li>2. During project activities, the cleaning and refueling of equipment and vehicles shall occur only within a designated staging area at least 20 meters (~66 feet) from wetlands, other waters, or other aquatic areas. This staging area shall conform to best management practices applicable to attaining zero discharge of stormwater runoff. At a minimum, all equipment and vehicles be checked and maintained daily to ensure proper operation and to avoid potential leaks or spills.</li> <li>3. Affected wetlands shall be mitigated at a 1:1 restoration ratio for temporary impacts and at a 3:1 enhancement ratio for permanent impacts to wetlands and other waters. Compensatory mitigation for Tier II Auxiliary Lane Alternative impacts shall include in-kind, on-site replacement of vegetation.</li> <li>4. At a minimum, compensatory mitigation restoration and/or enhancement efforts shall achieve a 75% success ratio at the end of a 5-year period and shall require no further maintenance for survival. All mitigation activities will be conducted within the affected watershed, if feasible. The compensatory mitigation will be implemented immediately following project completion. Compensatory mitigation plantings shall be monitored quarterly. Any required maintenance shall also occur quarterly. Maintenance activities will include weeding, debris removal, replanting (if necessary), repair of any vandalism, fertilizing, and/or pest control. Maintenance activities will be dictated by the results of the quarterly monitoring effort. Quarterly reports and annual monitoring reports be submitted to Caltrans, the Regional Transportation Commission, and the affected regulatory agencies. The annual monitoring report submitted at Year 5 will serve as a final completion report if the mitigation is successful.</li> </ol>
<b>Threatened and Endangered Species</b>	2.3.5 Permanent and Construction Impacts	<p><u>Mitigation Measures:</u></p> <p><i>Tidewater Goby</i></p> <p>Compensatory mitigation of impacted freshwater marsh habitat described in Section 2.3.2 will mitigate impacts to the tidewater goby and its habitat because compensatory mitigation will occur onsite. Specifically, any impacts to Rodeo Gulch would be mitigated directly onsite.</p> <ol style="list-style-type: none"> <li>1. If in-stream work is proposed to occur Rodeo Gulch, incidental take</li> </ol>

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		<p>authorization from the U.S. Fish and Wildlife Service through a Federal Endangered Species Act Section 7 Biological Opinion and Incidental Take Statement shall be acquired, if deemed necessary by the U.S. Fish and Wildlife Service. Formal consultation with U.S. Fish and Wildlife Service may be necessary if a Section 404 permit is issued.</p> <ol style="list-style-type: none"> <li>2. A component including a description of tidewater goby, its ecology, and the need for conservation of the species will be integrated into the worker environmental training program.</li> <li>3. Prior to construction, if it is necessary to dewater/divert areas within Rodeo Gulch prior to project implementation, a U.S. Fish and Wildlife Service-approved biologist shall conduct a pre-construction survey for tidewater goby and use seining, dip-nets, or other approved methods to capture and relocate tidewater goby from the areas to be dewatered to areas with suitable habitat outside of the area of proposed disturbance.</li> <li>4. If dewatering/stream diversion is necessary, a Diversion and Dewatering Plan shall be prepared and implemented to allow for passage of aquatic species through the site during construction. At a minimum, the form and function of all pumps used during the dewatering activities shall be checked twice daily by the biological monitor(s) to ensure a dry work environment and minimize adverse effects to aquatic species and habitats.</li> <li>5. During project activities, if pumps are incorporated to assist in temporarily dewatering the site, intakes shall be completely screened with no larger than 0.2-inch wire mesh to prevent tidewater goby and other sensitive aquatic species from entering the pump system. Pumps shall release the additional water to a settling basin, allowing the suspended sediment to settle out prior to re-entering the stream(s) outside the isolated area.</li> <li>6. During dewatering/diversion activities, or if tidal fluctuations breach a formerly dewatered and isolated project site, the U.S. Fish and Wildlife Service-approved biological monitor(s) or other U.S. Fish and Wildlife Service-approved biologist(s) shall supervise site dewatering and relocate tidewater goby and other stranded aquatic species.</li> <li>7. If it is determined by the biological monitor(s) or the U.S. Fish and Wildlife Service-approved biologist(s) that impacts to tidewater goby could exceed the levels authorized by the U.S. Fish and Wildlife Service, they will notify the resident engineer (the engineer that is directly overseeing construction activities) immediately. The resident engineer will either resolve the situation immediately by stopping the actions that are causing the problem and notifying the appropriate resource agency as soon as is reasonably possible. No work will resume until the issue is resolved.</li> <li>8. Following construction, temporary impacts to streamside vegetation used as sheltering areas or streambed sandbars, gravels, and cobbles used by fish species will be restored to their pre-construction conditions, at a minimum.</li> </ol> <p><i>California Red-Legged Frog</i></p> <ol style="list-style-type: none"> <li>1. Onsite mitigation for, and onsite replacement of, freshwater marsh and riparian vegetation per the project compensatory mitigation for wetlands and riparian habitat (described in Sections 2.3.2) will also mitigate any impacts to California red-legged frog and its habitat; this mitigation will be onsite within the shall occur with regards to the relocation site prior to the capture of any California red-legged frogs.</li> <li>2. Before any construction activities begin, a U.S. Fish and Wildlife Service-approved biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of the California red-legged frog and its habitat, the specific measures to be implemented to conserve the California red-legged frog during the project, and all project boundary limits. Brochures, books, and briefings may be</li> </ol>

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		<p>used in the training session, provided that a qualified person is on hand to answer questions.</p> <ol style="list-style-type: none"> <li>3. A U.S. Fish and Wildlife Service-approved biologist will be present at the worksite until all California red-legged frogs have been removed, workers have been instructed, and disturbance of the habitat has been completed. After this time, the state or local sponsoring agency will designate a person to monitor onsite compliance with all minimization measures. The U.S. Fish and Wildlife Service-approved biologist will ensure that this monitor receives the training outlined above in measure 4 and in the identification of California red-legged frogs. If the monitor or the U.S. Fish and Wildlife Service-approved biologist recommends that work be stopped because California red-legged frogs would be affected to a degree that exceeds the levels anticipated by the Federal Highway Administration and the U.S. Fish and Wildlife Service during the review of the proposed action, he or she will notify the resident engineer (the engineer that is directly overseeing construction activities) immediately. The resident engineer will resolve the situation by stopping the actions that are causing the problem and notifying the U.S. Fish and Wildlife Service as soon as is reasonably possible. No work will resume until the issue is resolved.6. During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.</li> <li>4. All refueling, maintenance, and staging of equipment and vehicles will occur at least 60 feet from the riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. The monitor will ensure that contamination of habitat does not occur during such operations. Before of work begins, the Federal Highway Administration will ensure that a plan is in place for prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take if a spill occurs.</li> <li>5. Habitat contours will be returned to their original configuration at the end of the project activities. This measure will be implemented in all areas disturbed by activities associated with the project, unless the U.S. Fish and Wildlife Service and Federal Highway Administration determine that it is not feasible or modification of original contours would not benefit the California red-legged frog.</li> <li>6. The number of access routes, size of staging areas, and the total area of activity will be limited to the minimum necessary to achieve the project goal. Environmentally sensitive areas will be established to confine access routes and construction areas to the minimum area necessary to complete construction, and minimize the impact to California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.</li> <li>7. The Federal Highway Administration will attempt to schedule work activities for times of the year when impacts to the California red-legged frog would be minimal. For example, work that would affect large pools that may support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools that are important to maintain California red-legged frogs through the driest portions of the year would be avoided, to the maximum degree practicable, during the late summer and early fall. Habitat assessments, surveys, and informal consultation between the Federal Highway Administration and the U.S. Fish and Wildlife Service during project planning shall be used to assist in scheduling work activities to avoid sensitive habitats during key times of year.</li> </ol>

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for the Tier II Auxiliary Lanes Project**

Environmental Category	EA/EIR Section	Mitigation Measures
		<p>8. To control sedimentation during and after project implementation, the Federal Highway Administration and the sponsoring agency will implement Best Management Practices outlined in any authorizations or permits issued under the authorities of the Clean Water Act that it receives for the specific project. If Best Management Practices are ineffective, the Federal Highway Administration will attempt to remedy the situation immediately, in consultation with the U.S. Fish and Wildlife Service.</p> <p>9. If a work site is to be temporarily dewatered by pumping, intakes will be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water will be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. The methods and materials used in any dewatering will be determined by the Federal Highway Administration in consultation with U.S. Fish and Wildlife Service on a site-specific basis. Upon completion of construction activities, any diversions or barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed will be minimized to the maximum extent possible; any imported material will be removed from the streambed upon completion of the project.</p> <p>10. Unless approved by the U.S. Fish and Wildlife Service, water will not be impounded in a manner that could attract California red-legged frogs.</p> <p>11. A U.S. Fish and Wildlife Service-approved biologist will permanently remove any individuals of exotic species, such as bullfrogs (<i>Rana catesbeiana</i>), crayfish, and centrarchid fishes from the project area, to the maximum extent possible. The U.S. Fish and Wildlife Service-approved biologist will be responsible for ensuring his or her activities are in compliance with the California Fish and Game Code.</p> <p>12. If the Federal Highway Administration demonstrates that disturbed areas have been restored to conditions that allow them to function as habitat for the California red-legged frog, these areas will not be included in the amount of total habitat permanently disturbed.</p> <p>13. To ensure that diseases are not conveyed between work sites by the U.S. Fish and Wildlife Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all time.</p> <p>14. Project sites will be revegetated with an assemblage of native riparian, wetlands, and upland vegetation suitable for the area. Locally collected plant materials will be used to the extent practicable. Invasive, exotic plants will be controlled to the maximum extent practicable. These measures will be implemented in all areas disturbed by activities associated with the project, unless the U.S. Fish and Wildlife Service and the Federal Highway Administration determine that it is not feasible or practical.</p> <p>15. The Federal Highway Administration will not use herbicides as the primary method used to control invasive, exotic plants. However, if the Federal Highway Administration determines that the use of herbicides is the only feasible method for controlling invasive plants at a specific project site, it will implement the following additional protective measures for the California red-legged frog:</p> <ol style="list-style-type: none"> <li>The Federal Highway Administration will not use herbicides during the breeding season for the California red-legged frog.</li> <li>The Federal Highway Administration will conduct surveys for the California red-legged frog immediately prior to the start of any herbicide use. If found, California red-legged frogs will be relocated to suitable habitat far enough from the project area that no direct contact with herbicides would occur.</li> </ol>



<b>Table F-1: Summary of Proposed Mitigation Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Mitigation Measures</b>
		<ul style="list-style-type: none"> <li>c. Giant reed and other invasive plants will be cut and hauled out by hand and the stems painted with glyphosate or glyphosate-based products, such as Aquamaster or Rodeo.</li> <li>d. Licensed and experienced Federal Highway Administration staff or a licensed and experience contractor will use a hand-held sprayer for foliar application of Aquamaster or Rodeo where large monoculture stands occur at an individual project site.</li> <li>e. All precautions will be taken to ensure that no herbicide is applied to native vegetation.</li> <li>f. Herbicides will not be applied on or near open water surfaces (no closer than 60 feet from open water).</li> <li>g. Foliar applications of herbicide will not occur when wind speeds are in excess of 3 miles per hour.</li> <li>h. No herbicides will be applied within 24 hours of forecasted rain.</li> <li>i. Application of all herbicides will be done by a qualified Federal Highway Administration staff or contractors to ensure that overspray is minimized, that all application is made in accordance with label recommendations, and with implementation of all required and reasonable safety measures. A safe dye will be added to the mixture to visually denote treated sites. Application of herbicides will be consistent with the U.S. Environmental Protection Agency's Office of Pesticide Programs, Endangered Species Protection Program county bulletins.</li> <li>j. All herbicides, fuels, lubricants, and equipment will be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill would not drain directly toward aquatic habitat. The Federal Highway Administration will ensure that contamination of habitat does not occur during such operations. Before work begins, the Federal Highway Administration will ensure that a plan is in place for a prompt and effective response to accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take if a spill occurs.</li> </ul> <p>16. Upon completion of any project for which this programmatic consultation is used, the Federal Highway Administration will ensure that a Project Completion Report is completed and provided to the Ventura Fish and Wildlife Office. The Federal Highway Administration should include recommended modification of the protective measures if alternative measures would facilitate compliance with the provisions of this consultation. In addition, the Federal Highway Administration will reinstitute formal consultation in the event any of the following thresholds are reached as a result of projects conducted under the provisions of this consultation:</p> <p>The Federal Highway Administration will reinstitute consultation when, as a result of projects conducted under the provisions of this consultation:</p> <ul style="list-style-type: none"> <li>a. 10 California red-legged frog adults or juveniles have been killed or injured in a given year (for this and all other standards, an egg mass is considered to be one California red-legged frog);</li> <li>b. 50 California red-legged frogs have been killed or injured in total;</li> <li>c. 20 acres of critical habitat for the California red-legged frog that include the primary constituent elements of aquatic breeding and non-breeding aquatic habitat and upland and dispersal habitat have been permanently lost in any given year;</li> <li>d. 100 acres of critical habitat for the California red-legged frog that include the primary constituent elements of aquatic breeding and non-breeding aquatic habitat and upland and dispersal habitat have been permanently lost in total;</li> </ul>

Table F-1: Summary of Proposed Mitigation Measures for the Tier II Auxiliary Lanes Project		
Environmental Category	EA/EIR Section	Mitigation Measures
		<ul style="list-style-type: none"> <li>e. 100 acres of critical habitat for the California red-legged frog that include the primary constituent elements of aquatic breeding and non-breeding aquatic habitat and upland and dispersal habitat have been temporarily disturbed in any given year; or,</li> <li>f. 500 acres of critical habitat for the California red-legged frog that include the primary constituent elements of aquatic breeding and non-breeding aquatic habitat and upland and dispersal habitat have been temporarily disturbed in total.</li> </ul>

<b>Table F-2: Summary of Proposed Avoidance and Minimization Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Avoidance and Minimization Measures</b>
<b>HUMAN ENVIRONMENT</b>		
<b>Land Use</b>	2.1.1.1 Permanent Impacts	<u>Avoidance/Minimization Measures:</u> <ul style="list-style-type: none"> <li>The project alignment has been adjusted to fit within existing right-of-way where feasible;</li> <li>In the vicinity of Rodeo Gulch, include retaining walls on both sides of the roadway to minimize impacts;</li> <li>Exceptions to design standards are proposed to reduce right-of-way impacts in the vicinity of the Chanticleer Avenue pedestrian overcrossing.</li> </ul>
<b>Community Impacts - Relocations</b>	2.1.3.2 Permanent Impacts	<u>Avoidance/Minimization Measures:</u> <ul style="list-style-type: none"> <li>Minimize right-of-way requirements.</li> <li>Financial compensation for partial property loss will be provided in accordance with procedures in the Caltrans Right-of-Way Manual.</li> </ul>
	2.4.3 Construction Phase Impacts	<u>Avoidance/Minimization Measures:</u> <ul style="list-style-type: none"> <li>The Transportation Management Plan described in Section 2.4.1 will include traffic rerouting, a detour plan, and public information procedures will be developed during the design phase with participation from local agencies, local communities, business associations, and affected drivers. Early and well-publicized announcements and other public information measures will be implemented prior to and during construction to minimize confusion, inconvenience, and traffic congestion.</li> <li>As part of the Transportation Management Plan, construction planning will minimize nighttime construction in residential areas and minimize daytime construction impacts on retail and commercial areas.</li> <li>During the construction phase of the project, some parking restrictions may be required on a temporary basis. A public outreach program would be implemented throughout the construction period to keep the public informed of the construction schedule and scheduled parking and roadway closures, including detour routes and if available, alternative parking.</li> <li>The acquisition of temporary construction easements shall conform to the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.</li> </ul>
<b>Utilities and Emergency Services</b>	2.1.4 Permanent Impacts	<u>Avoidance/Minimization Measures:</u> <ul style="list-style-type: none"> <li>Coordination with utility providers would be initiated during the preliminary engineering phase of the project and would continue through final design and construction.</li> <li>Caltrans and the Regional Transportation Commission would coordinate with the utility providers to plan utility relocations, identify potential conflicts, ensure that construction of the proposed project minimizes disruption to utility operations, and formulate strategies for overcoming problems that may arise.</li> <li>Design, construction, and inspection of utilities relocated for the project would be done in accordance with Caltrans requirements.</li> </ul>
	2.4.2 Construction Phase Impacts	<u>Avoidance/Minimization Measures:</u> <ul style="list-style-type: none"> <li>Caltrans and the Regional Transportation Commission would coordinate with the affected service provider in each instance to ensure that work is in accordance with the appropriate requirements and criteria.</li> <li>If unexpected underground utilities are encountered, the construction contractor will coordinate with the utility provider to develop plans to address the utility conflict, protect the utility if needed, and limit service interruptions.</li> <li>A public outreach plan implemented in conjunction with project construction and the Transportation Management Plan will involve</li> </ul>

<b>Table F-2: Summary of Proposed Avoidance and Minimization Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Avoidance and Minimization Measures</b>
		<p>communication with the affected communities to plan any utility interruptions and keep the public informed of construction activities.</p> <ul style="list-style-type: none"> <li>Caltrans and the Regional Transportation Commission will coordinate with emergency service providers and through the public information program to avoid emergency service delays by ensuring that all providers are aware well in advance of road closures or detours.</li> </ul>
<b>Traffic and Transportation/ Pedestrian and Bicycle Facilities</b>	2.1.5 Permanent Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <p>None.</p>
	2.4.1 Construction Phase Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <ul style="list-style-type: none"> <li>Implementation of a Transportation Management Plan that addresses circulation for transit, bicycles, pedestrians, and private vehicles.</li> <li>The Transportation Management Plan would include a public outreach program to communicate any such closures and detours as described below under Section 2.4.4, Community Impacts.</li> <li>Lane and ramp closure charts would be included in the final Transportation Management Plan and in the project specifications.</li> <li>In the event of temporarily obstruction of any pedestrian walkways or bicycle paths, the Transportation Management Plan would identify nearby alternate routes, including pedestrian routes that meet Americans with Disabilities requirements, as appropriate.</li> <li>The Transportation Management Plan will include an evaluation of potential impacts as a result of diverting traffic to alternate routes. The Traffic Management Plan would include measures to minimize, avoid, and/or mitigate impacts to alternate routes, such as agreements with local agencies to provide enhanced infrastructure on arterial roads or intersections to deal with detoured traffic. The Traffic Management Plan may also provide for contracting with local agencies for traffic personnel, especially for special event traffic through or near the construction zone.</li> <li>Coordination with transit and private shuttle services to plan for any rerouting.</li> <li>To minimize disruption to the traveling public during construction of the Tier II Auxiliary Lane Alternative, a comprehensive strategy would be developed to minimize disruption and ensure the safe movement of vehicles through and around the construction site.</li> </ul>
<b>Visual/ Aesthetics</b>	2.1.6 Permanent Impacts	<p><u>Avoidance/Minimization Measures</u></p> <p>Measures for Noise Barriers (if included in final project):</p> <ul style="list-style-type: none"> <li>Beginning with preliminary design and continuing through final design and construction, develop construction plans that apply aesthetic treatments to the soundwalls.</li> <li>Include vine plantings on one or both faces of soundwalls wherever feasible (given Caltrans setback and maintenance requirements). If vines are only planted on one side of the wall, include vine portals in the design of the wall to accommodate vine access to both sides of the wall.</li> </ul> <p>Measures for Fencing and Barriers:</p> <ul style="list-style-type: none"> <li>If bridge rail is used at Rodeo Creek Gulch retaining walls, use Type 80 rail with aesthetic treatment.</li> <li>Include aesthetic treatment on concrete median barrier consistent with the visual character of the corridor and the adjacent community.</li> <li>Replace existing chain link fencing between eastbound Route 1 and Soquel Avenue with ornamental fencing.</li> </ul> <p>Measures for Stormwater Treatment Facilities:</p> <ul style="list-style-type: none"> <li>Beginning with preliminary design and continuing through final design and</li> </ul>

<b>Table F-2: Summary of Proposed Avoidance and Minimization Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Avoidance and Minimization Measures</b>
		<p>construction, use drainage and water quality elements, where required, that maximize the allowable landscape.</p> <ul style="list-style-type: none"> <li>• Locate basins so that they would be at least 10 feet from the edge of the Caltrans plant setback to allow landscape screening to be installed.</li> <li>• Design basins so that they appear to be a natural landscape feature, such as a dry streambed or a riparian pool. They shall be shaped in an informal, curvilinear manner.</li> <li>• Basin slope grading shall incorporate slope rounding, variable gradients, and be similar to the surrounding topography to de-emphasize the edge. If a wall or hard feature is necessary, it will be worked into the overall design concept.</li> <li>• Employ grading design of any ponds or swales that is sympathetic to corridor aesthetics.</li> <li>• Locate maintenance access drives in unobtrusive areas away from local streets. Such drives will consist of inert materials or herbaceous groundcover that is visually compatible with the surrounding landscape.</li> <li>• Basins shall be designed so that chain-link perimeter fencing is not required.</li> <li>• Design all visible concrete structures and surfaces to visually blend with the adjacent landscaping and natural plantings.</li> <li>• Design rock slope protection to consist of aesthetically pleasing whole material with a variety of sizes.</li> <li>• Limit the use of bioswales within landscape areas. If they must be used, locate them in non-obtrusive areas and design them to appear natural.</li> </ul>
	2.4.11 Construction Phase Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <p>None.</p>
<b>Cultural Resources</b>	2.1.7 Permanent Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <p>None.</p>
	2.4.7 Construction Phase Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <p>None.</p>
<b>PHYSICAL ENVIRONMENT</b>		
<b>Hydrology and Floodplain</b>	2.2.1 Permanent Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <ul style="list-style-type: none"> <li>• Better end treatments, such as wingwalls, would be considered at major culvert crossings where culvert improvements are proposed to improve hydraulics.</li> <li>• Undersized existing culverts would be replaced with larger sizes (or parallel systems).</li> <li>• Implement outlet protection, velocity dissipation devices, and possible peak-flow attenuation basins as need to maintain preconstruction stormwater flows by metering or detaining post-construction flows to preconstruction rates prior to discharge to a receiving water body or municipal separate storm sewer system.</li> <li>• The project proponents will work closely with the Santa Cruz County Planning Department to determine if floodplain map revisions are necessary.</li> </ul>

<b>Table F-2: Summary of Proposed Avoidance and Minimization Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EAEIR Section</b>	<b>Avoidance and Minimization Measures</b>
	2.4.12 Construction Phase Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <ul style="list-style-type: none"> <li>Preparation and implementation of a Storm Water Pollution Prevention Plan during project construction that identifies all onsite drainage facilities, placement of appropriate stormwater and non-stormwater pollution controls, erosion and sediment control, spill response and containment plans, inspection scheduling, maintenance and trailing of construction personnel.</li> </ul>
<b>Water Quality and Storm Water Runoff</b>	2.2.2 Permanent Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <ul style="list-style-type: none"> <li>Use of biofiltration devices or infiltration devices as preferred Treatment Best Management Practices, and consideration of opportunities for other Treatment Best Management Practice devices such as: media filters, detention devices, wet basins, and multi-chambered treatment trains.</li> <li>Permanent erosion control measures shall be applied to all new or exposed slopes.</li> <li>Preservation of Existing Vegetation – At all locations, preserving existing vegetation is beneficial. The following general steps shall be taken to preserve existing vegetation during the Design Phase:               <ol style="list-style-type: none"> <li>Identify and delineate in contract documents all vegetation to be retained.</li> <li>Designer shall provide specification in contract documents that the Contractor shall delineate the areas to be preserved in the field prior to the start of soil-disturbing activities.</li> <li>Designer shall provide specification in contract documents that the Contractor shall minimize disturbed areas by locating temporary roadways to avoid stands of trees and shrubs and to follow existing contours to reduce areas of cut and fill.</li> <li>Designer shall, when specifying the removal of vegetation, consider provisions included in the contract documents to minimize impacts (i.e., increased exposure or wind damage) to the adjacent vegetation that will be preserved.</li> </ol> </li> <li>Proper design of the following drainage facilities to handle concentrated flows:               <ul style="list-style-type: none"> <li>Ditches, berms, dikes, and/or swales</li> <li>Overside drains</li> <li>Flared end sections</li> <li>Outlet protection/velocity dissipation devices</li> </ul> </li> <li>Slope/Surface Protection Systems – The following control measures must be implemented to stabilize slopes that are created or modified by the project:               <ul style="list-style-type: none"> <li>Vegetated surfaces</li> <li>Hard surfaces</li> </ul> </li> <li>Incorporate in the design documents, construct and ensure long-term, continuous operation of stormwater treatment measures (biofiltration or infiltration facilities are preferred) to provide treatment of stormwater runoff in accordance with the State Water Resources Control Board's Order No. 99-06 DWQ (the 1999 Caltrans Municipal Stormwater Permit).</li> <li>The delineation in the contract documents of vegetation to be retained shall include vegetation below the top of the bank at Soquel Creek and Rodeo Creek Gulch, to the maximum extent practicable.</li> <li>Stormwater treatment facilities incorporated in the project shall be protected from concentrated flows by the incorporation of rock slope protection or other hard material at the inlets to the treatment facilities.</li> </ul>

<b>Table F-2: Summary of Proposed Avoidance and Minimization Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Avoidance and Minimization Measures</b>
	2.4.13 Construction Phase Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <ul style="list-style-type: none"> <li>• Minimum construction control measures such as limiting access routes, stabilization of de-vegetated areas and using sediment controls and filtration.</li> <li>• Erosion and sediment control, including soil stabilization, measures to prevent a net increase in sediment load in storm water, and controls to reduce tracking sediment onto roads and erosion.</li> <li>• Non-stormwater management will include provisions to reduce and control discharges other than storm water.</li> <li>• Post-construction stormwater management will include measures for ongoing (permanent) protection for water resources.</li> <li>• Waste management and disposal will address equipment maintenance waste, used oil, and batteries etc. All waste must be disposed of as required by state and federal law.</li> <li>• Maintenance, inspection and repair and monitoring measures require an ongoing program to ensure that all controls are in place and operating as designed.</li> <li>• The Regional Transportation Commission will prepare and submit an annual report on the construction project to the Regional Water Quality Control Board, which must certify compliance with the Storm Water Pollution Prevention Plan.</li> </ul>
<b>Geology/Soils/ Seismic/ Topography</b>	2.2.3 Permanent Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <ul style="list-style-type: none"> <li>• A site-specific seismic hazard engineering analysis will be conducted during final design, which will include engineering recommendations for retaining walls, expansive soil treatment, cuts and fills, and bridge foundation elements.</li> <li>• The specific seismic hazard engineering analysis will include design measures to address surface drainage, slope maintenance, and surface protection/erosion control. In addition, the seismic hazard engineering analysis will include design measures to minimize the potential damage from ground shaking, fault rupture, liquefaction, lateral spreading, and slope stability. The following requirements and Best Management Practices will be incorporated as part of the seismic hazard engineering analysis:</li> <li>• Replanting will be incorporated into project plans to protect any new slopes.</li> <li>• Permanent erosion control measures, such as infiltration devices, media filters, and detention devices, will be applied to all new and/or exposed slopes. Ditches, berms, dikes, swales, overside drains, flared end sections, and outlet protection/velocity dissipation devices will be designed to handle concentration flows.</li> <li>• Slope/surface protection systems with vegetated surfaces and hard surfaces will be employed to minimize erosion.</li> <li>• To minimize potential damage from ground shaking, structures associated with this project will meet maximum credible earthquake standards, as established by the Caltrans Office of Earthquake Engineering. Caltrans has established Seismic Design Criteria for incorporating seismic loads in the design of structures. Structure design, including bridges, will reflect these design guidelines. Impacts from ground shaking and fault rupture are to be mitigated using appropriate Caltrans design methods, such as the use of stone columns, subexcavation, dynamic compaction, or dewatering methods.</li> <li>• For foundation design of structures having concentrated loads (e.g.,</li> </ul>

<b>Table F-2: Summary of Proposed Avoidance and Minimization Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Avoidance and Minimization Measures</b>
		<p>bridges), design will address the additional loads generated by the liquefaction conditions. The most suitable method(s) will be selected based on site-specific subsurface investigations conducted as part of the seismic hazard engineering analysis.</p> <ul style="list-style-type: none"> <li>Site-specific engineering recommendations to minimize impacts from lateral spreading will be incorporated into the final design plans and construction contract documents. Angled piles may be needed to lessen lateral pressures of creek banks to resist lateral spreading.</li> <li>Localized movements along creek banks will be controlled by incorporating in the project design appropriate permanent slope protection, including rock riprap or revetment. Structures, such as retaining walls, will be required to mitigate specific conditions. Site-specific engineering recommendations to minimize long-term impacts due to landsliding will be defined based upon field testing during the final design phase and incorporated in the final design.</li> </ul>
	2.4.6 Construction Phase Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <ul style="list-style-type: none"> <li>Open excavations will be shored, taking into consideration surcharge loads from nearby structures and examination of the potential for lateral movement of the excavation walls.</li> <li>Heavy construction equipment, building materials, excavated soil, and vehicle traffic shall be kept away from the edge of excavations, generally a distance equal to or greater than the depth of the excavation.</li> <li>During wet weather, storm runoff shall be directed from entering excavation areas as feasible.</li> <li>Sidewalks, slabs, pavement, and utilities adjacent to proposed excavations shall be adequately supported during construction.</li> </ul>
<b>Paleontology</b>	2.2.4 Permanent Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <p>None.</p>
	2.4.8 Construction Phase	<p><u>Avoidance/Minimization Measures:</u></p> <p>None.</p>
<b>Hazardous Waste Materials</b>	2.2.5 Permanent Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <p>None.</p>
	2.4.9 Construction Phase Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <p>None.</p>
<b>Air Quality</b>	2.2.6 Permanent Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <p>None.</p>
	2.4.4 Construction Phase Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <ul style="list-style-type: none"> <li>The construction contractor shall comply with Caltrans' Standard Specifications Section 7-1.01F and Section 10 of Caltrans' Standard Specifications (2006). <ul style="list-style-type: none"> <li>Section 7, "Legal Relations and Responsibility," addresses the contractor's responsibility on many items of concern, such as air pollution; protection of lakes, streams, reservoirs, and other water bodies; use of pesticides; safety; sanitation; convenience of the public;</li> </ul> </li> </ul>



Table F-2: Summary of Proposed Avoidance and Minimization Measures for the Tier II Auxiliary Lanes Project		
Environmental Category	EA/EIR Section	Avoidance and Minimization Measures
		<p>and damage or injury to any person or property as a result of any construction operation. Section 7-1.01F specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.</p> <ul style="list-style-type: none"> <li>○ Section 10 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are contained in Section 18.</li> <li>• The construction contractor shall apply water or dust palliative to the site and equipment as frequently as necessary to control fugitive dust emissions.</li> <li>• The construction contractor shall spread soil binder on any unpaved roads used for construction purposes and on all project construction parking areas.</li> <li>• The construction contractor shall wash off trucks as they leave the right-of-way as necessary to control fugitive dust emissions.</li> <li>• The construction contractor shall properly tune and maintain construction equipment and vehicles.</li> <li>• The construction contractor shall use low-sulfur fuel in all construction equipment as provided in Title 17 California Code of Regulations, Section 93114.</li> <li>• The construction contractor shall develop a dust control plan documenting sprinkling, temporary paving, speed limits, and expedited revegetation of disturbed slopes as needed to minimize construction impacts to existing communities.</li> <li>• The construction contractor shall locate equipment and materials storage sites as far away from residential and park uses as practical. Construction areas shall be kept clean and orderly.</li> <li>• The construction contractor shall establish Environmentally Sensitive Areas for sensitive air receptors within which construction activities involving extended idling of diesel equipment would be prohibited, to the extent that is feasible.</li> <li>• The construction contractor shall use track-out reduction measures, such as gravel pads, at project access points to minimize dust and mud deposits on roads affected by construction traffic.</li> <li>• The construction contractor shall cover all transported loads of soils and wet materials prior to transport or provide adequate freeboard (space from the top of the material to the top of the truck) to reduce PM<sub>10</sub> and deposition of particulate matter during transportation.</li> <li>• The construction contractor shall remove dust and mud that are deposited on paved, public roads due to construction activity and traffic to decrease particulate matter.</li> <li>• The construction contractor shall route and schedule construction traffic to avoid peak travel times as much as possible to reduce congestion and related air quality impacts caused by idling vehicles along local roads.</li> <li>• The construction contractor shall install mulch or plant vegetation as soon as practical after grading to reduce windblown particulate in the area.</li> <li>• According to Caltrans Standard Specification Provisions, idling time for lane closure during construction is restricted to 10 minutes in each direction.</li> <li>• The construction contractor must comply with Monterey Bay Unified Air Pollution Control District rules, ordinances, and regulations in regards to air quality restrictions.</li> </ul>

<b>Table F-2: Summary of Proposed Avoidance and Minimization Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Avoidance and Minimization Measures</b>
<b>Noise and Vibration</b>	2.2.7 Permanent Impacts	<u>Avoidance/Minimization Measures:</u> <ul style="list-style-type: none"> <li>Noise abatement in form of short soundwalls or building acoustical treatment must be considered for one house with the future predicted traffic noise levels of 75 A-weighted decibels or higher.</li> </ul>
	2.4.5 Construction Phase Impacts	<u>Avoidance/Minimization Measures:</u> <ul style="list-style-type: none"> <li>Construction activities shall comply with Section 14-8.02 "Noise Control" of Caltrans' 2010 Standard Specifications and Standard Special Provisions.</li> <li>All internal combustion engines must be equipped with the manufacturer-recommended muffler. Do not exceed a maximum sound level (<math>L_{max}</math>) of 86 decibels (A-weighted) at 50 feet from the job site activities from 9 p.m. to 6 a.m.</li> <li>As directed by the resident engineer, the contractor shall implement appropriate additional noise abatement measures including, but not limited to, changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, or installing acoustic barriers around stationary construction noise sources.</li> </ul>
<b>Energy</b>	2.2.8	<u>Avoidance/Minimization Measures:</u> None.
<b>BIOLOGICAL ENVIRONMENT</b>		
<b>Natural Communities</b>	2.3.1 Permanent and Construction Impacts <sup>2</sup>	<u>Avoidance/Minimization Measures:</u> Measures 1-12 and Measures 1-2 for Riparian Forest listed in Table F-1 for Natural Communities are also avoidance and minimization measures for all other affected natural communities. <b>Coast Live Oak Woodland</b> In addition to the measures 1 through 12 described above under the Tier II Auxiliary Lane Alternative, the following measures are specific to coast live oak Woodland. <ol style="list-style-type: none"> <li>All coast live oak woodland and individual oaks that are not planned for removal shall be delineated on the project plans and provided protective fencing at a distance no less than the dripline of the affected tree canopy. Project equipment shall not be permitted to enter the coast live oak dripline canopy at any time during the project.</li> <li>During project activities, erosion control measures shall be implemented. Silt fencing, fiber rolls, and barriers (e.g., hay bales) shall be installed between the project site and adjacent coast live oak woodlands. At a minimum, silt fencing shall be checked and maintained daily throughout the construction period. The contractor shall also apply adequate dust control techniques, such as site watering, during construction.</li> <li>During project activities, the cleaning and refueling of equipment and vehicles shall occur only within a designated staging area and at least 20 meters (~66 feet) from coast live oak woodlands. This staging area shall conform to Best Management Practices applicable to attaining zero discharge of stormwater runoff. At a minimum, all equipment and vehicles shall be checked and maintained daily to ensure proper operation and avoid potential leaks or spills.</li> <li>Any coast live oak tree that is removed as part of Tier I or Tier II activities shall be replaced at a 10:1 ratio. Oak tree replacement efforts shall achieve 75% success at the end of a 5-year period, and require no further</li> </ol>

<sup>2</sup> Permanent and construction measures have been combined in the biology section to be consistent with Section 2.3.

<b>Table F-2: Summary of Proposed Avoidance and Minimization Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Avoidance and Minimization Measures</b>
		<p>maintenance for survival. These replacement plantings shall be located on-site and shall be closely associated with existing coast live oak woodland habitat to provide continuity with the existing coast live oak woodland habitat. The compensatory mitigation will be implemented immediately following project completion. Compensatory mitigation plantings shall be monitored quarterly. Any required maintenance shall also occur quarterly. Maintenance activities include weeding, debris removal, replanting (if necessary), repair of any vandalism, fertilizing, and/or pest control. Maintenance activities will be dictated by the results of the quarterly monitoring effort. Quarterly reports and annual monitoring reports and a final completion report will be submitted to Caltrans, the Regional Transportation Commission, and the affected regulatory agencies. The annual monitoring report submitted at Year 5 shall serve as a final completion report if the mitigation is successful.</p>
<b>Wetlands and Other Waters</b>	2.3.2 Permanent and Construction Impacts	<p><u>Avoidance/Minimization Measures:</u> None.</p>
<b>Plant Species</b>	2.3.3 Permanent and Construction Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <ol style="list-style-type: none"> <li>1. If areas with special-status plant species cannot be avoided, impacts to special-status plant species will be mitigated by implementing the following measures, which are provided on a conceptual basis for the Tier I Corridor Alternatives and will be considered mitigation commitments for the Tier II Auxiliary Lane Alternative for any impacts to special-status plant species that may be identified in future botanical surveys: (a) replace species within the project right-of-way through installation of plantings/seed material; and/or (b) retain topsoil and duff material from the project site, or mitigation bank within the known geographic range of the species, for redistribution on the site following construction. A minimum replacement ratio of 2:1 shall be provided. Planting materials and methods, short- and long-term maintenance requirements, success criteria, and monitoring and reporting methodology shall be implemented so that replacement plantings shall have a 75% survivability goal. For annual species, seeding of the targeted special-status species shall achieve 15 percent relative cover within 5 years. The percent cover shall be determined using a recognized methodology, selected by the project biologist in coordination with the appropriate resource agencies; however, the Daubenmire or point intercept methods as described by Sampling Vegetation Attributes (Natural Resources Conservation Service 1996) are recommended. Compensatory mitigation plantings shall be monitored quarterly. Any required maintenance shall also occur quarterly. Maintenance activities will include weeding, debris removal, replanting (if necessary), repair of any vandalism, fertilizing, and/or pest control. Maintenance activities will be dictated by the results of the quarterly monitoring effort. Quarterly reports and annual monitoring reports shall be submitted to Caltrans, the Regional Transportation Commission, and the affected regulatory agencies. The annual monitoring report submitted at Year 5 shall serve as a final completion report if the mitigation is successful.</li> <li>2. An environmental training program shall be developed to educate construction personnel about special-status plant species that could be encountered during construction, and the avoidance and minimization measures being employed to prevent or reduce impacts to these species.</li> <li>3. If federally listed plant species are determined to occur within the biological study area and cannot be avoided, the project must obtain incidental take authorization from U.S. Fish and Wildlife Service through a Federal Endangered Species Act Section 7 Biological Opinion and Incidental Take</li> </ol>

<b>Table F-2: Summary of Proposed Avoidance and Minimization Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Avoidance and Minimization Measures</b>
		<p>Statement.</p> <ol style="list-style-type: none"> <li>If feasible, avoid disturbance in areas with special-status plant species. Areas with special-status plant species to be avoided shall be marked on project plans and marked in the field with flagging and/or brightly colored fencing to facilitate plant recognition and avoidance.</li> <li>If plant species listed by the state as endangered or threatened are found to occur within the biological study area and cannot be avoided, the project must obtain incidental take authorization from the California Department of Fish and Wildlife through a California Endangered Species Act Section 2081 Incidental Take Permit. Species that are considered State Rare by the California Department of Fish and Wildlife must be completely avoided because the California Department of Fish and Wildlife currently does not have a legal mechanism to allow for "take."</li> <li>Under California Code of Regulations Section, Title 14, Section 786.9, the take of plants listed as rare by the California Native Plant Society may be authorized by the California Department of Fish and Wildlife using the same procedures and under the same conditions as incidental take permits, voluntary local programs, natural community conservation plans, safe harbor agreements, and scientific/educational/management permits. During the California Environmental Quality Act project analysis, the California Department of Fish and Wildlife may require implementation of specific mitigation measures for impacts to rare plants found within the biological study area.</li> <li>If the biological monitor(s) or the agency-approved biologist(s) determines that impacts to special-status plant species exceed the levels that are authorized by the affected regulatory agency, he/she will notify the resident engineer (the engineer that is directly overseeing and in command of construction activities) immediately. The resident engineer will resolve the situation immediately by stopping the actions that are causing the problem and notifying the appropriate resource agency as soon as is reasonably possible. No work will resume until the issue is resolved.</li> </ol>
<b>Animal Species/Special Status Wildlife</b>	2.3.4 Permanent and Construction Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <p><i>Foothill Yellow-legged Frog</i></p> <p>The avoidance and minimization measures for California red-legged frog (listed below under Section 2.3.5 Threatened and Endangered Species) will also be applicable for foothill yellow-legged frog. In addition, the following mitigation measure specifically applies to foothill yellow-legged frog.</p> <ol style="list-style-type: none"> <li>If project-related construction will impact aquatic areas and if regulatory agency approval allows, qualified biologists shall conduct a pre-construction survey for foothill yellow-legged frog in aquatic areas where construction will occur. The qualified biologists shall capture and relocate any foothill yellow-legged frog (if present) or other sensitive aquatic species to suitable habitat outside the area of impact. A letter of permission from the California Department of Fish and Wildlife will be obtained to relocate foothill yellow-legged frog and other California Special Concern species from work areas encountered during construction within the biological study area as necessary.</li> </ol> <p><i>Western Pond Turtle</i></p> <p>The avoidance and minimization measures for California red-legged frog will also be applicable for foothill western pond turtle. In addition, the following mitigation measure specifically applies to western pond turtle.</p> <ol style="list-style-type: none"> <li>If project-related construction will impact aquatic areas and if regulatory agency approval allows, qualified biologists shall conduct a preconstruction survey for the western pond turtle in aquatic areas where construction will occur. The qualified biologists shall capture and relocate</li> </ol>

Table F-2: Summary of Proposed Avoidance and Minimization Measures for the Tier II Auxiliary Lanes Project		
Environmental Category	EA/EIR Section	Avoidance and Minimization Measures
		<p>any western pond turtle (if present) or other sensitive aquatic species to suitable habitat outside the area of impact. A letter of permission from California Department of Fish and Wildlife will be obtained to relocate western pond turtle and other California Special Concern species encountered during construction from work areas.</p> <p><i>Cooper's Hawk and Short-eared Owl</i></p> <p>The following measures apply to Cooper's Hawk and Short-eared Owl, as well as all other birds protected by the Migratory Bird Treaty Act and California Fish and Game Code.</p> <ol style="list-style-type: none"> <li>1. If feasible, tree removals shall be scheduled to occur in the fall and winter (between September 1 and February 15), outside of the typical nesting season.</li> <li>2. If vegetation removal is proposed to occur during the typical bird-nesting season (February 15 to August 31), a nesting bird survey of the area of disturbance shall be conducted by qualified biologists no more than 2 weeks prior to construction to determine presence/absence of nesting birds within the project area.</li> <li>3. If evidence of migratory bird nesting that may be impacted by construction activities is discovered, or when birds are injured or killed as a result of construction activities, the contractor shall immediately notify the engineer or biological monitor. A 500-foot radius of the nest shall be designated an environmentally sensitive area for nesting raptors, and a 250-foot radius shall be designated an environmentally sensitive area for other nesting avian species, unless otherwise directed by the U.S. Fish and Wildlife Service or California Department of Fish and Wildlife. Nests, eggs, or young of birds covered by the Migratory Bird Treaty Act and California Fish and Game Code would not be moved or disturbed until the end of the nesting season or until the young fledge, whichever is later, nor would adult birds be killed, injured, or harassed at any time. The environmentally sensitive area designation shall remain in place until such time that the nest is no longer considered active by the qualified biologist. Written notification shall be provided to Caltrans, the Regional Transportation Commission, and the resource agencies by the qualified biologist.</li> <li>4. If white tailed kite is identified within the biological study area at any time during the proposed project, the biological monitor shall thoroughly document the species activity and ensure that immediate project activities avoid any impacts to the species. If there is a potential for take, the California Department of Fish and Wildlife shall be contacted immediately to ensure that avoidance of take is maintained throughout the duration of project activities</li> <li>5. Vegetation removal in potential nesting habitats shall be monitored and documented by the biological monitor(s) regardless of time of year.</li> </ol> <p><i>Roosting Bats</i></p> <ol style="list-style-type: none"> <li>1. A qualified biologist shall conduct surveys for bat species that could be utilizing existing structures or trees as roosting habitat. If bats are identified as utilizing areas within the biological study area for day or night roosting, the qualified biologist shall identify the species of bat present. The biologist(s) conducting the preconstruction surveys shall also identify the nature of the bat utilization of the bridge (i.e., maternity roost, day roost, night roost).</li> <li>2. If bat species are identified as roosting in areas that will be impacted a plan to exclude bat species from impact areas shall be prepared. This plan shall discuss methods of eliminating bat access to the identified roosting habitat prior to construction so that bats are not able to return to and occupy the roost. The appropriate timing for exclusion implementation shall be determined when the species is identified as occurring within the</li> </ol>

<b>Table F-2: Summary of Proposed Avoidance and Minimization Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Avoidance and Minimization Measures</b>
		<p>project site. Roost areas shall be surveyed by a qualified biologist prior to implementing exclusion methods to ensure that no bats are trapped within. Exclusion methods may include, but are not limited to, wire mesh, spray foam, or fabric placement. The plan shall be submitted to the appropriate regulatory agency for approval.</p> <ol style="list-style-type: none"> <li>Demolition of existing structures and vegetation removal shall occur outside of the bat maternity roosting season, typically during the spring and summer months.</li> <li>If bats cannot be excluded from bat roosts, work activities shall be avoided within 100 feet of active maternity roosts until bat pups have been weaned and are deemed independent by a qualified biologist. Regulatory agencies shall be contacted for additional guidance if roosting bats are observed within the biological study area during construction.</li> <li>A qualified biologist shall be present periodically during construction activities to monitor bat populations that may be utilizing the bridge and to ensure that all practicable measures are employed to avoid incidental disturbance to special-status bat species. Monitoring will be timed to occur during key construction events (e.g., removal of existing structures or trees with roosting habitat).</li> <li>If the proposed project permanently affects a major roost location, compensatory mitigation would be required. Compensatory mitigation shall include replacement of suitable habitat that follows the guidance included within <i>California Bat Mitigation Techniques, Solutions, and Effectiveness</i>, prepared for Caltrans (H.T. Harvey 2004).</li> </ol>
<b>Threatened and Endangered Species</b>	2.3.5 Permanent and Construction Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <p><u>None.</u></p>
<b>Nesting Birds</b>	2.3.6 Permanent and Construction Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <p>The measures included in Section 2.3.4 for Cooper's hawk and short-eared owl would avoid or minimize impacts to nesting birds. No additional avoidance or minimization measures are necessary.</p>
<b>Invasive Species</b>	2.3.7 Permanent and Construction Impacts	<p><u>Avoidance/Minimization Measures:</u></p> <ol style="list-style-type: none"> <li>The landscaping and erosion control included in the project will not use species listed as invasive. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or next to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.</li> <li>To avoid the spread of invasive species, the contractor will stockpile topsoil and redeposit the stockpiled soil on the slopes after construction of the new bridge is complete, or transport all topsoil to a certified landfill for disposal.</li> <li>During construction, the project will make all reasonable efforts to limit the use of imported soils for fill. Soils currently existing on-site should be used for fill material. If imported fill material must be used, the imported material must be obtained from a source that is known to be free of invasive plant species; or the material must consist of purchased clean material such as crushed aggregate, sorted rock, or similar.</li> <li>The landscape and restoration planting plans must emphasize the use of native species expected to occur in the area. Project plans must avoid the use of plant species that the California Invasive Plant Council, California Exotic Pest Plant Council, California Department of Fish and Wildlife, or</li> </ol>

<b>Table F-2: Summary of Proposed Avoidance and Minimization Measures for the Tier II Auxiliary Lanes Project</b>		
<b>Environmental Category</b>	<b>EA/EIR Section</b>	<b>Avoidance and Minimization Measures</b>
		other resource organizations considers to be invasive or potentially invasive. Prior to issuance grading, all project landscape and restoration plans shall be verified to ensure that the plans do not include the use of any species considered invasive by the California Invasive Plant Council, California Exotic Pest Plant Council, California Department of Fish and Wildlife.

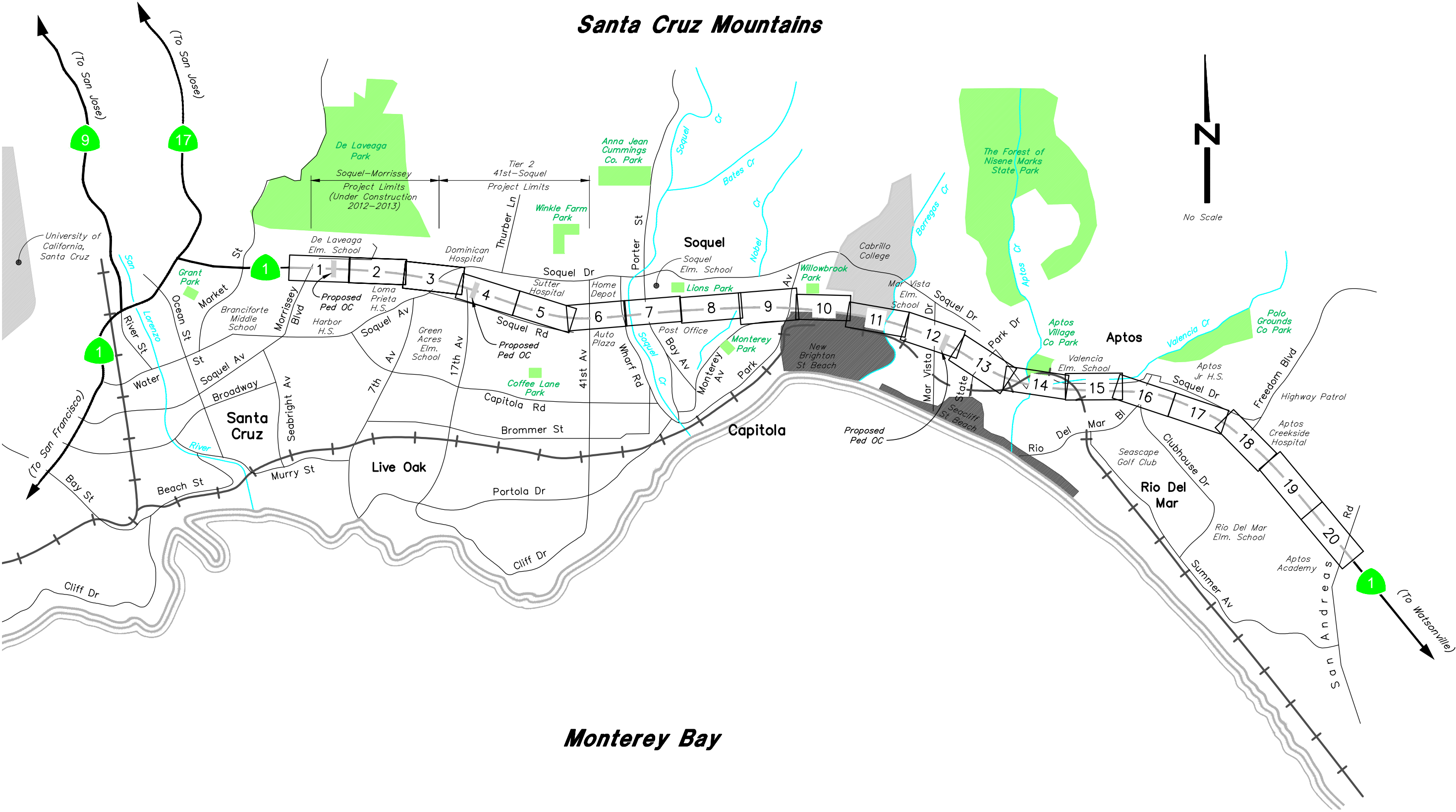
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**Appendix G**  
**Tier I Corridor HOV Lane Alternative Plan Drawings**



**Santa Cruz Mountains**



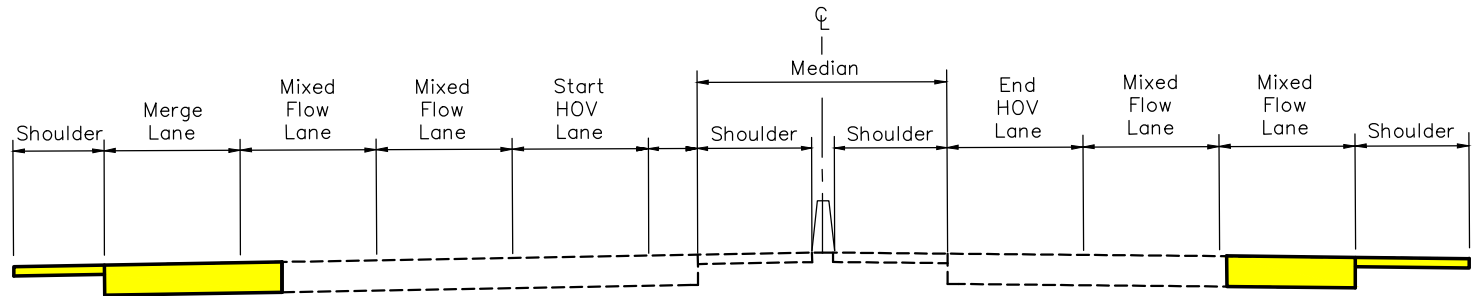
**KEYMAP  
TIER 1 CORRIDOR**



DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	1	20

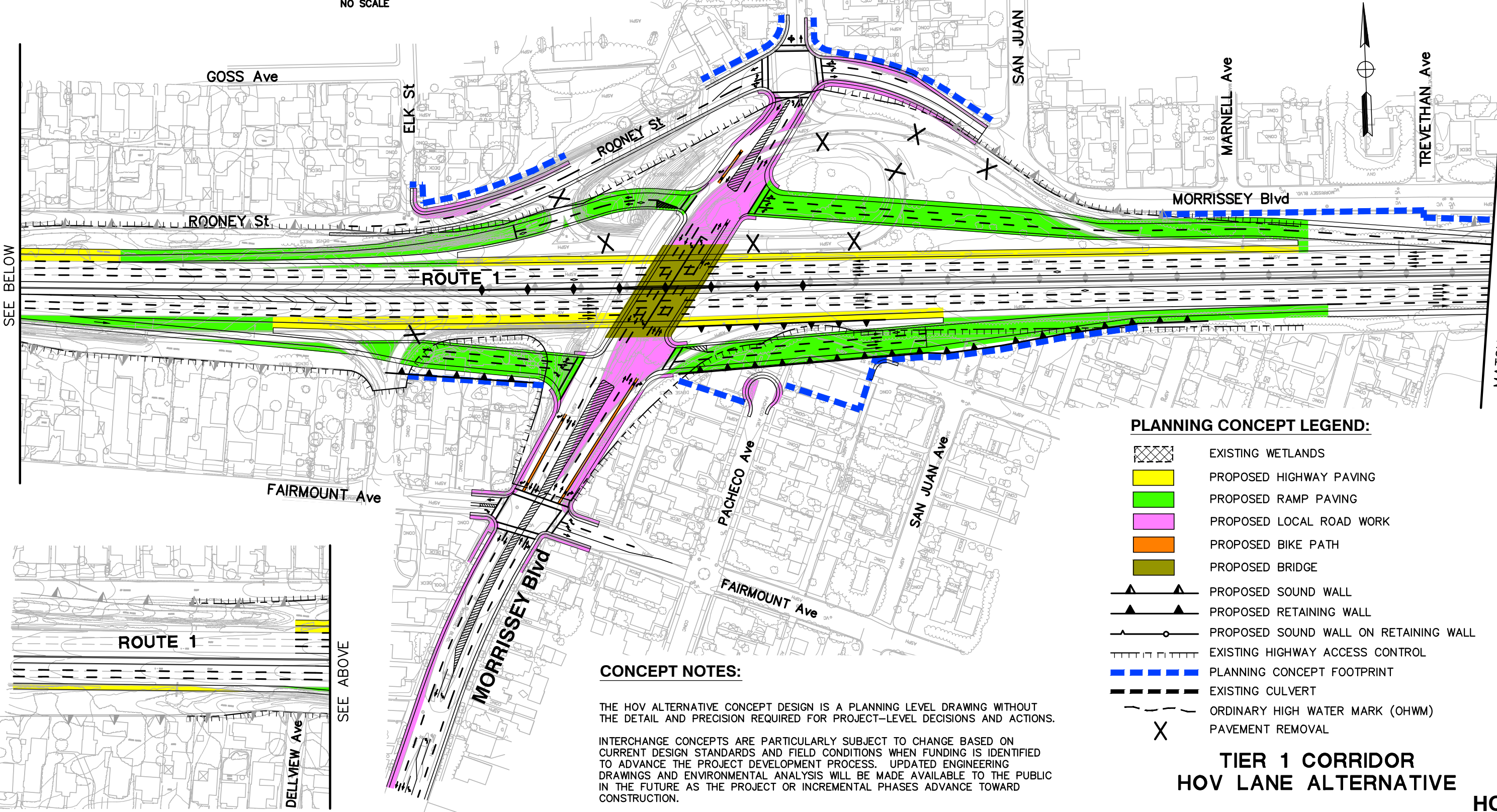
**GENERAL NOTES:**

1. ALL EXISTING BIKE LANES AND BIKE PATHS WILL BE MAINTAINED IN PLACE, UNLESS OTHERWISE NOTED.
2. SECTION SHOWN ON PLANS ARE FOR LANE CONFIGURATION PURPOSE ONLY
3. ALL CURB RETURNS WHERE SIDEWALKS ARE PRESENT WILL HAVE CURB RAMPS.
4. ALL R/W LINES THAT ARE ACCESS CONTROLLED WILL HAVE WALLS OR FENCING.



**TYPICAL SECTION – NO RAMPS SHOWN**

NO SCALE



**PLANNING CONCEPT LEGEND:**

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE
- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

**CONCEPT NOTES:**

THE HOV ALTERNATIVE CONCEPT DESIGN IS A PLANNING LEVEL DRAWING WITHOUT THE DETAIL AND PRECISION REQUIRED FOR PROJECT-LEVEL DECISIONS AND ACTIONS.

INTERCHANGE CONCEPTS ARE PARTICULARLY SUBJECT TO CHANGE BASED ON CURRENT DESIGN STANDARDS AND FIELD CONDITIONS WHEN FUNDING IS IDENTIFIED TO ADVANCE THE PROJECT DEVELOPMENT PROCESS. UPDATED ENGINEERING DRAWINGS AND ENVIRONMENTAL ANALYSIS WILL BE MADE AVAILABLE TO THE PUBLIC IN THE FUTURE AS THE PROJECT OR INCREMENTAL PHASES ADVANCE TOWARD CONSTRUCTION.

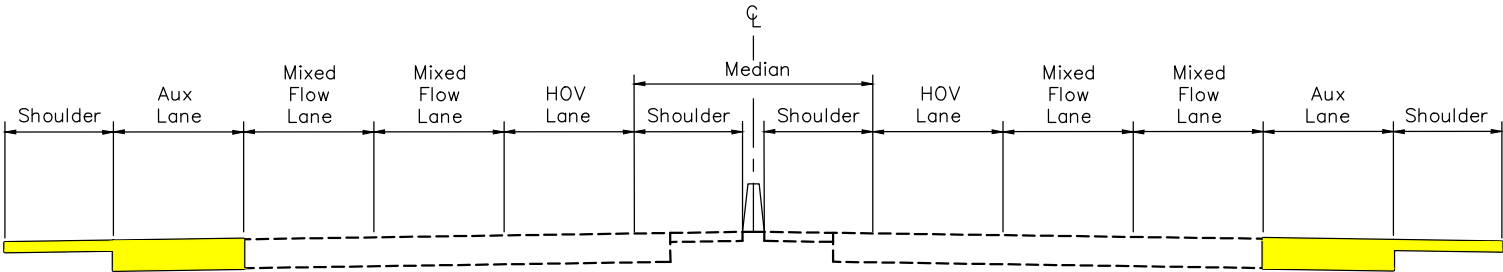
**TIER 1 CORRIDOR  
HOV LANE ALTERNATIVE**

**HOV-1**

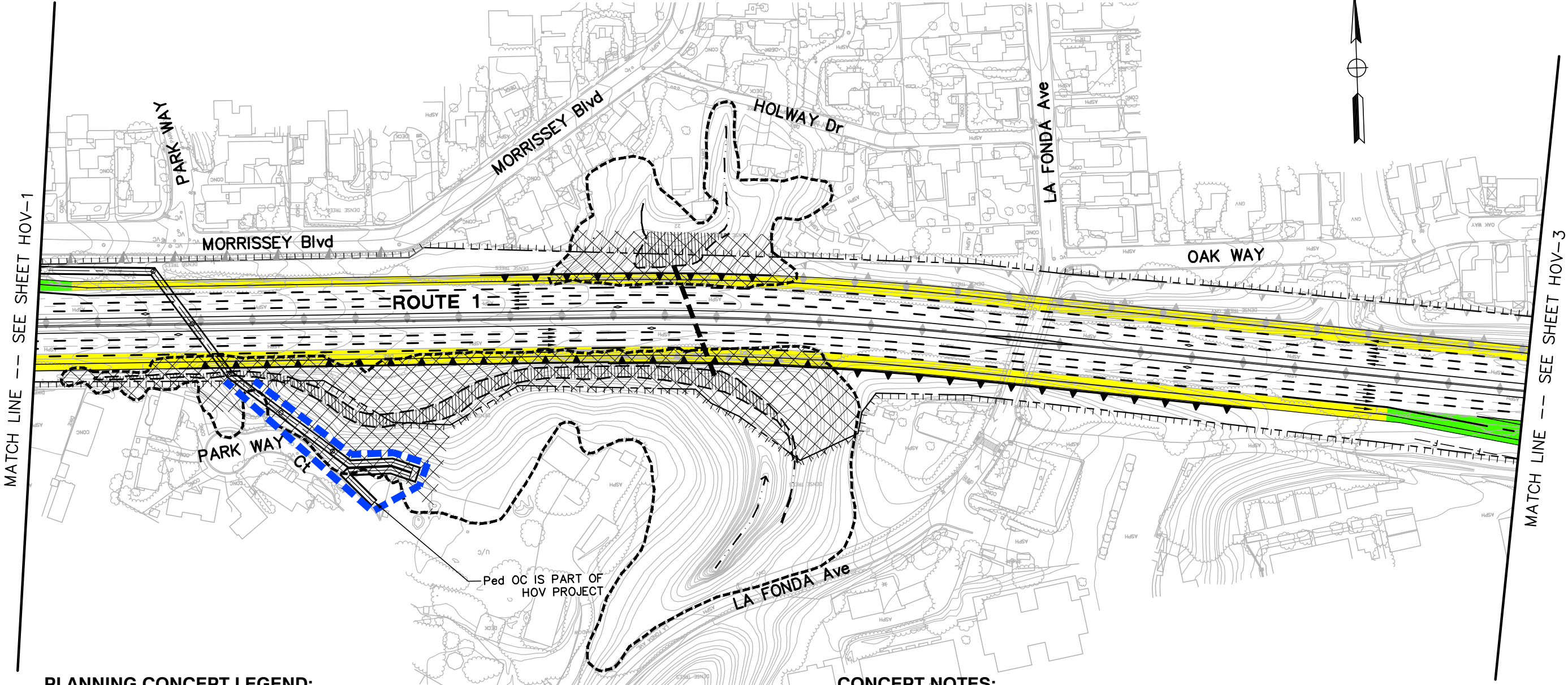




DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	SCr	1	R 7.24/16.13	2	20



TYPICAL SECTION  
NO SCALE



PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE

- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

CONCEPT NOTES:

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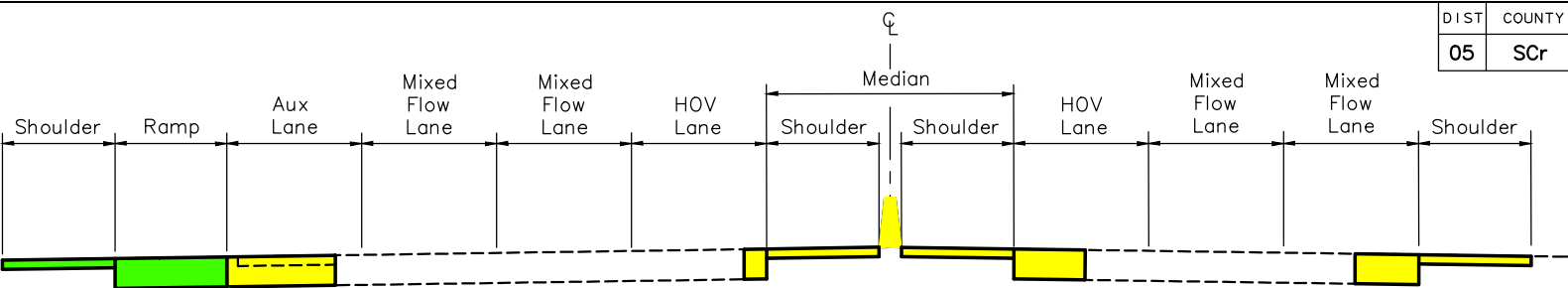


CONCEPT NOTES:

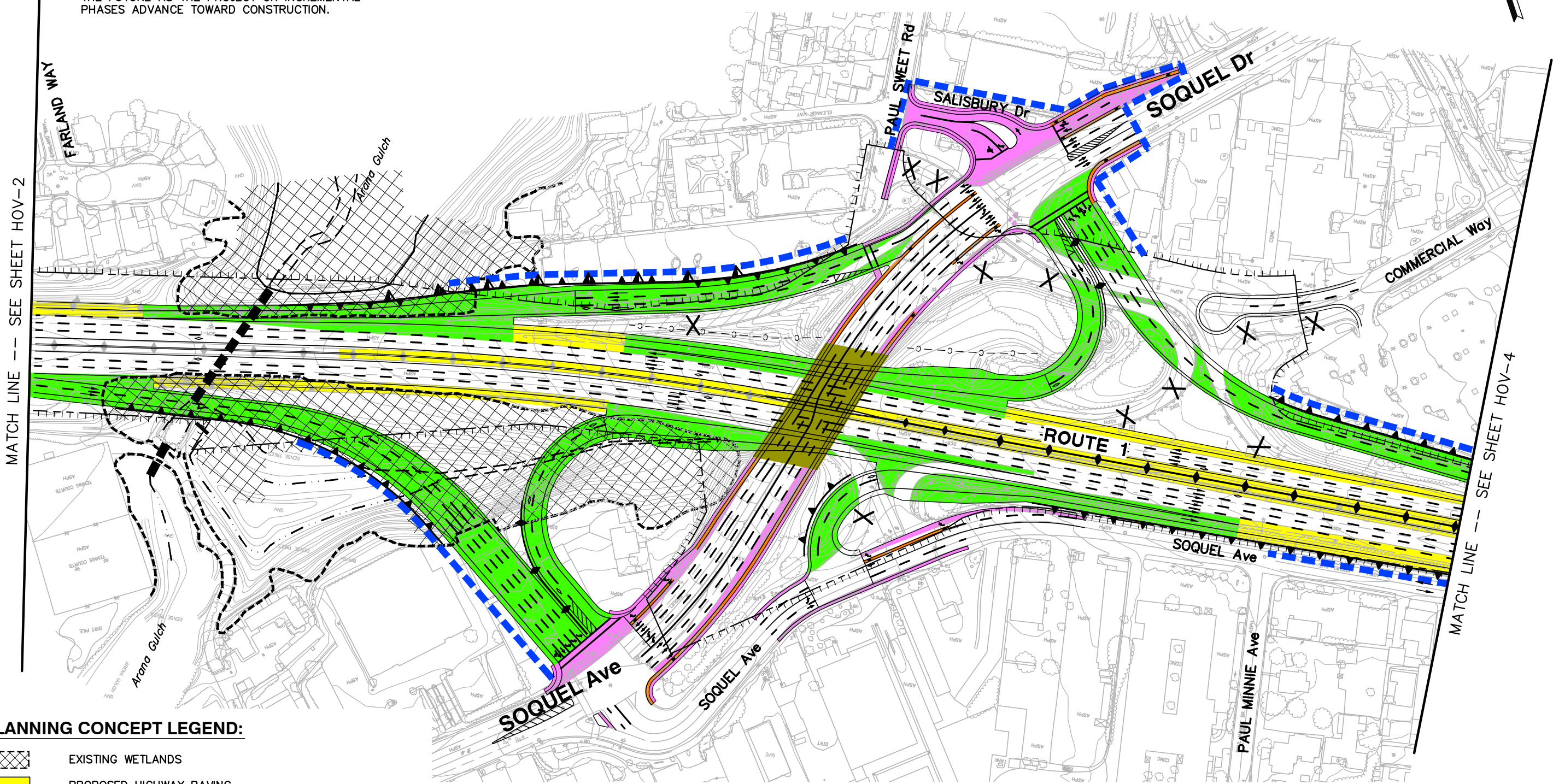
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DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	SCr	1	R 7.24/16.13	3	20



TYPICAL SECTION  
NO SCALE



PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE
- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

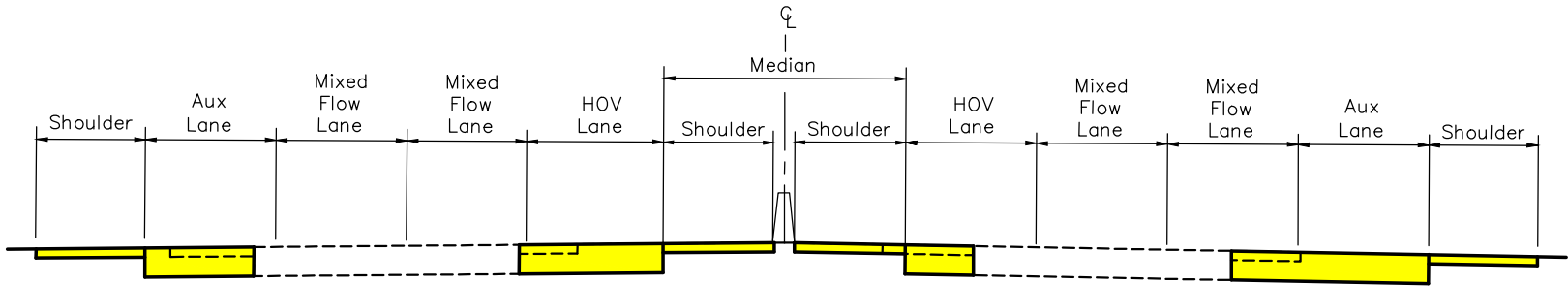
TIER 1 CORRIDOR  
HOV LANE ALTERNATIVE

HOV-3

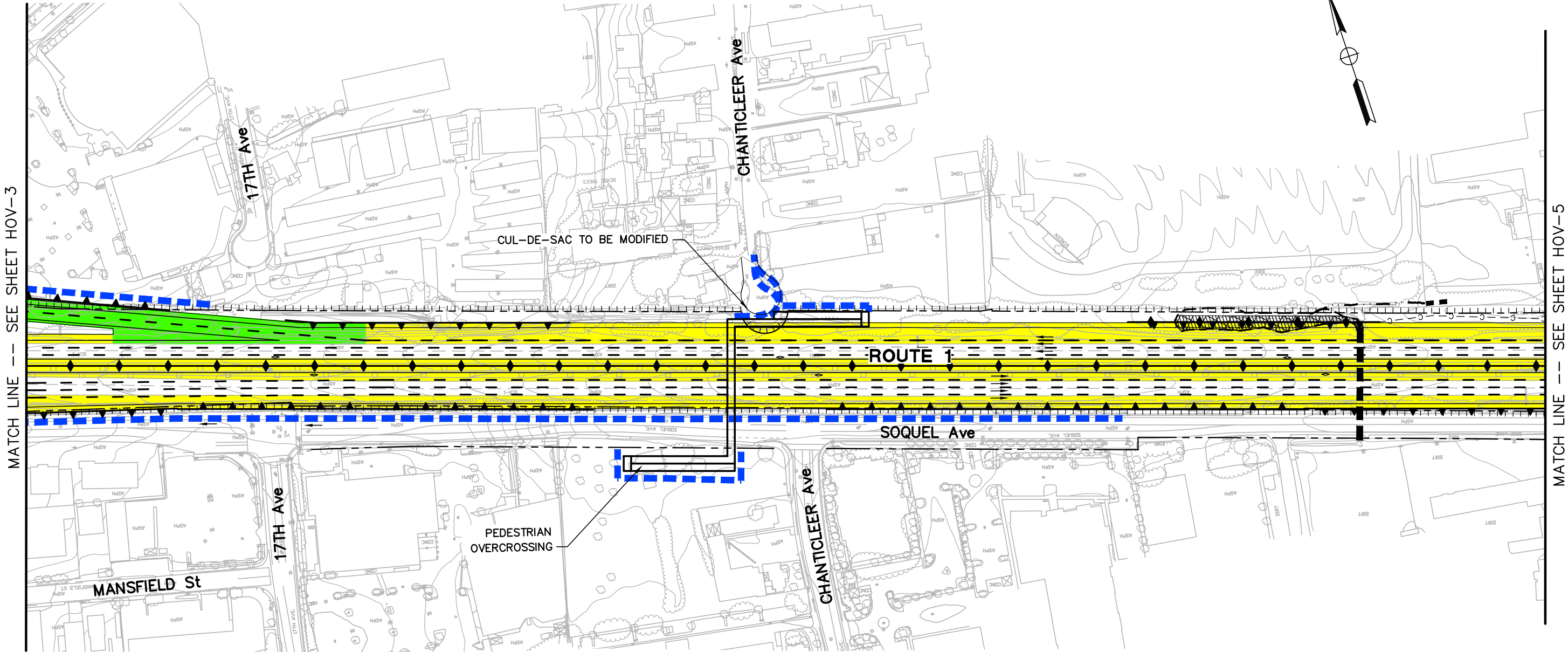




DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	4	20



TYPICAL SECTION  
NO SCALE



PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE

- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

CONCEPT NOTES:

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TIER 1 CORRIDOR  
HOV LANE ALTERNATIVE

HOV-4

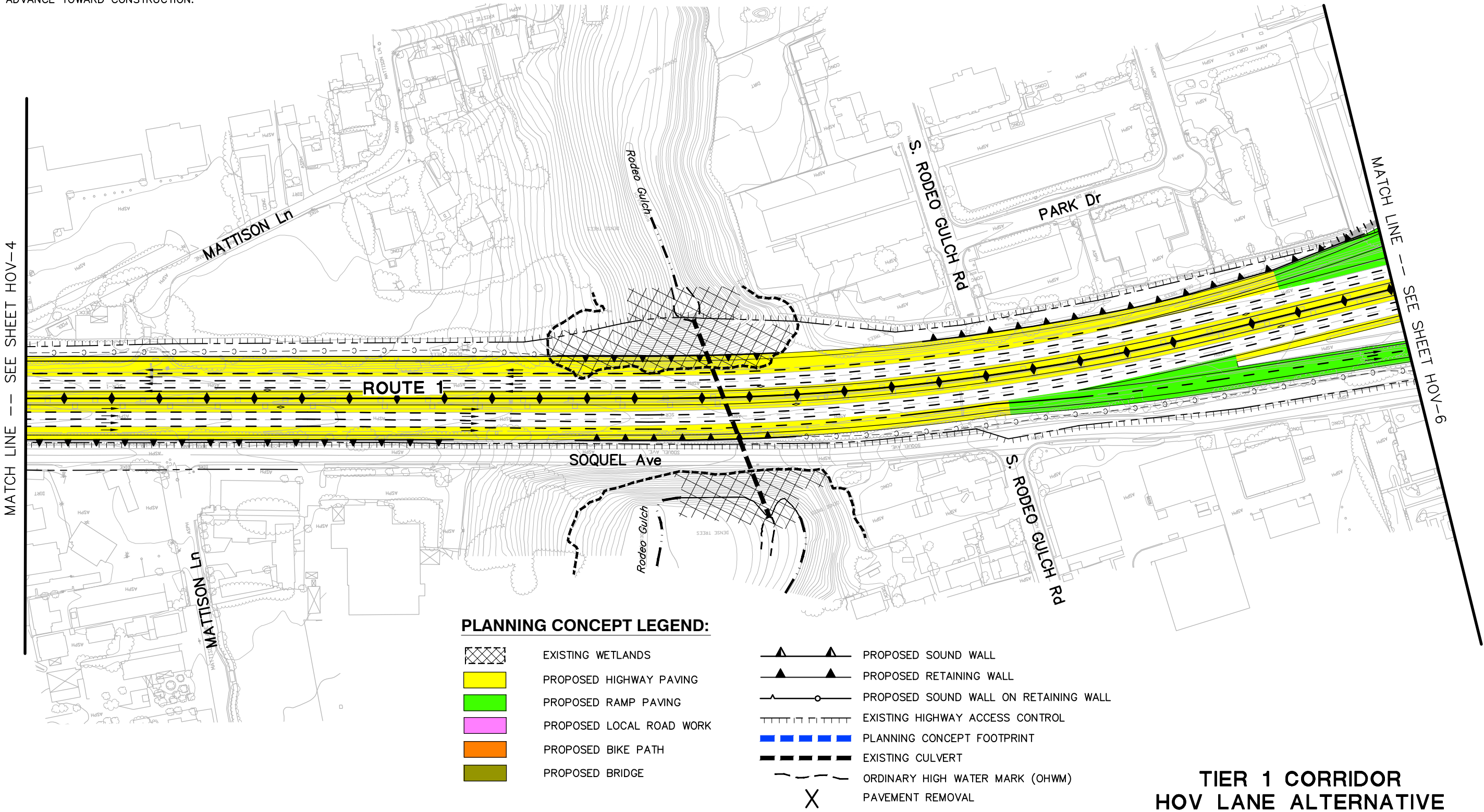
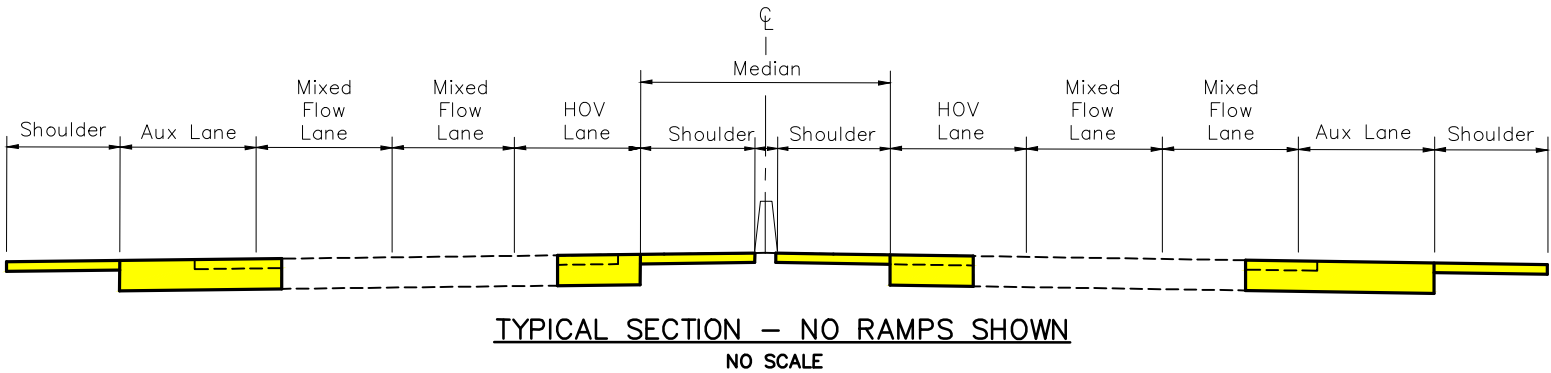


CONCEPT NOTES:

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DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	5	20



TIER 1 CORRIDOR  
HOV LANE ALTERNATIVE

HOV-5



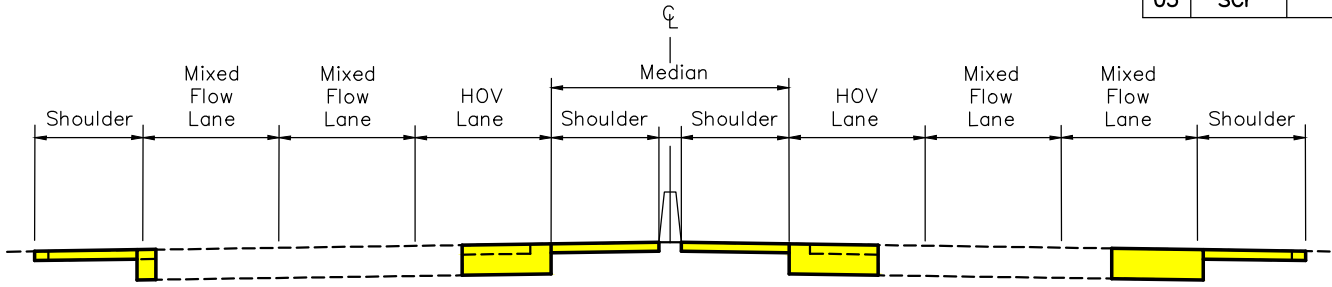
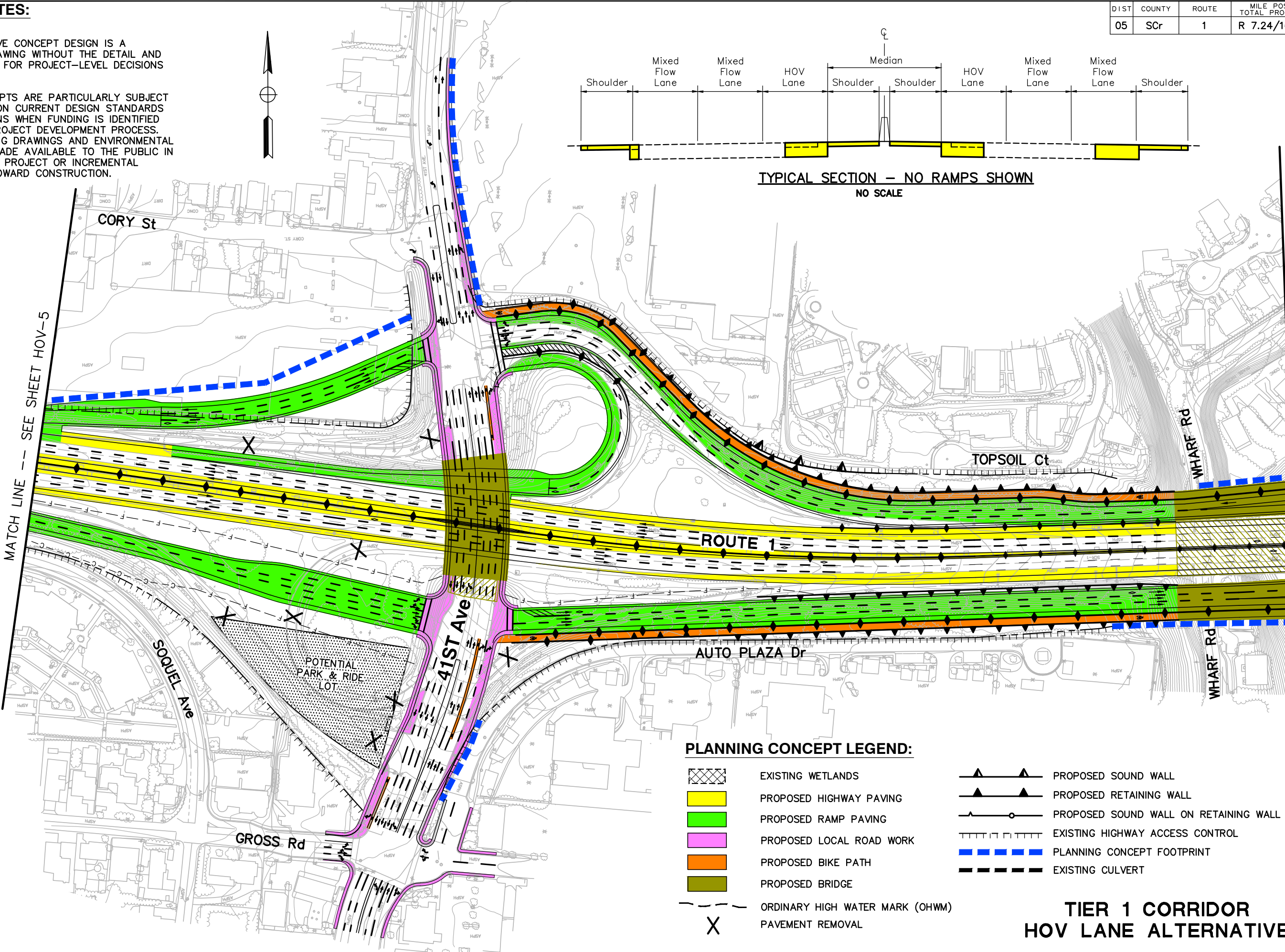


CONCEPT NOTES:

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INTERCHANGE CONCEPTS ARE PARTICULARLY SUBJECT TO CHANGE BASED ON CURRENT DESIGN STANDARDS AND FIELD CONDITIONS WHEN FUNDING IS IDENTIFIED TO ADVANCE THE PROJECT DEVELOPMENT PROCESS. UPDATED ENGINEERING DRAWINGS AND ENVIRONMENTAL ANALYSIS WILL BE MADE AVAILABLE TO THE PUBLIC IN THE FUTURE AS THE PROJECT OR INCREMENTAL PHASES ADVANCE TOWARD CONSTRUCTION.

DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	6	20



TYPICAL SECTION – NO RAMPS SHOWN  
NO SCALE

PLANNING CONCEPT LEGEND:

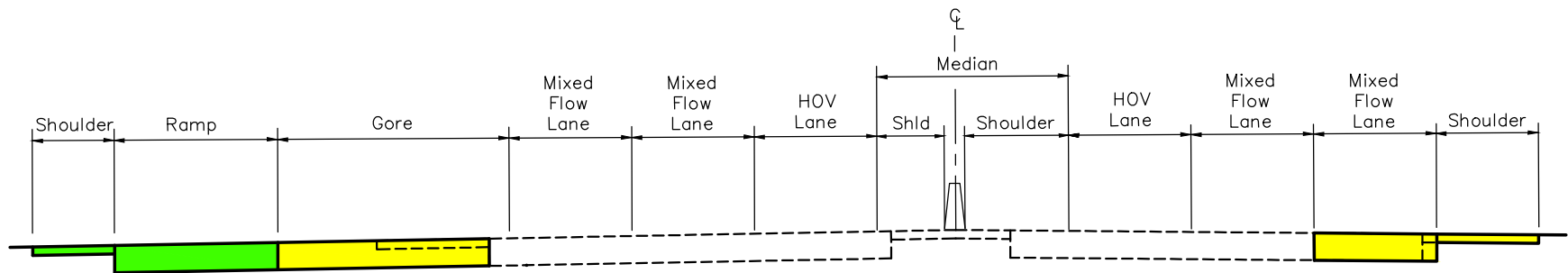
- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE
- ORDINARY HIGH WATER MARK (OHWM)  
PAVEMENT REMOVAL
- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT

TIER 1 CORRIDOR  
HOV LANE ALTERNATIVE

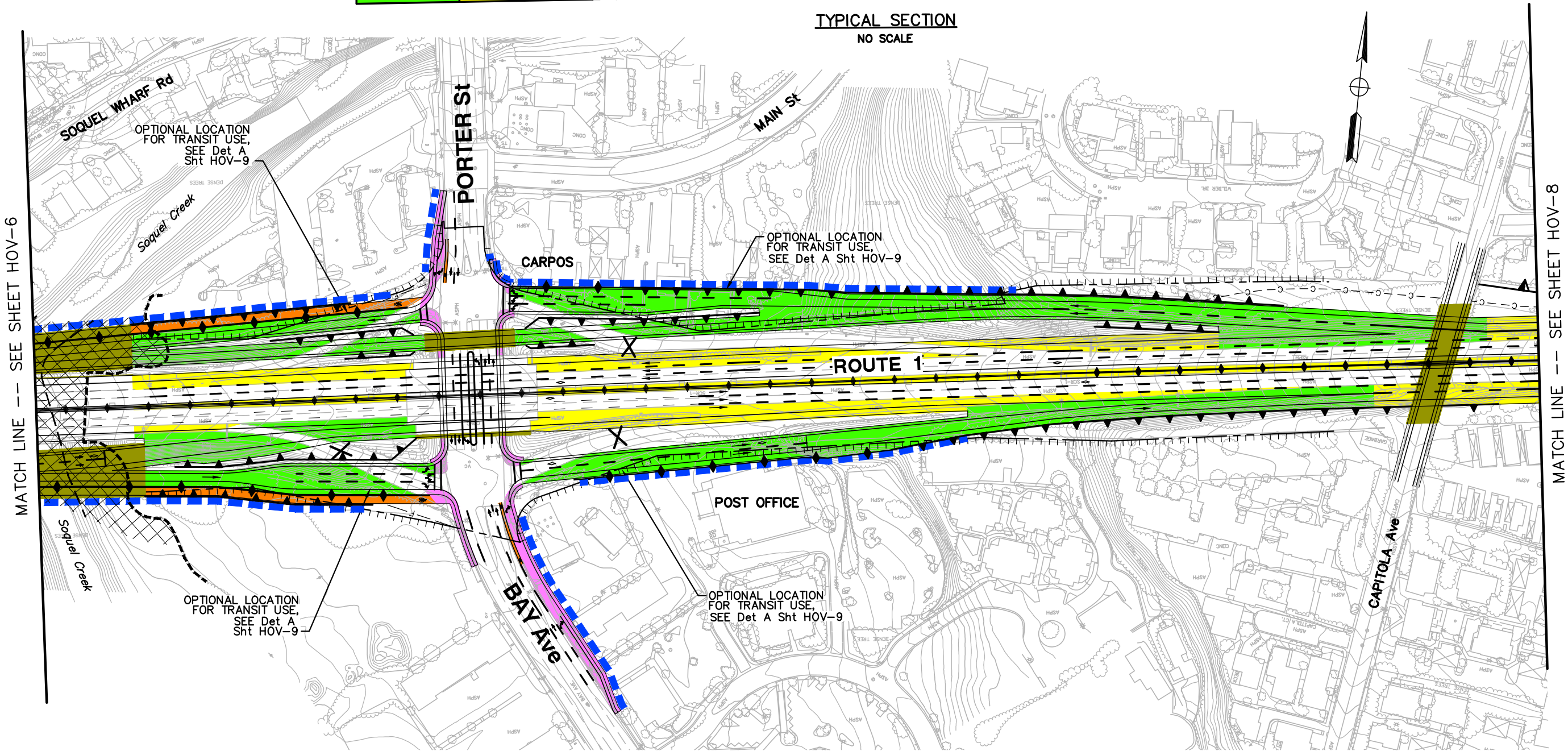




DIST	COUNTY	ROUTE	MI LE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	7	20



TYPICAL SECTION  
NO SCALE



PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE

- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

CONCEPT NOTES:

THE HOV ALTERNATIVE CONCEPT DESIGN IS A PLANNING LEVEL DRAWING WITHOUT THE DETAIL AND PRECISION REQUIRED FOR PROJECT-LEVEL DECISIONS AND ACTIONS.

INTERCHANGE CONCEPTS ARE PARTICULARLY SUBJECT TO CHANGE BASED ON CURRENT DESIGN STANDARDS AND FIELD CONDITIONS WHEN FUNDING IS IDENTIFIED TO ADVANCE THE PROJECT DEVELOPMENT PROCESS. UPDATED ENGINEERING DRAWINGS AND ENVIRONMENTAL ANALYSIS WILL BE MADE AVAILABLE TO THE PUBLIC IN THE FUTURE AS THE PROJECT OR INCREMENTAL PHASES ADVANCE TOWARD CONSTRUCTION.

\*\*\* MINIMUM CLEARANCE OVER WHARF ROAD

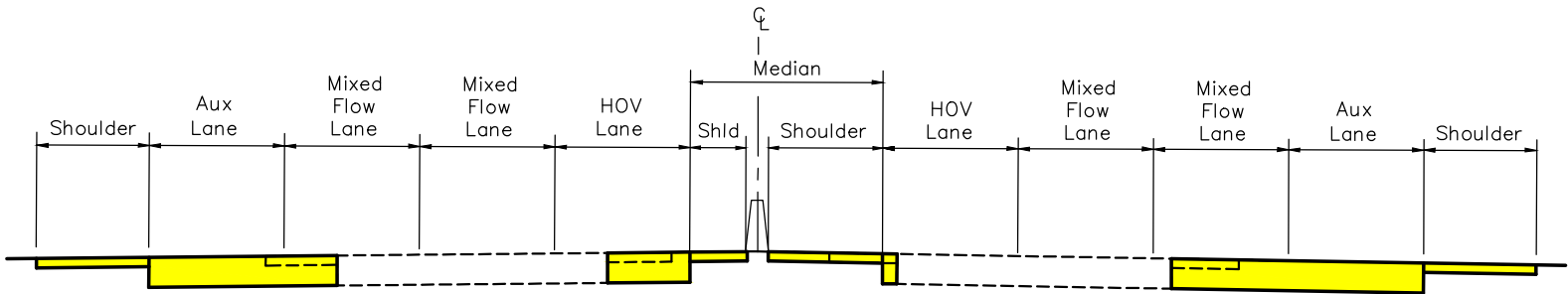
TIER 1 CORRIDOR  
HOV LANE ALTERNATIVE

HOV-7

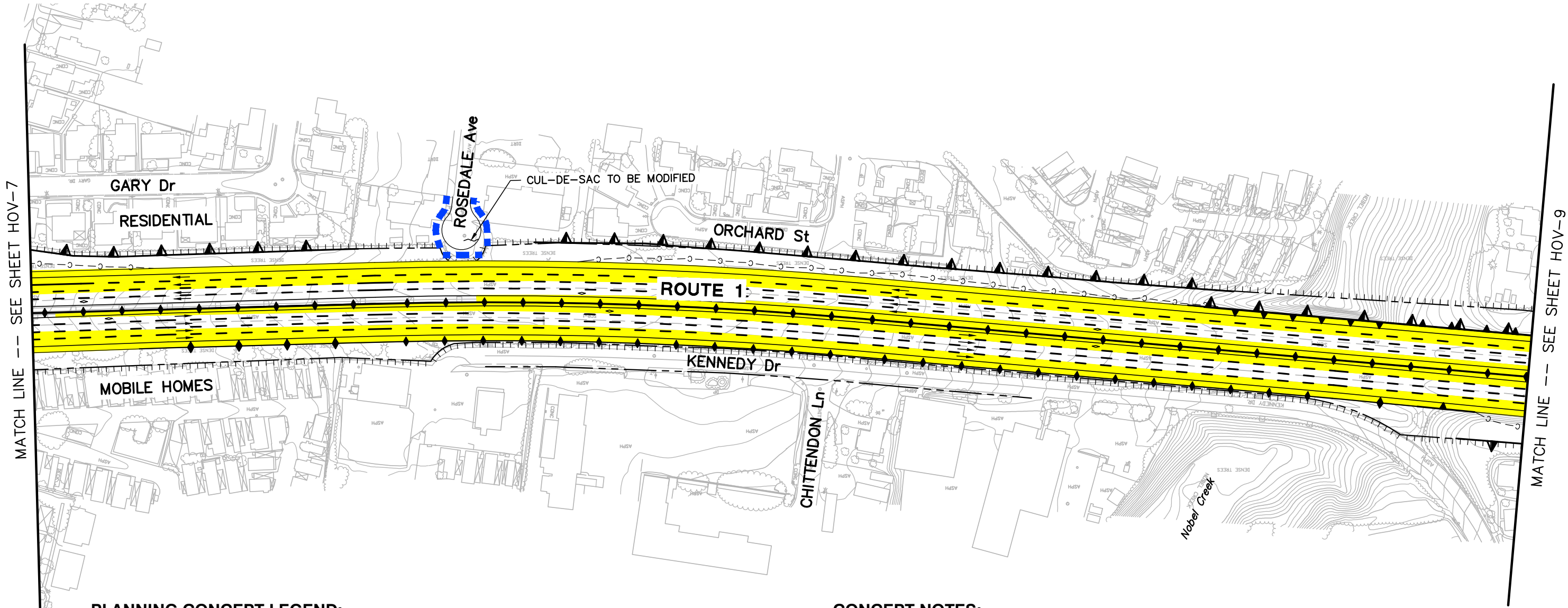




DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	8	20



TYPICAL SECTION  
NO SCALE



PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE

- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

CONCEPT NOTES:

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TIER 1 CORRIDOR  
HOV LANE ALTERNATIVE

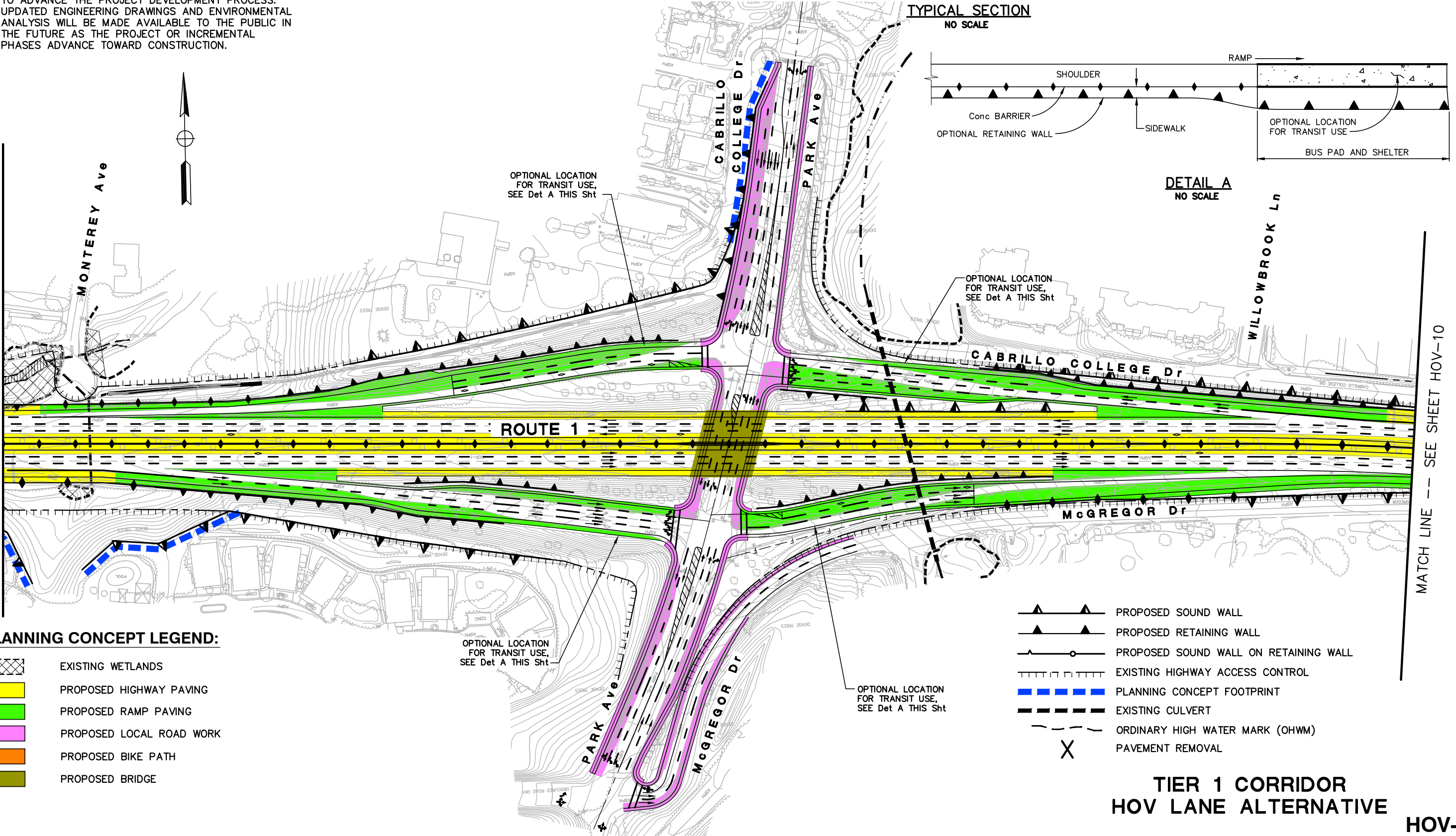
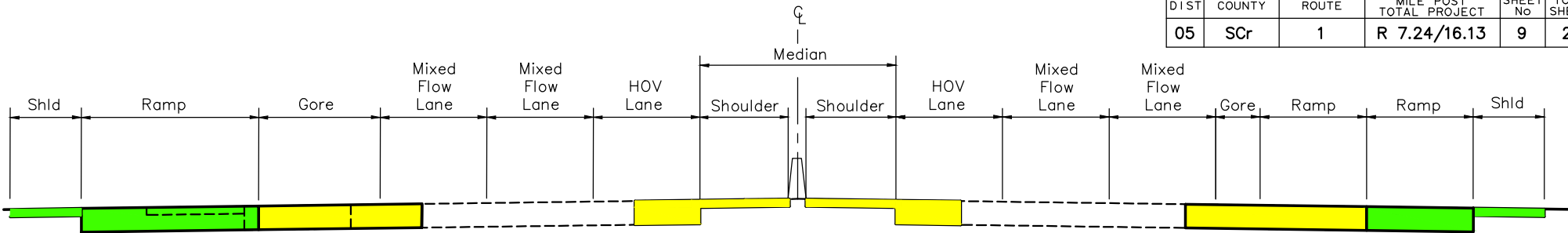


DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	9	20

### CONCEPT NOTES:

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### PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE

- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

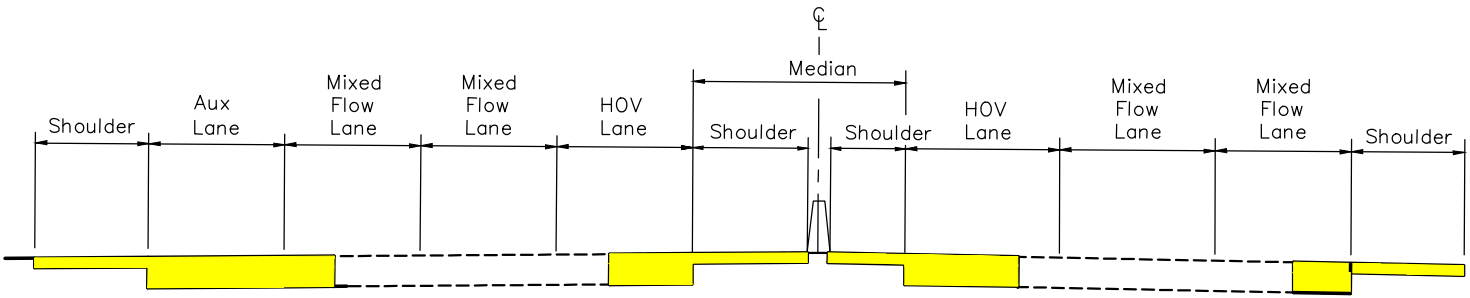
TIER 1 CORRIDOR  
HOV LANE ALTERNATIVE

HOV-9

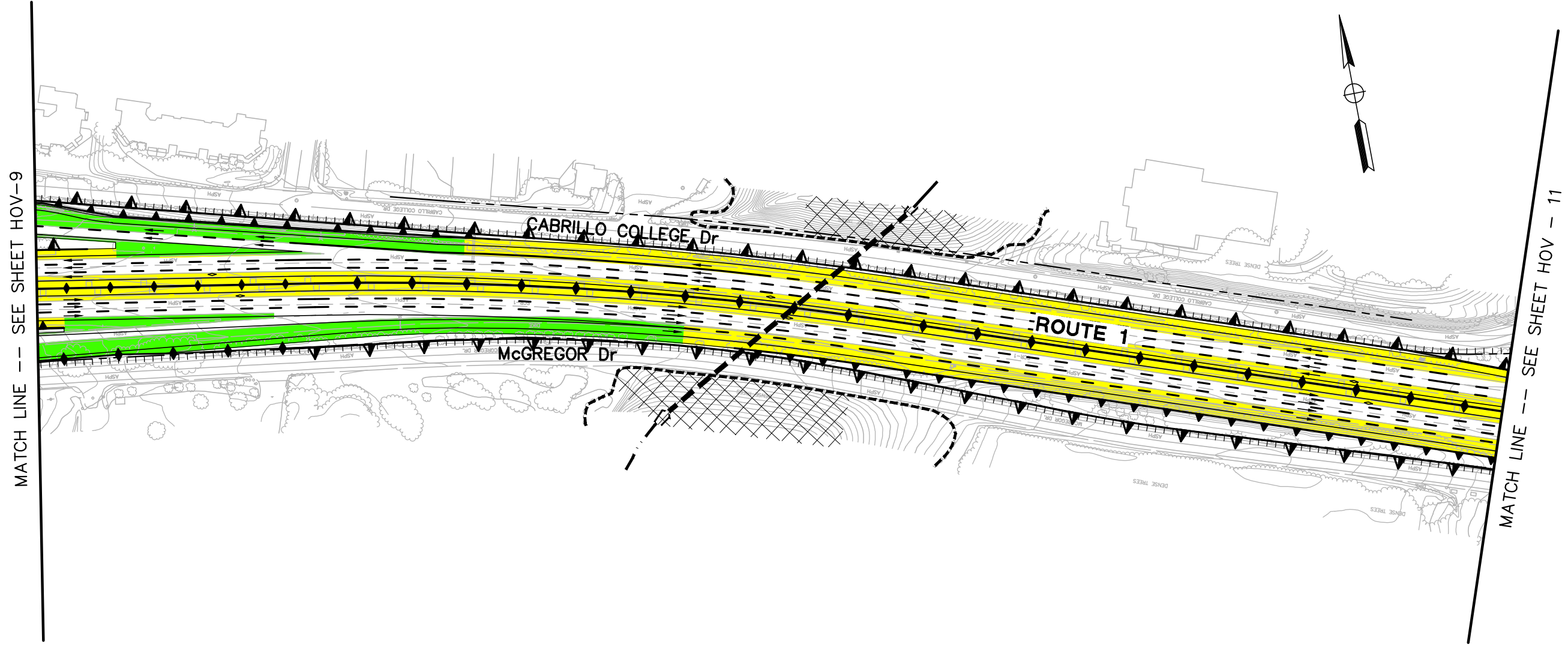




DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	10	20



TYPICAL SECTION  
NO SCALE



PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE
- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

CONCEPT NOTES:

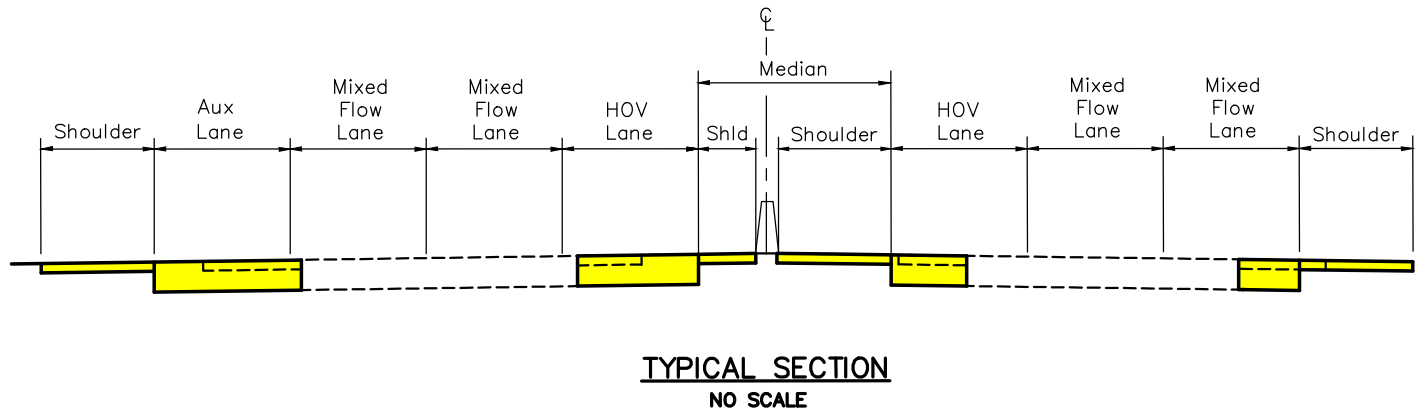
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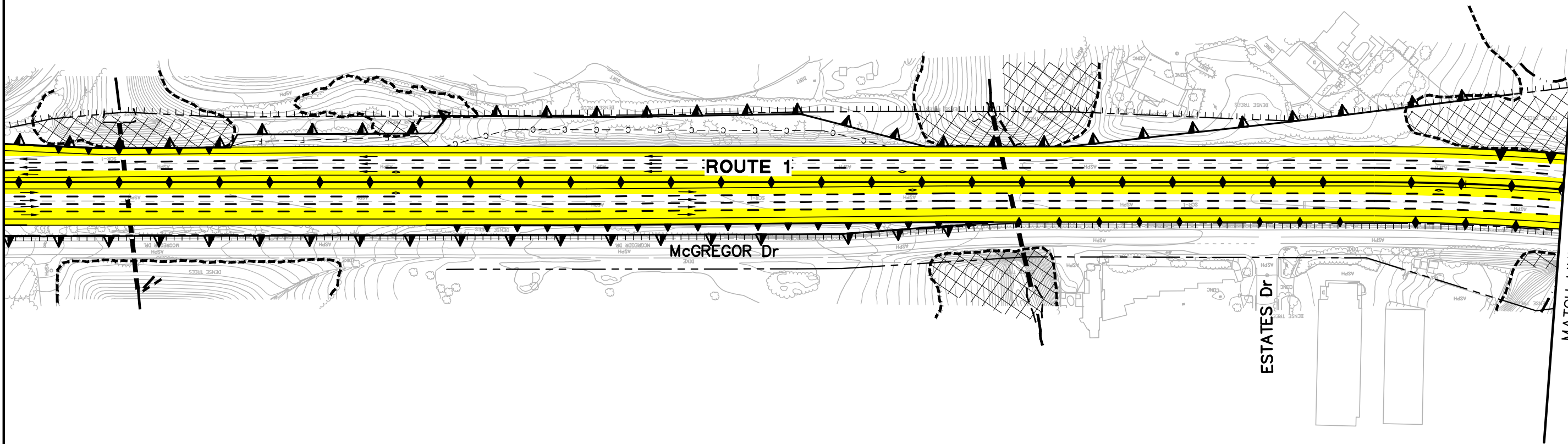




DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	11	20



MATCH LINE -- SEE SHEET HOV-10



MATCH LINE -- SEE SHEET HOV-12

PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE
- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

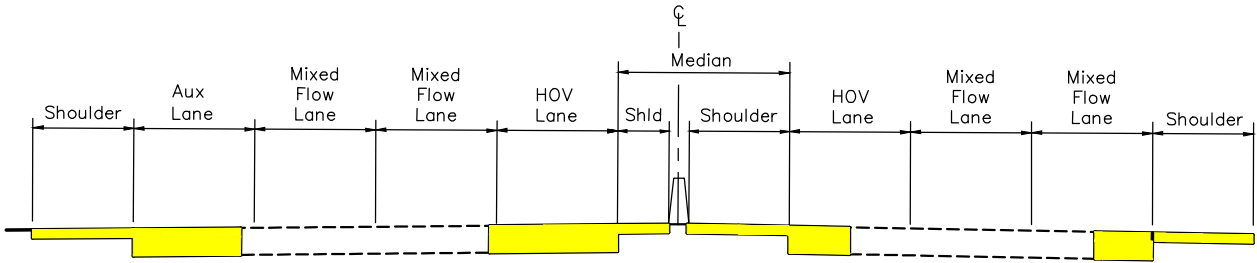
CONCEPT NOTES:

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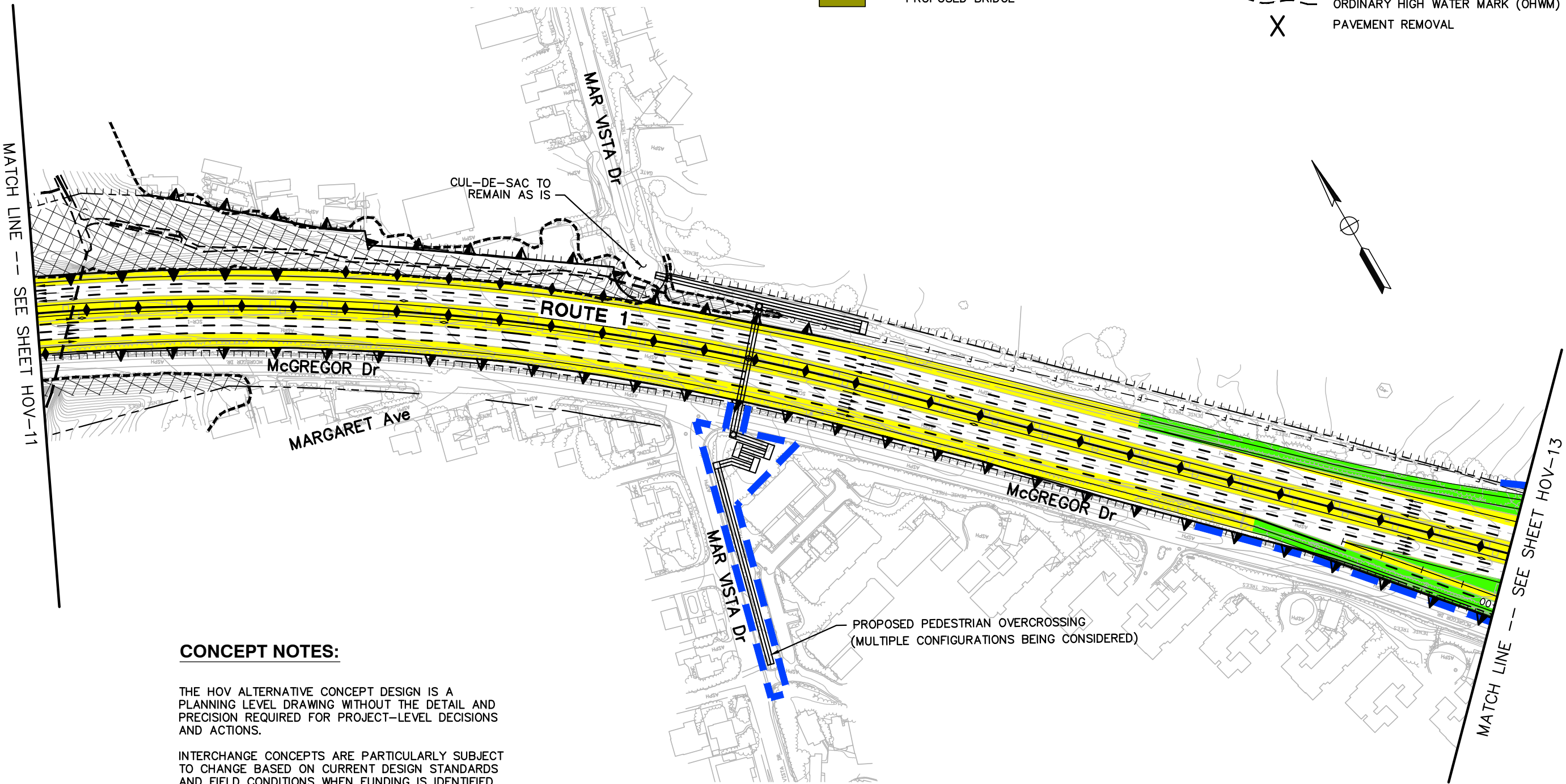
DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	12	20



TYPICAL SECTION  
NO SCALE

PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE

PROPOSED SOUND WALLPROPOSED RETAINING WALLPROPOSED SOUND WALL ON RETAINING WALLEXISTING HIGHWAY ACCESS CONTROLPLANNING CONCEPT FOOTPRINTEXISTING CULVERTORDINARY HIGH WATER MARK (OHWM)PAVEMENT REMOVAL

CONCEPT NOTES:

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DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	13	20


PLANNING CONCEPT LEGEND:


- 

EXISTING WETLANDS
- 

PROPOSED HIGHWAY PAVING
- 

PROPOSED RAMP PAVING
- 

PROPOSED LOCAL ROAD WORK
- 

PROPOSED BIKE PATH
- 

PROPOSED BRIDGE



PROPOSED SOUND WALL



PROPOSED RETAINING WALL



PROPOSED SOUND WALL ON RETAINING WALL



EXISTING HIGHWAY ACCESS CONTROL



PLANNING CONCEPT FOOTPRINT



EXISTING CULVERT



ORDINARY HIGH WATER MARK (OHWM)



PAVEMENT REMOVAL

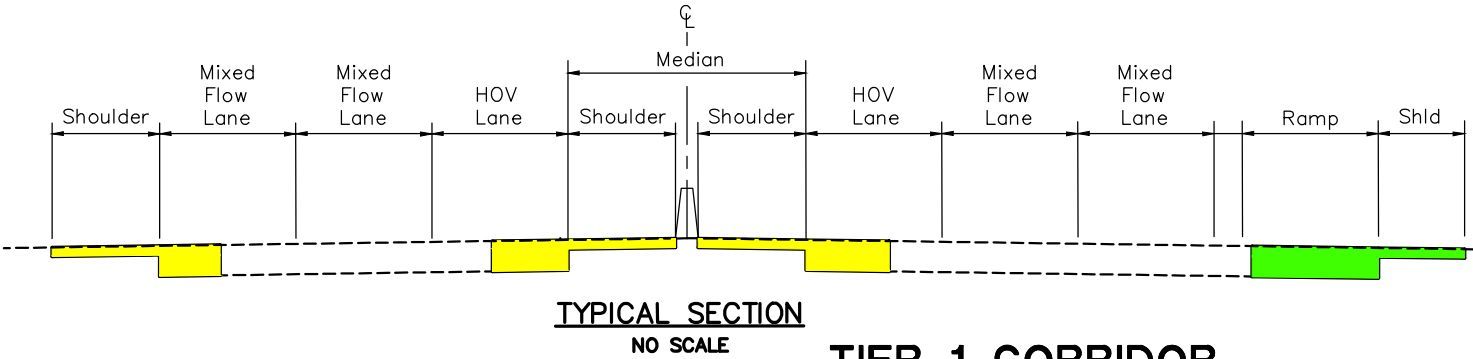
MATCH LINE -- SEE SHEET HOV-12

MATCH LINE -- SEE SHEET HOV-14

CONCEPT NOTES:

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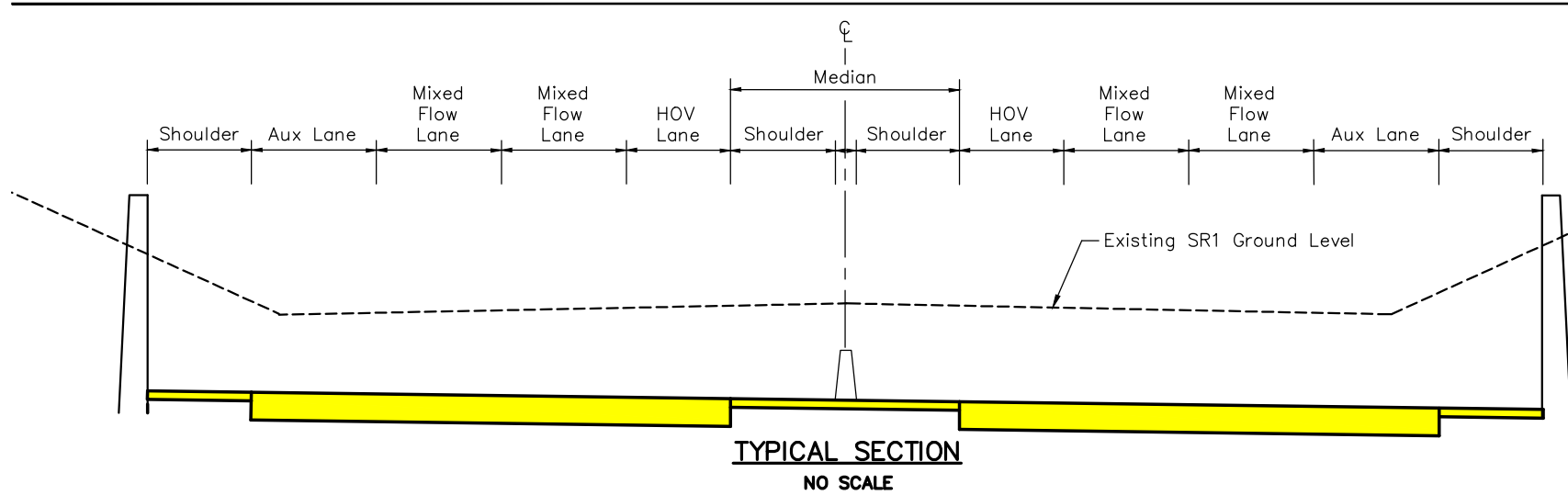


TIER 1 CORRIDOR  
HOV LANE ALTERNATIVE  
HOV-13



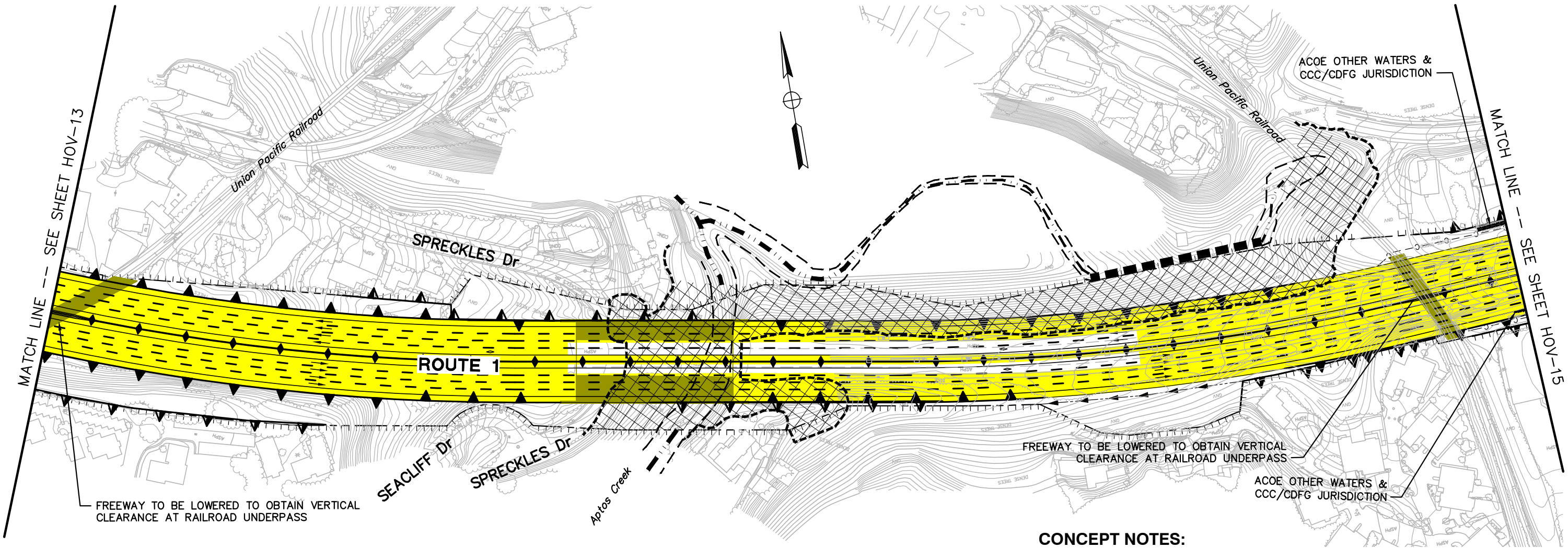


DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	14	20



**PLANNING CONCEPT LEGEND:**

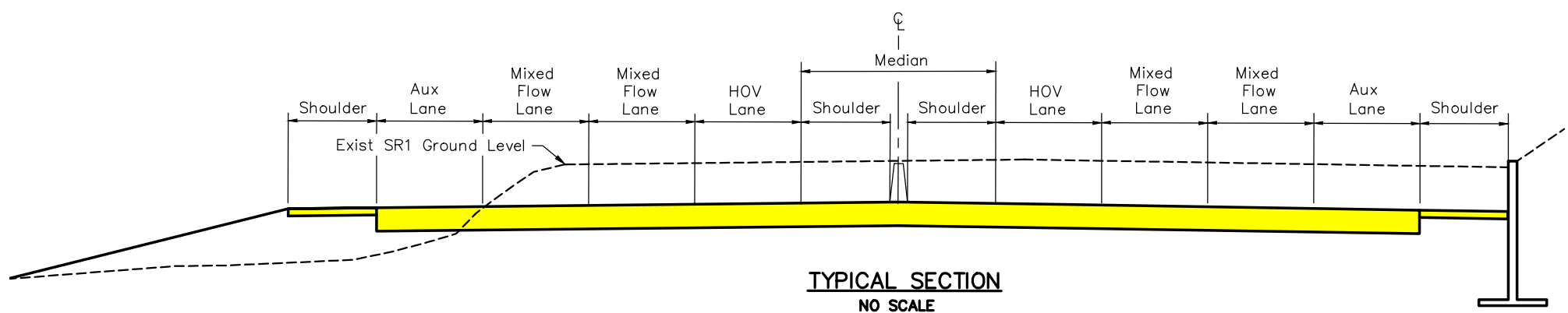
- |  |                          |  |   |
|--|--------------------------|--|---|
|  | EXISTING WETLANDS        |  | PROPOSED SOUND WALL                                 |
|  | PROPOSED HIGHWAY PAVING  |  | PROPOSED RETAINING WALL                             |
|  | PROPOSED RAMP PAVING     |  | PROPOSED SOUND WALL ON RETAINING WALL               |
|  | PROPOSED LOCAL ROAD WORK |  | EXISTING HIGHWAY ACCESS CONTROL                     |
|  | PROPOSED BIKE PATH       |  | PLANNING CONCEPT FOOTPRINT                          |
|  | PROPOSED BRIDGE          |  | EXISTING CULVERT                                    |
|  |                          |  | ORDINARY HIGH WATER MARK (OHWM)<br>PAVEMENT REMOVAL |



**CONCEPT NOTES:**

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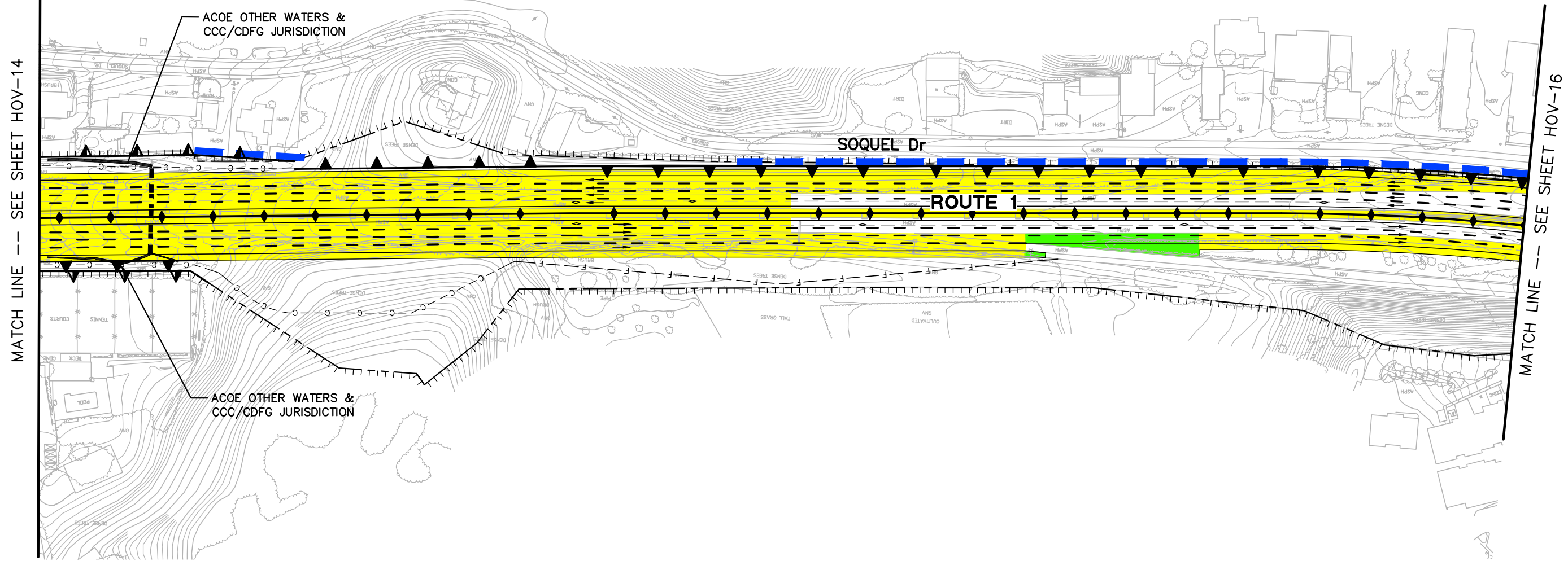
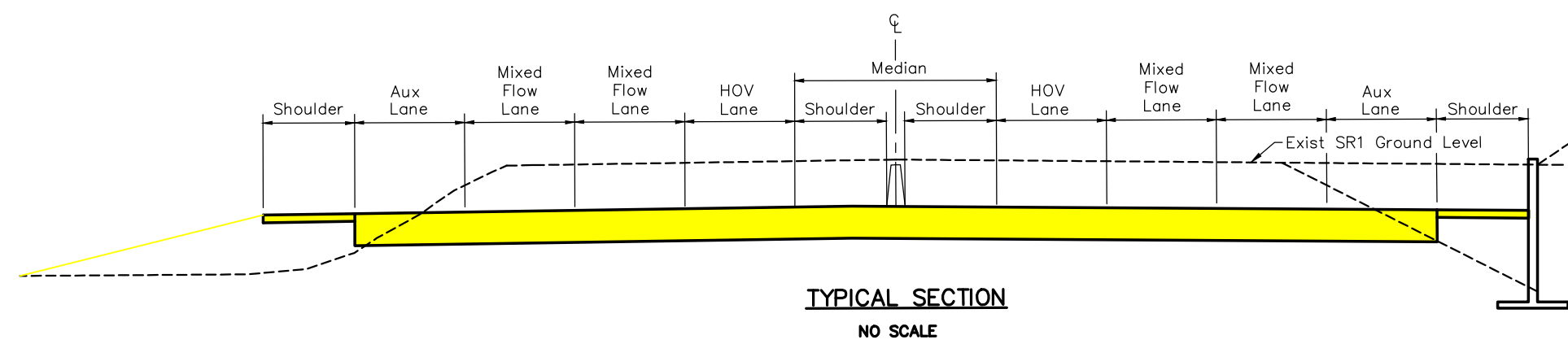
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DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	15	20



**PLANNING CONCEPT LEGEND:**

- |  |                          |  |                                       |
|--|--------------------------|--|---------------------------------------|
|  | EXISTING WETLANDS        |  | PROPOSED SOUND WALL                   |
|  | PROPOSED HIGHWAY PAVING  |  | PROPOSED RETAINING WALL               |
|  | PROPOSED RAMP PAVING     |  | PROPOSED SOUND WALL ON RETAINING WALL |
|  | PROPOSED LOCAL ROAD WORK |  | EXISTING HIGHWAY ACCESS CONTROL       |
|  | PROPOSED BIKE PATH       |  | PLANNING CONCEPT FOOTPRINT            |
|  | PROPOSED BRIDGE          |  | EXISTING CULVERT                      |
|  |                          |  | ORDINARY HIGH WATER MARK (OHWM)       |
|  |                          |  | PAVEMENT REMOVAL                      |

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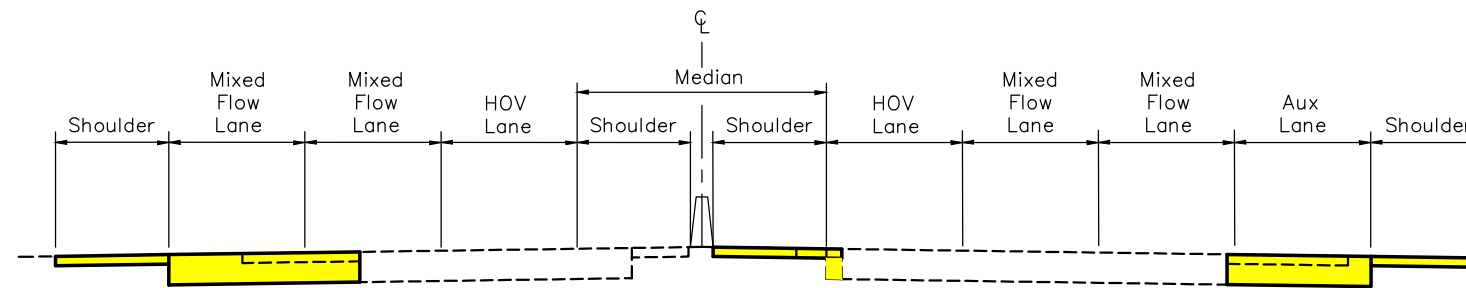




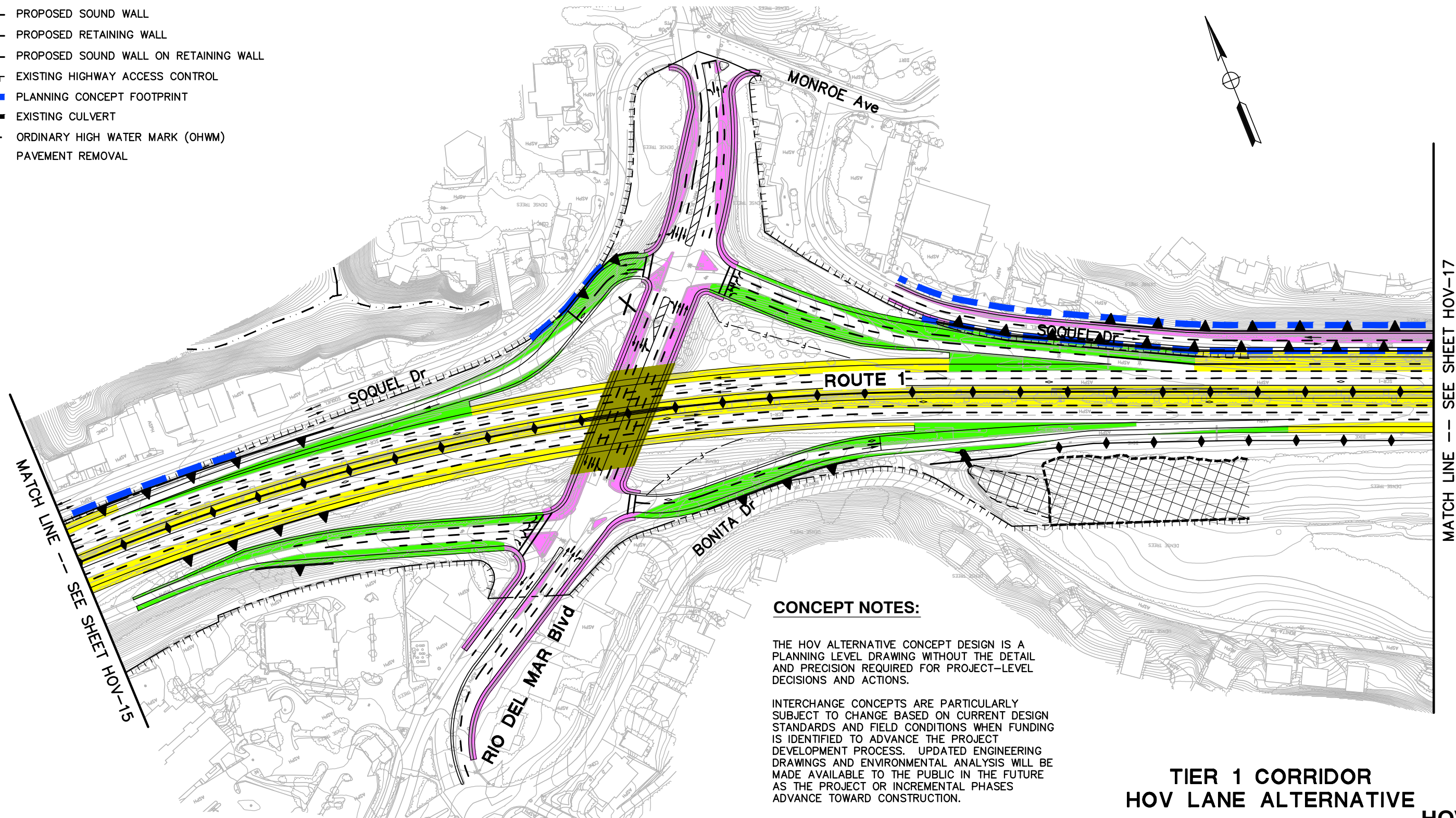
DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	16	20

**PLANNING CONCEPT LEGEND:**

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE
- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL



**TYPICAL SECTION – NO RAMPS SHOWN**  
NO SCALE



**CONCEPT NOTES:**

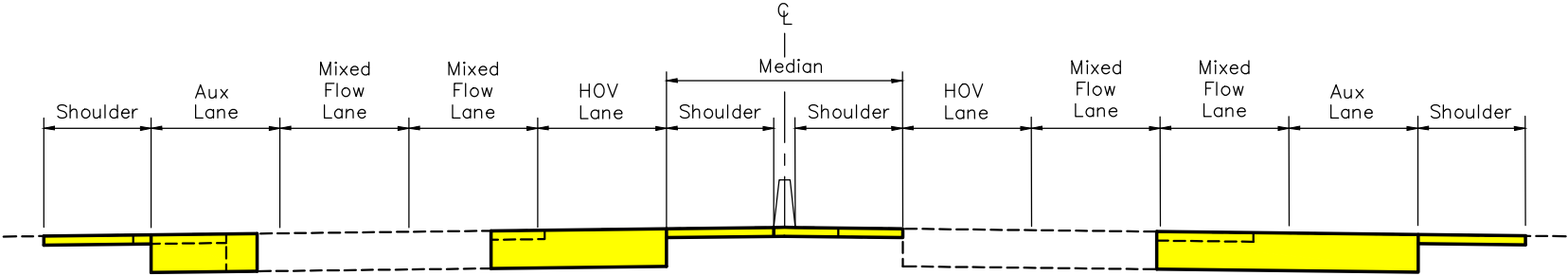
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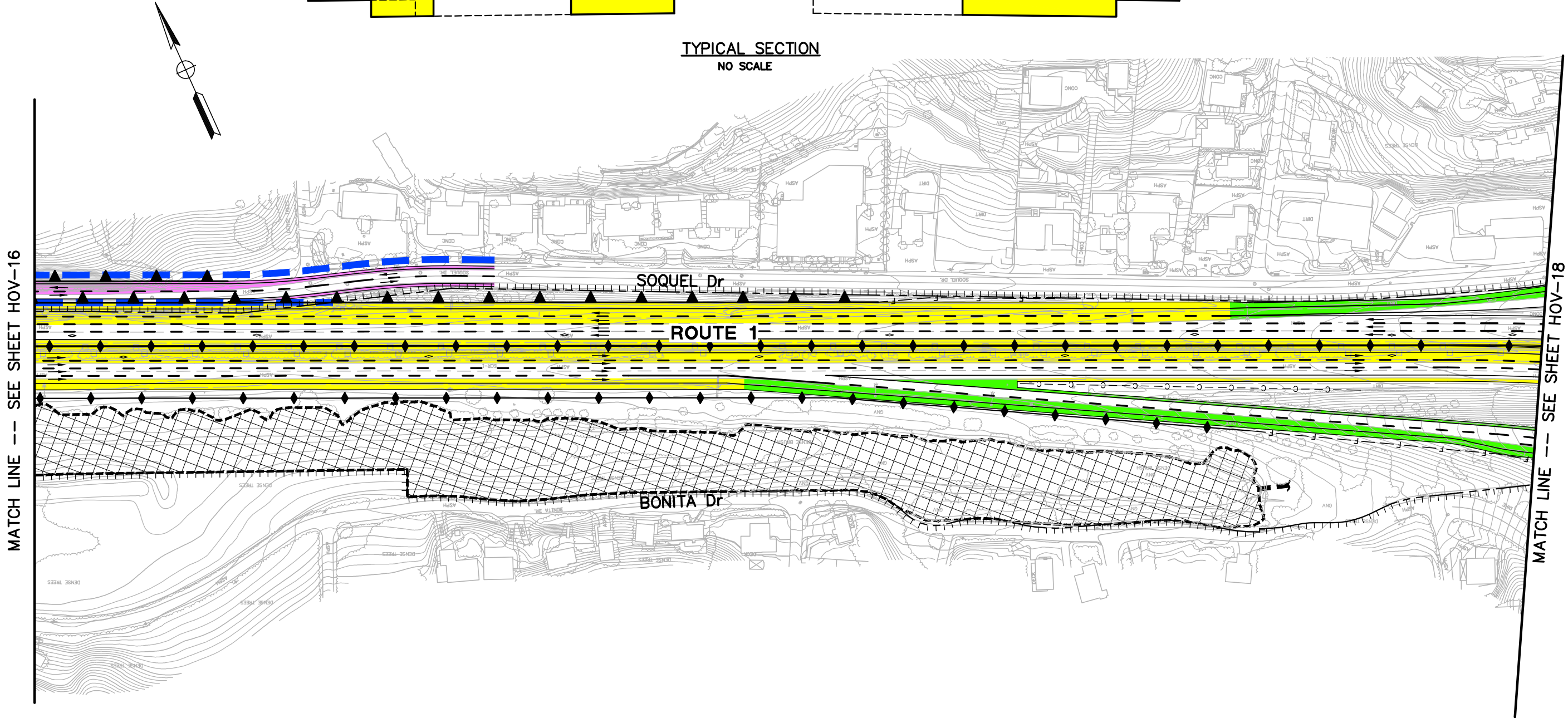




DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	17	20



TYPICAL SECTION  
NO SCALE



PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE
- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

CONCEPT NOTES:

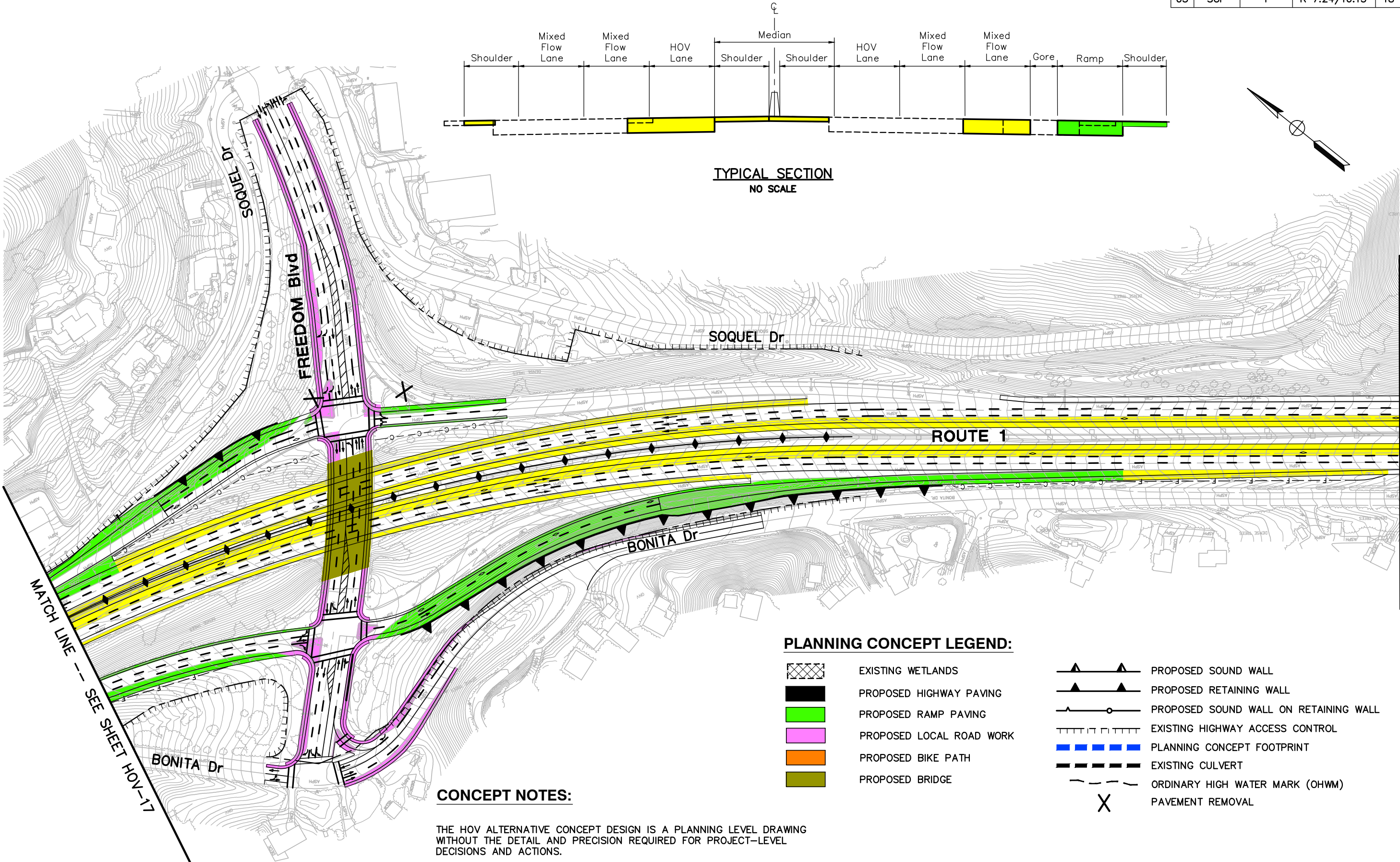
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DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	18	20


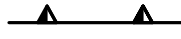

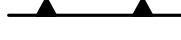

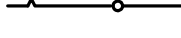









**CONCEPT NOTES:**

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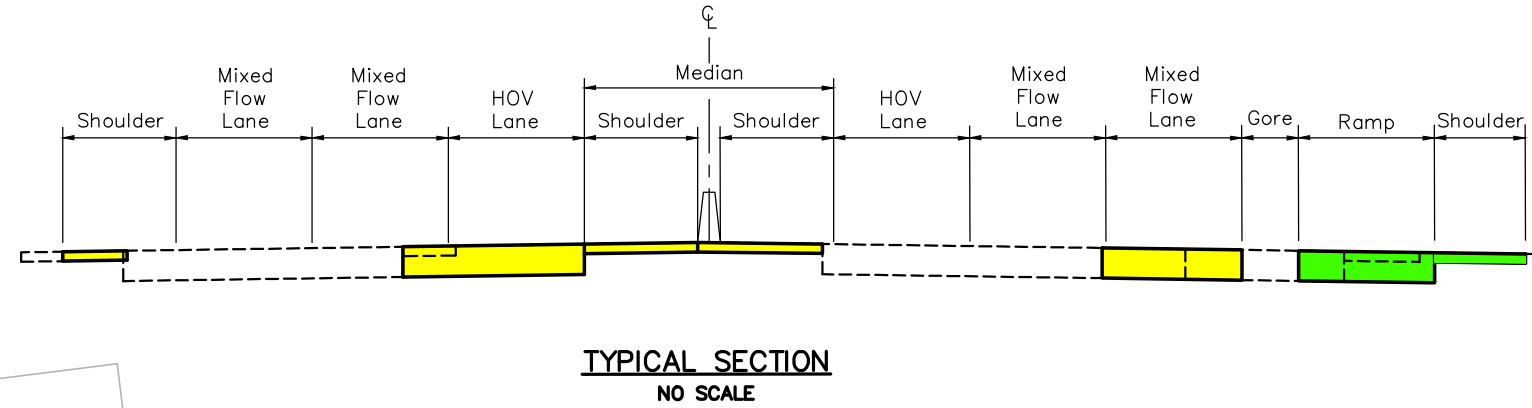
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**PLANNING CONCEPT LEGEND:**

- |   |                          |   |                                       |
|---|--------------------------|---|---------------------------------------|
|  | EXISTING WETLANDS        |  | PROPOSED SOUND WALL                   |
|  | PROPOSED HIGHWAY PAVING  |  | PROPOSED RETAINING WALL               |
|  | PROPOSED RAMP PAVING     |  | PROPOSED SOUND WALL ON RETAINING WALL |
|  | PROPOSED LOCAL ROAD WORK |  | EXISTING HIGHWAY ACCESS CONTROL       |
|  | PROPOSED BIKE PATH       |  | PLANNING CONCEPT FOOTPRINT            |
|  | PROPOSED BRIDGE          |  | EXISTING CULVERT                      |
|   |                          |  | ORDINARY HIGH WATER MARK (OHWM)       |
|   |                          |   | PAVEMENT REMOVAL                      |

**TIER 1 CORRIDOR  
HOV LANE ALTERNATIVE**

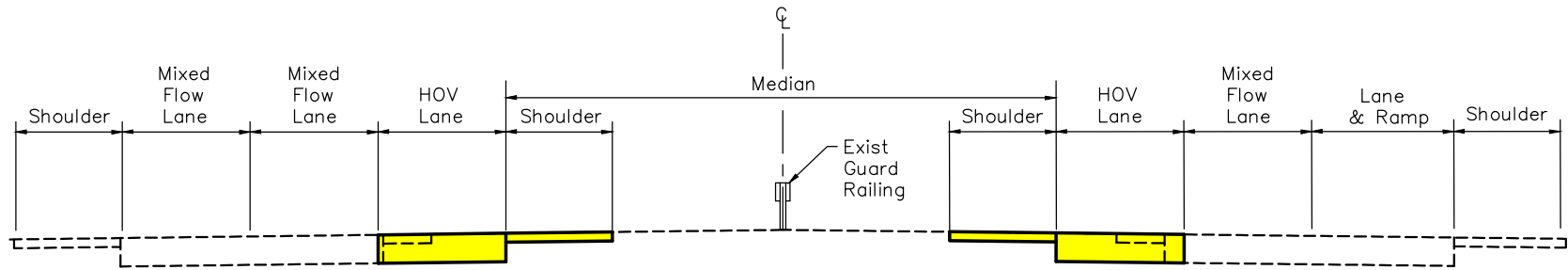
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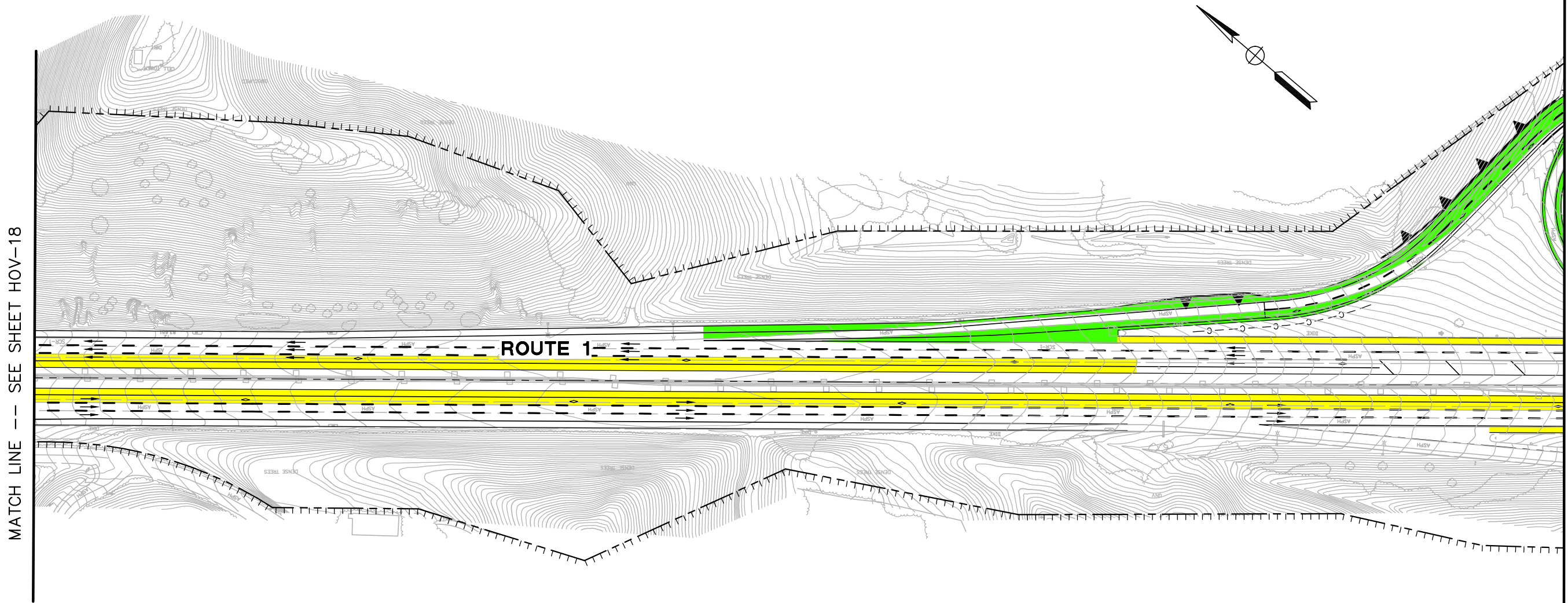




DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	19	20



TYPICAL SECTION  
NO SCALE



PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE
- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

CONCEPT NOTES:

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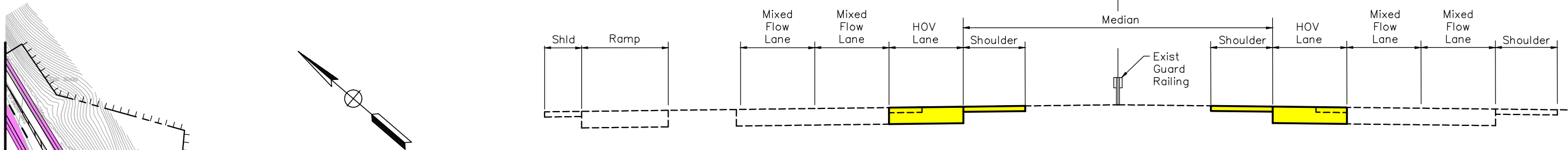
TIER 1 CORRIDOR  
HOV LANE ALTERNATIVE



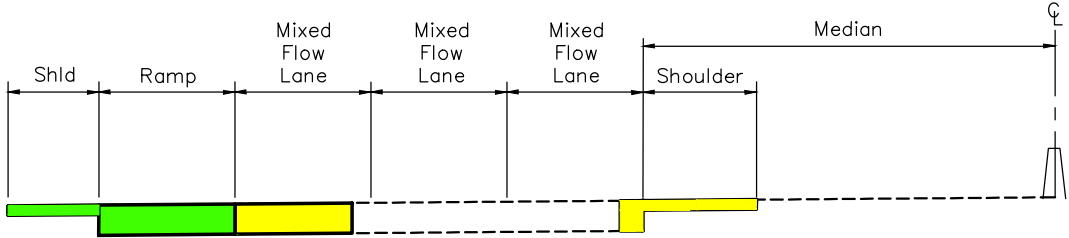


DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	20	20

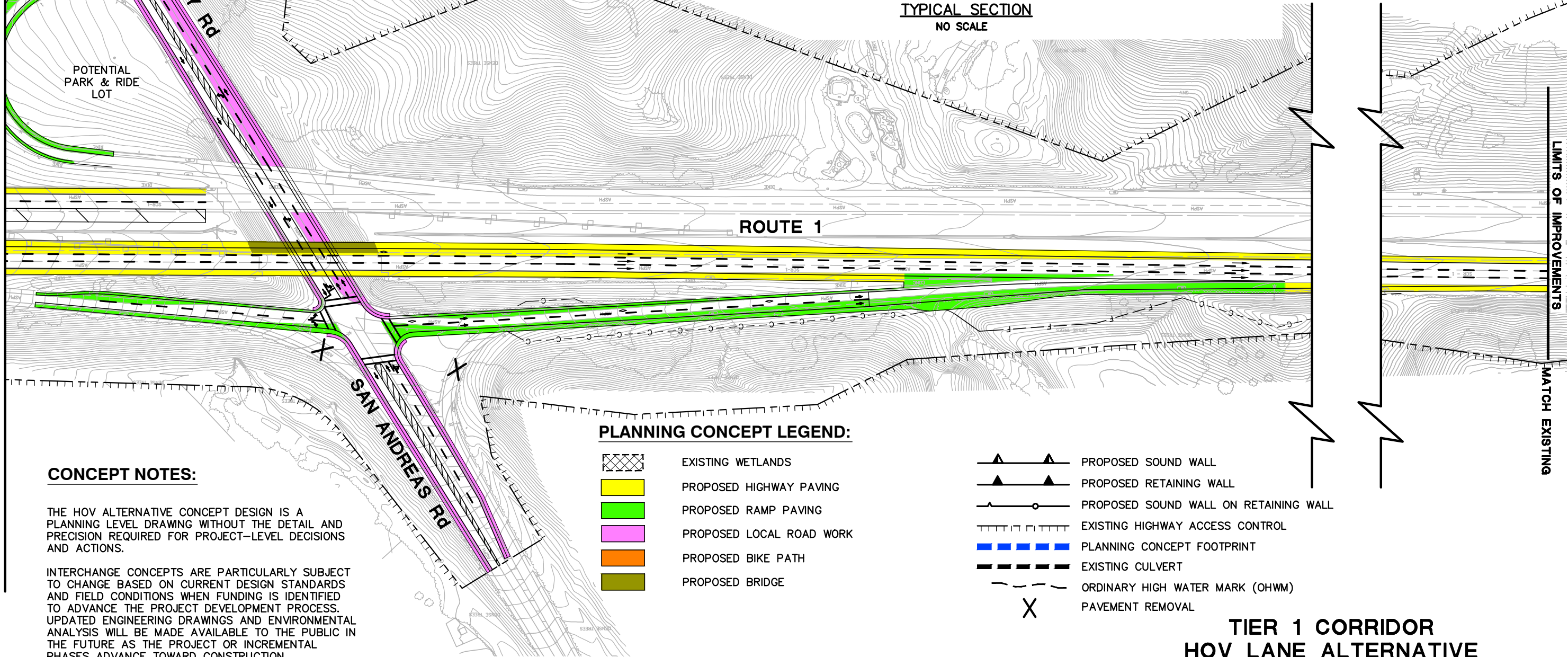
MATCH LINE -- SEE SHEET HOV-19



TYPICAL SECTION – NO RAMPS SHOWN



TYPICAL SECTION  
NO SCALE



### CONCEPT NOTES:

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### PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE

- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

TIER 1 CORRIDOR  
HOV LANE ALTERNATIVE



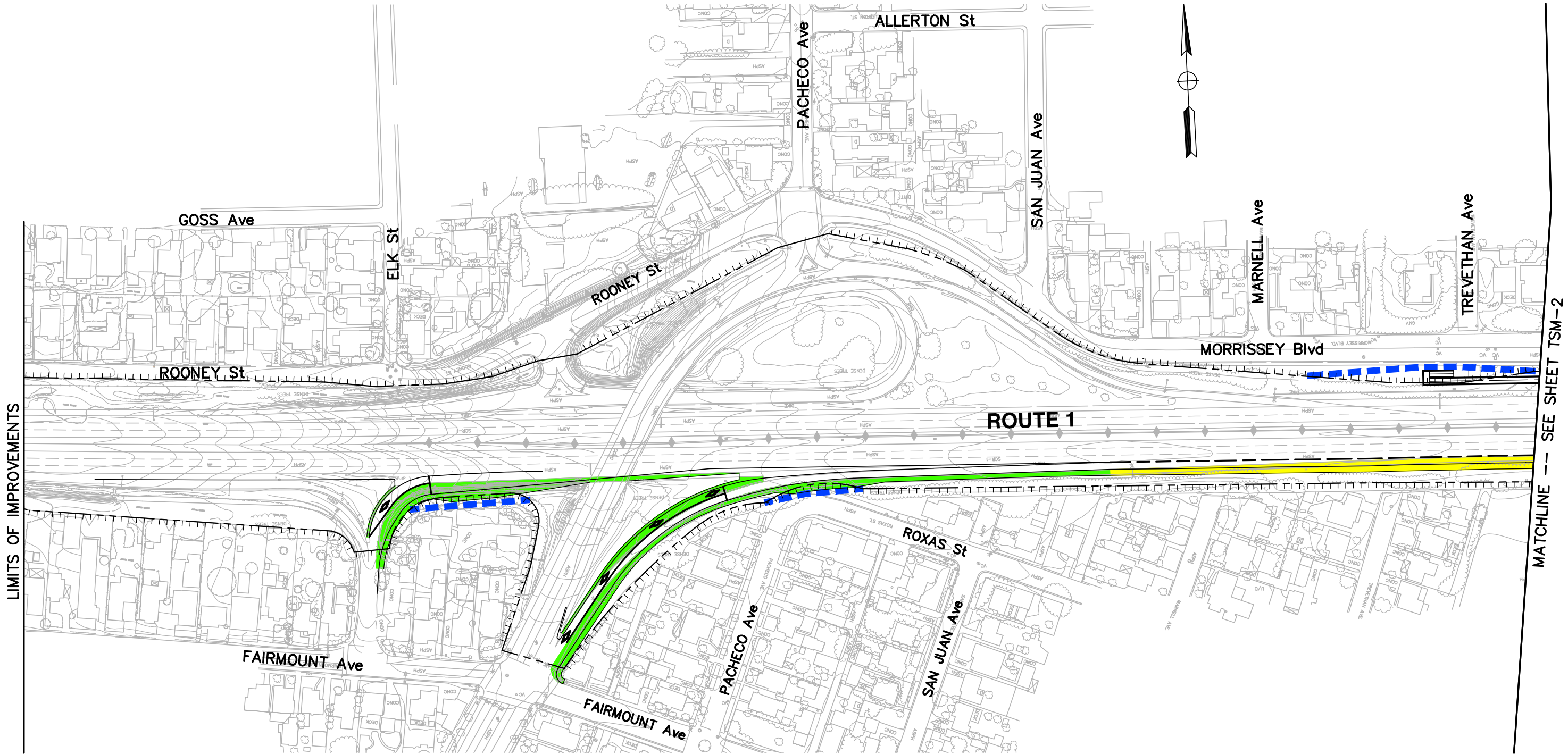
## **Appendix H**

### **Tier I Corridor TSM Alternative Plan Drawings**





DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	1	20



**PLANNING CONCEPT LEGEND:**

	EXISTING WETLANDS		PROPOSED SOUND WALL
	PROPOSED HIGHWAY PAVING		PROPOSED RETAINING WALL
	PROPOSED RAMP PAVING		PROPOSED SOUND WALL ON RETAINING WALL
	PROPOSED LOCAL ROAD WORK		EXISTING HIGHWAY ACCESS CONTROL
	PROPOSED BIKE PATH		PLANNING CONCEPT FOOTPRINT
	PROPOSED BRIDGE		EXISTING CULVERT
			ORDINARY HIGH WATER MARK (OHWM)
			PAVEMENT REMOVAL

**CONCEPT NOTES:**

THE TSM ALTERNATIVE CONCEPT DESIGN IS A PLANNING LEVEL DRAWING WITHOUT THE DETAIL AND PRECISION REQUIRED FOR PROJECT-LEVEL DECISIONS AND ACTIONS.

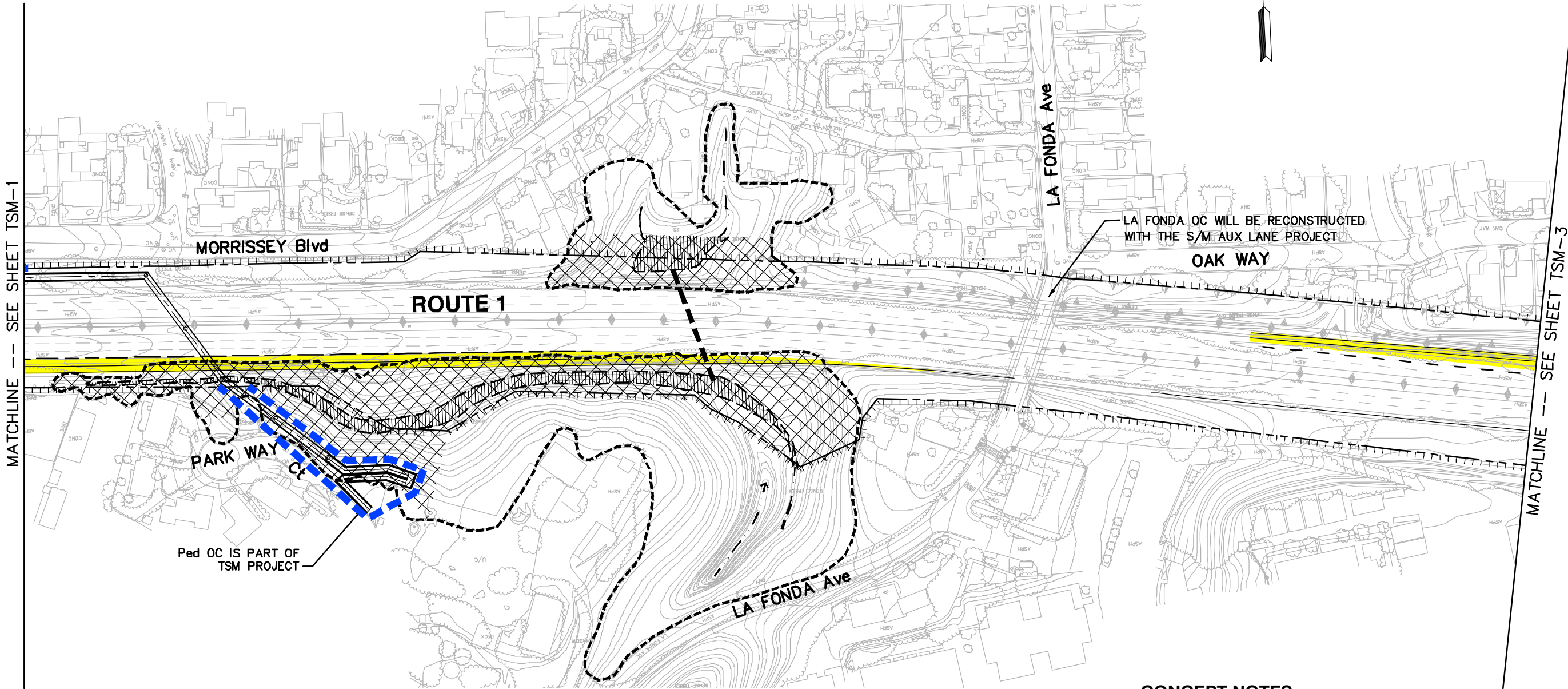
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**TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE**




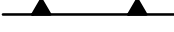

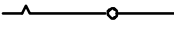











DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	2	20



PLANNING CONCEPT LEGEND:

- |   |                          |   |   |
|---|--------------------------|---|---|
|  | EXISTING WETLANDS        |  | PROPOSED SOUND WALL                                 |
|  | PROPOSED HIGHWAY PAVING  |  | PROPOSED RETAINING WALL                             |
|  | PROPOSED RAMP PAVING     |  | PROPOSED SOUND WALL ON RETAINING WALL               |
|  | PROPOSED LOCAL ROAD WORK |  | EXISTING HIGHWAY ACCESS CONTROL                     |
|  | PROPOSED BIKE PATH       |  | PLANNING CONCEPT FOOTPRINT                          |
|  | PROPOSED BRIDGE          |  | EXISTING CULVERT                                    |
|   |                          |  | ORDINARY HIGH WATER MARK (OHWM)<br>PAVEMENT REMOVAL |

CONCEPT NOTES:

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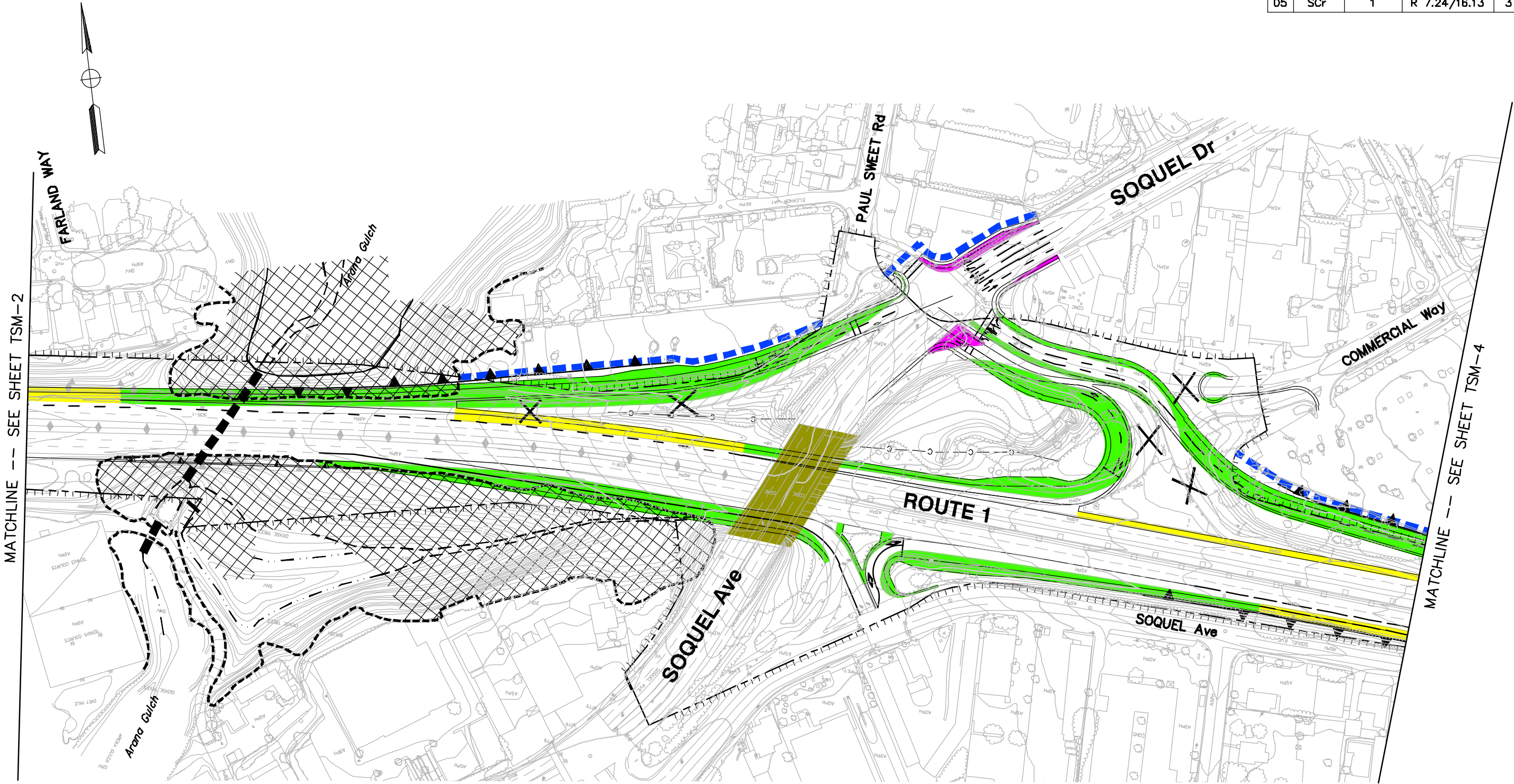
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TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE





DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	3	20



**PLANNING CONCEPT LEGEND:**

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE
- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

**CONCEPT NOTES:**

THE TSM ALTERNATIVE CONCEPT DESIGN IS A PLANNING LEVEL DRAWING WITHOUT THE DETAIL AND PRECISION REQUIRED FOR PROJECT-LEVEL DECISIONS AND ACTIONS.

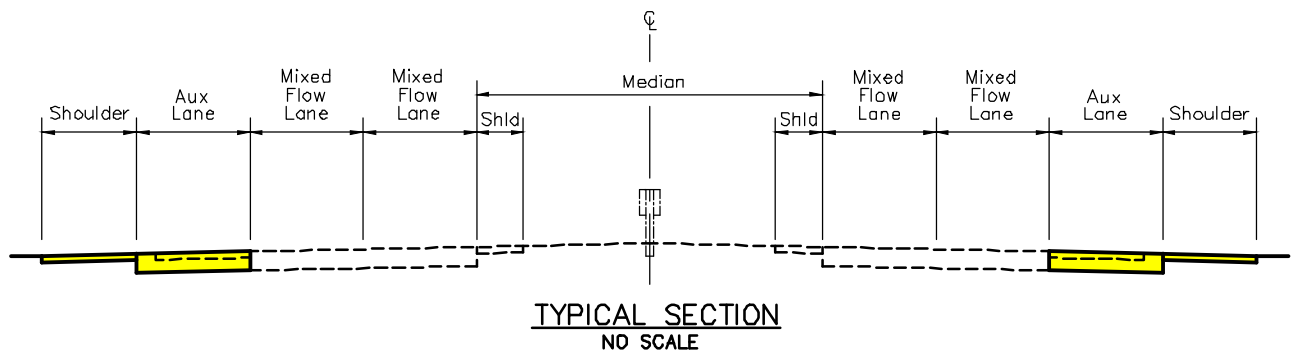
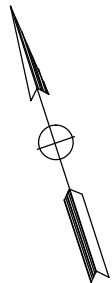
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**TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE**





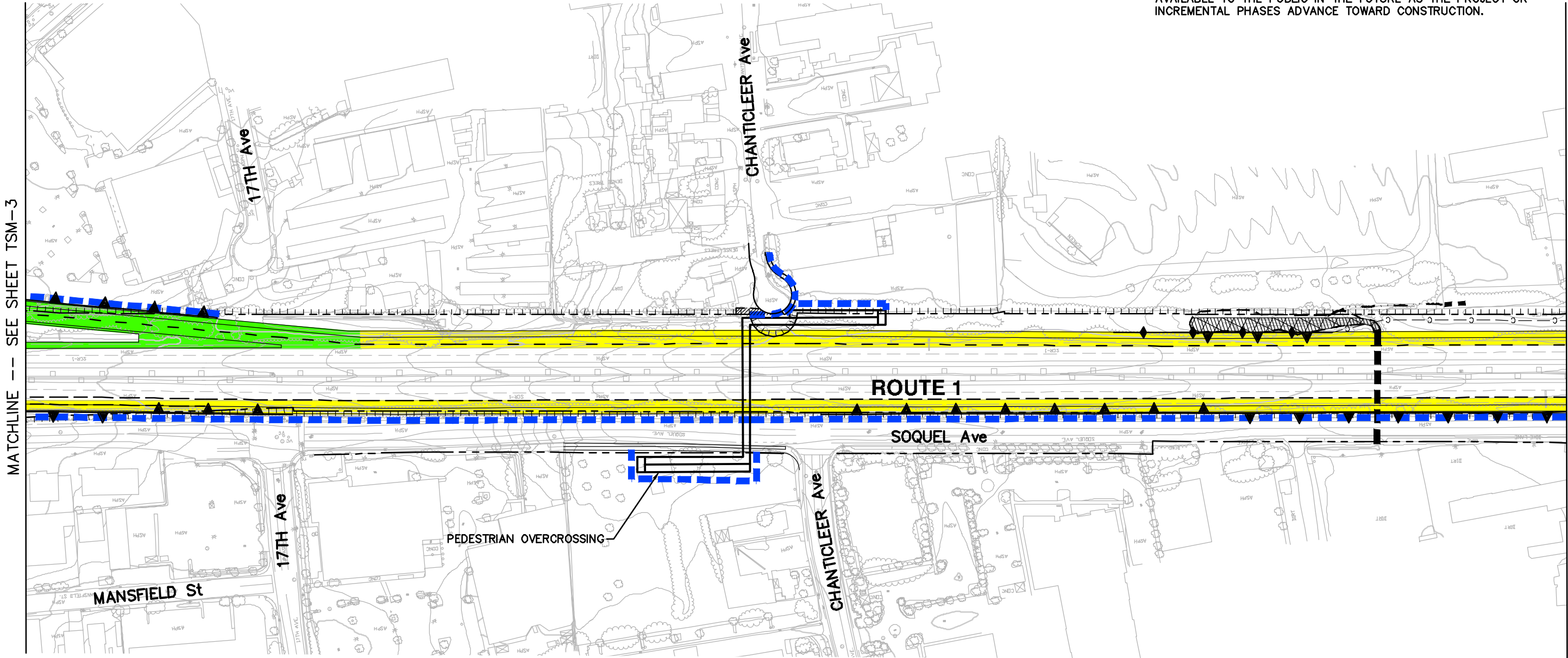
DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	4	20



CONCEPT NOTES:

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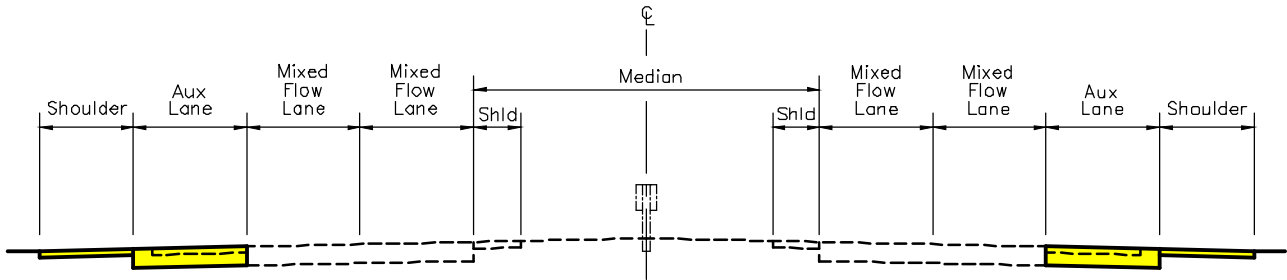
PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE
- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

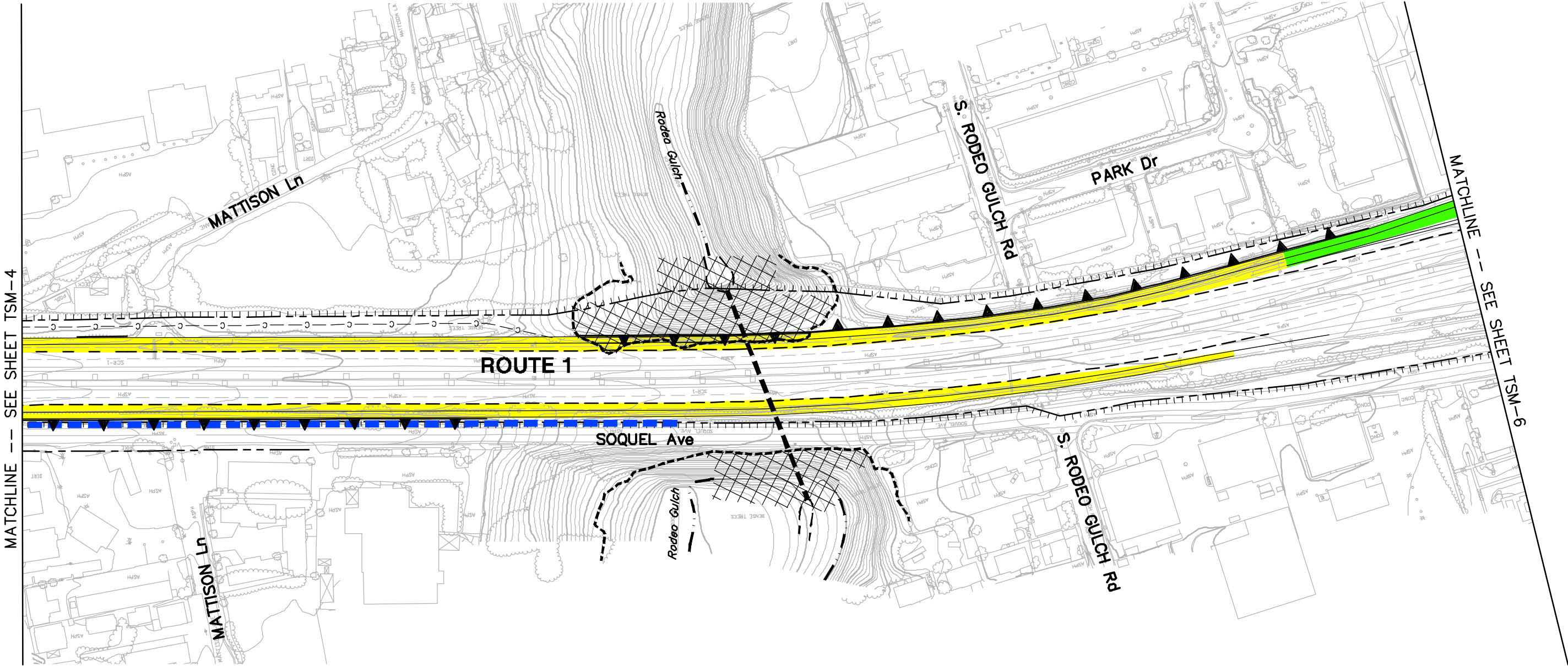
TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE



DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	5	20



TYPICAL SECTION  
NO SCALE



PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE
- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
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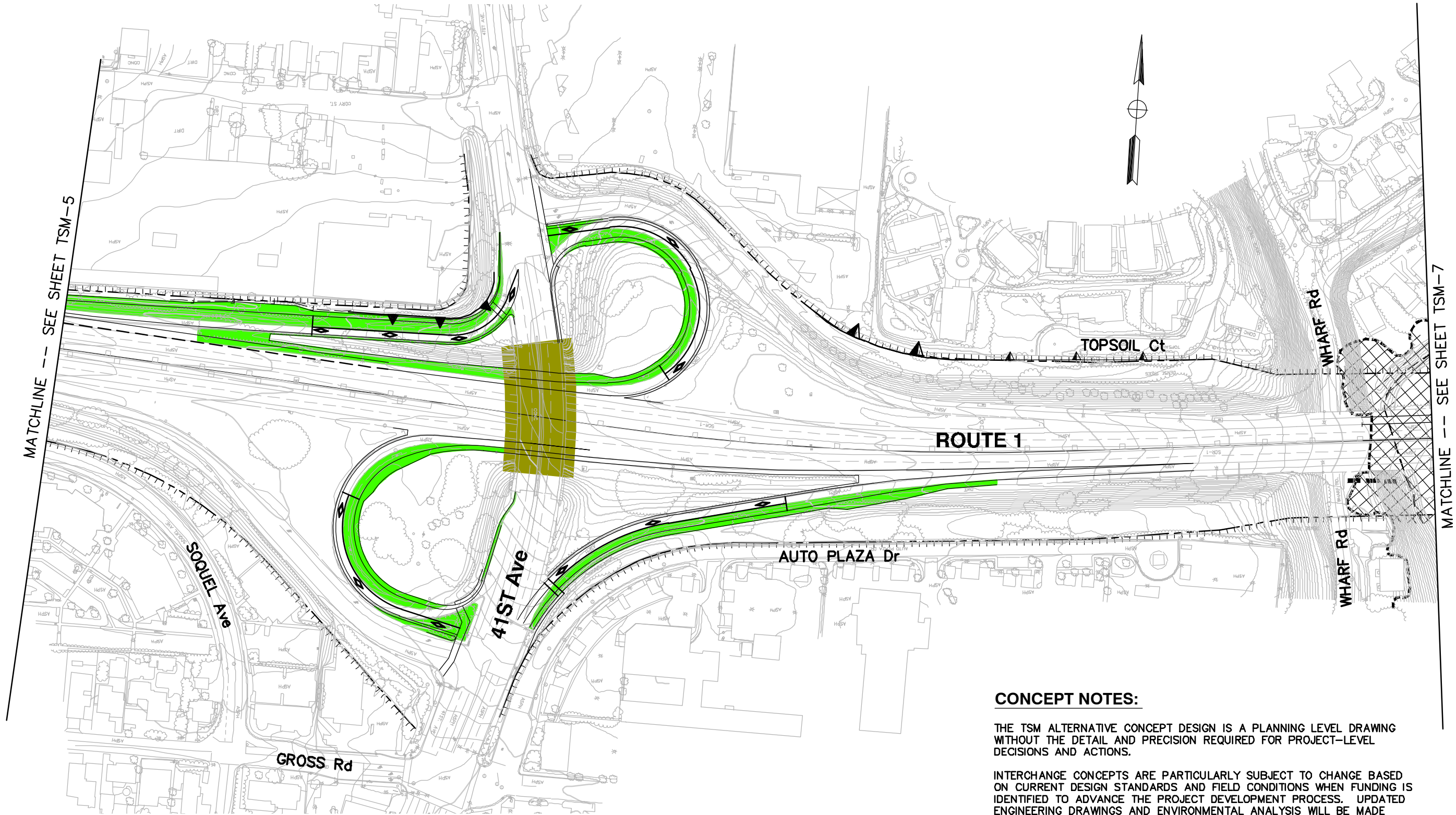
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TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE





DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	6	20



**PLANNING CONCEPT LEGEND:**

- |  |                          |  |                                       |
|--|--------------------------|--|---------------------------------------|
|  | EXISTING WETLANDS        |  | PROPOSED SOUND WALL                   |
|  | PROPOSED HIGHWAY PAVING  |  | PROPOSED RETAINING WALL               |
|  | PROPOSED RAMP PAVING     |  | PROPOSED SOUND WALL ON RETAINING WALL |
|  | PROPOSED LOCAL ROAD WORK |  | EXISTING HIGHWAY ACCESS CONTROL       |
|  | PROPOSED BIKE PATH       |  | PLANNING CONCEPT FOOTPRINT            |
|  | PROPOSED BRIDGE          |  | EXISTING CULVERT                      |
|  |                          |  | ORDINARY HIGH WATER MARK (OHWM)       |
|  |                          |  | PAVEMENT REMOVAL                      |

**CONCEPT NOTES:**

THE TSM ALTERNATIVE CONCEPT DESIGN IS A PLANNING LEVEL DRAWING WITHOUT THE DETAIL AND PRECISION REQUIRED FOR PROJECT-LEVEL DECISIONS AND ACTIONS.

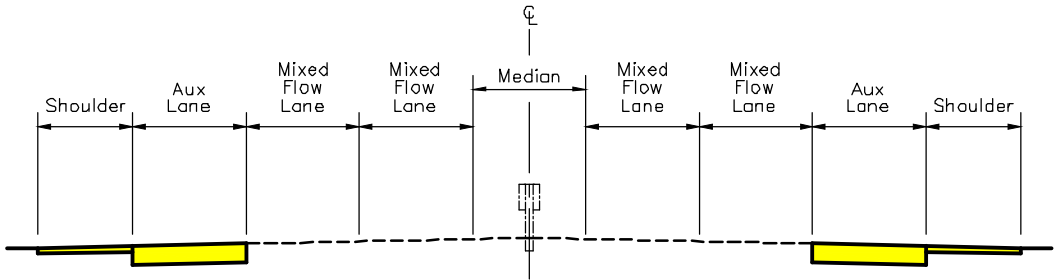
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**TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE**

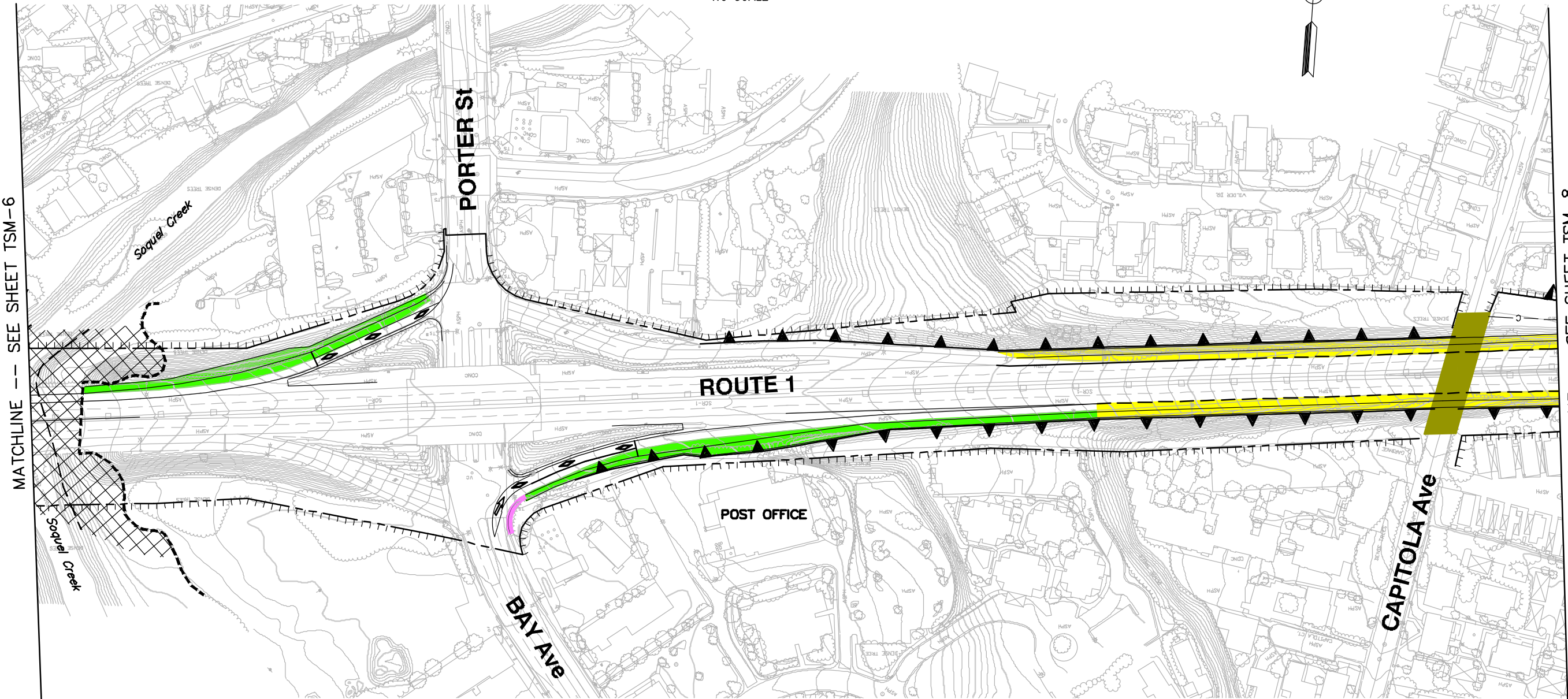




DIST	COUNTY	ROUTE	MI TOTAL PROJECT	POST SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	7	20



TYPICAL SECTION  
NO SCALE



PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE

- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

CONCEPT NOTES:

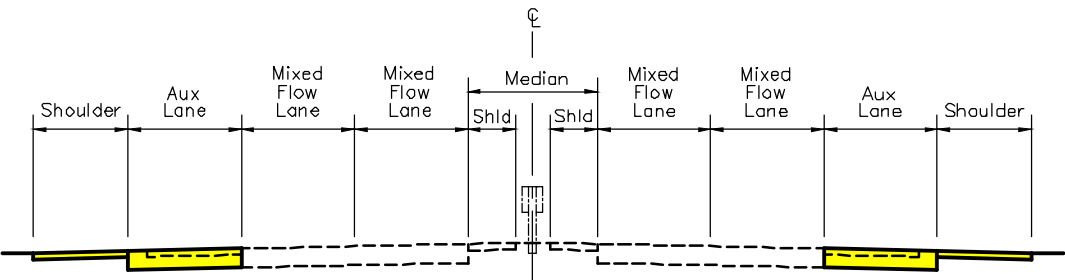
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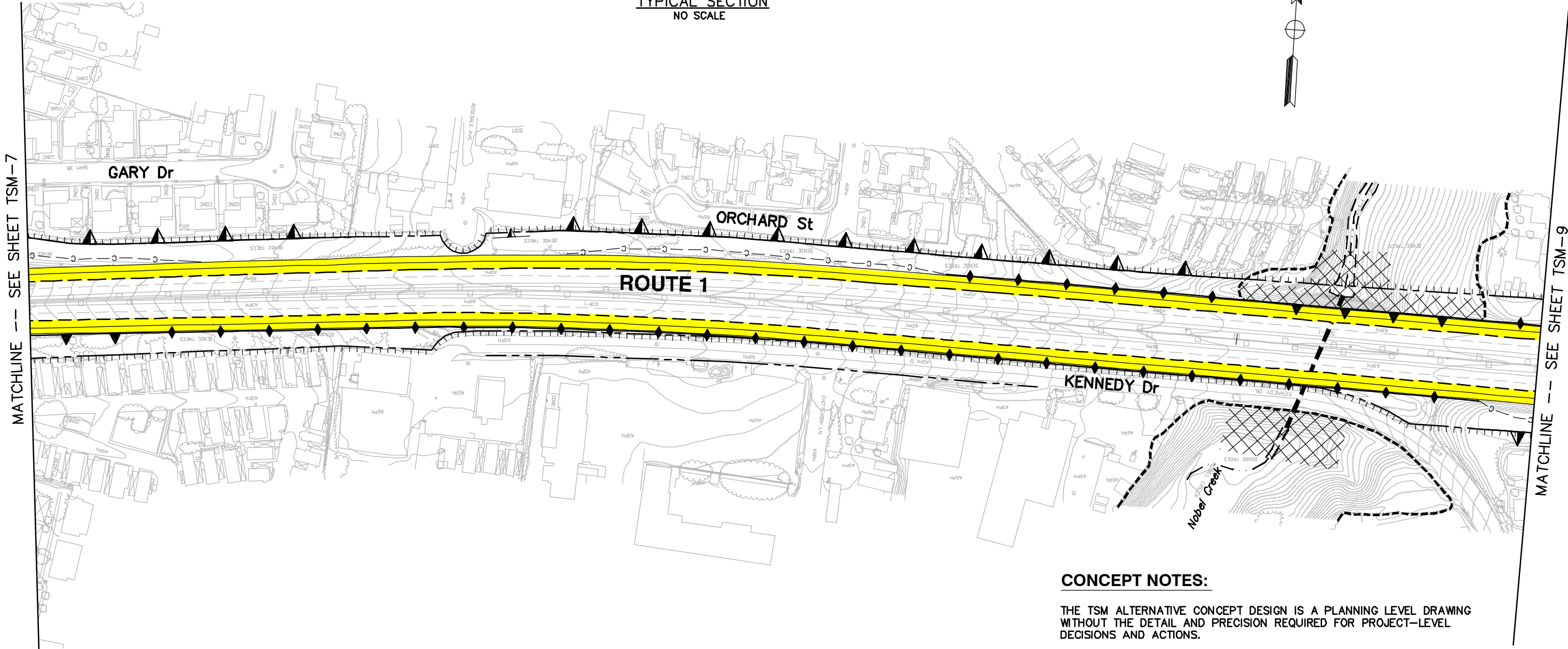
TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE



DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	8	20



TYPICAL SECTION  
NO SCALE



**PLANNING CONCEPT LEGEND:**

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE

- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
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**TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE**



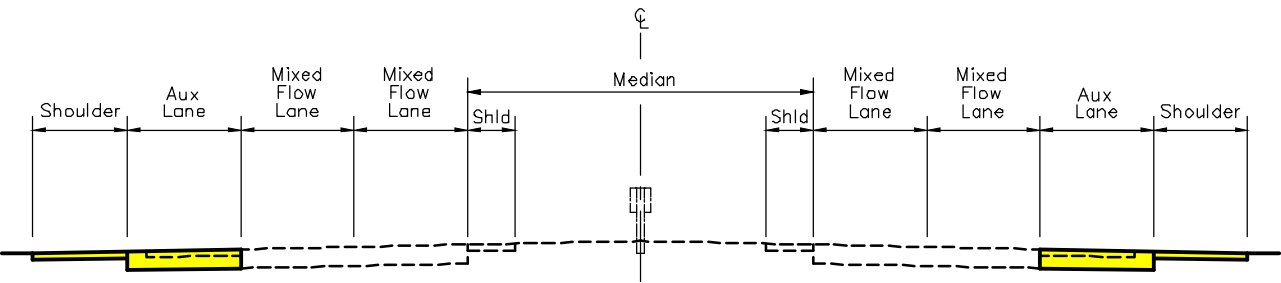


**CONCEPT NOTES:**

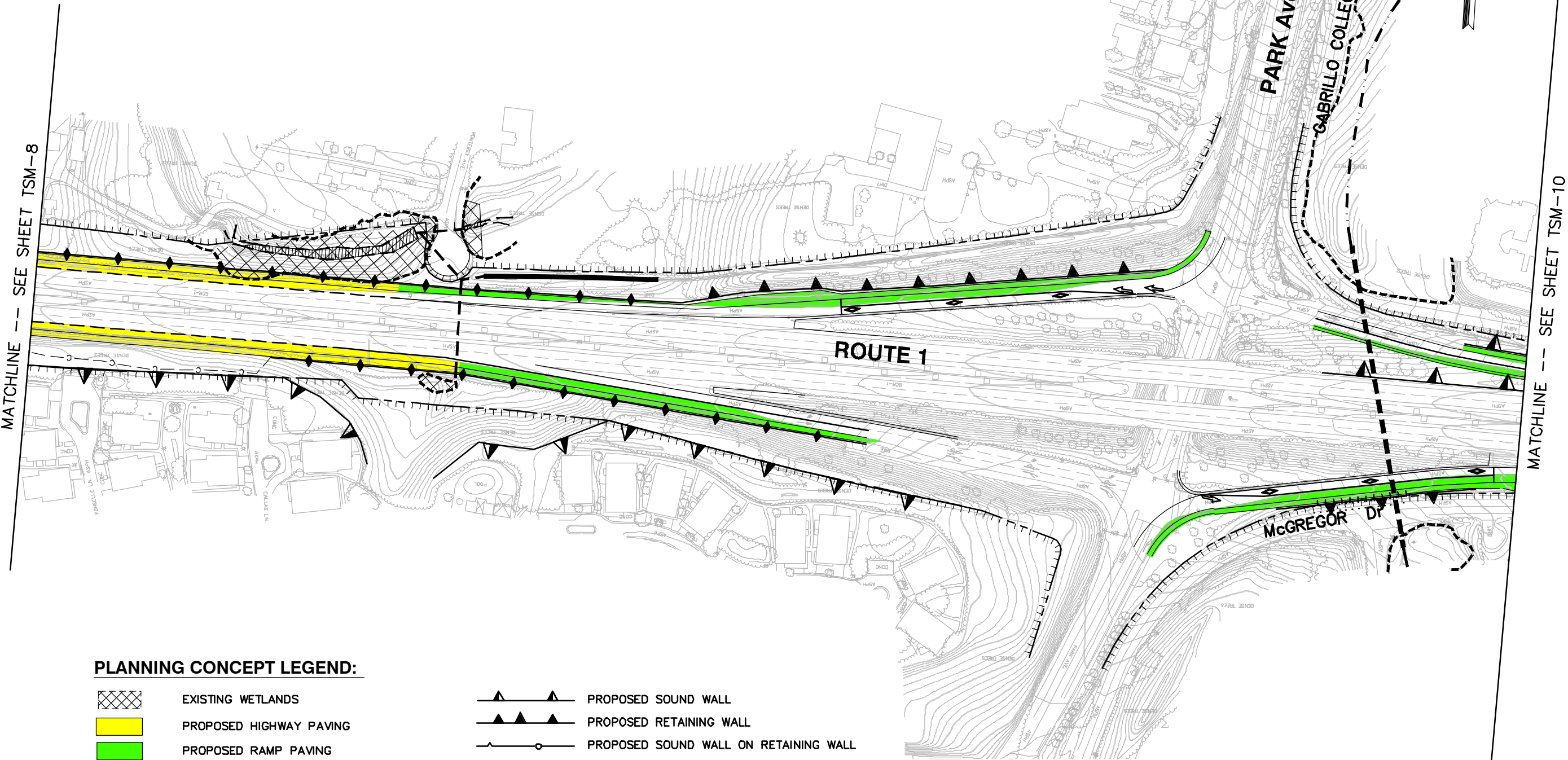
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DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	9	20



**TYPICAL SECTION**  
NO SCALE



**PLANNING CONCEPT LEGEND:**

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE

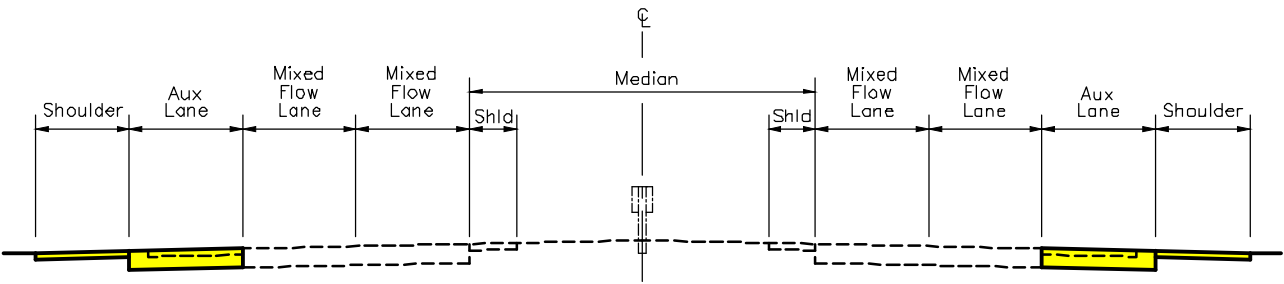
- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

**TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE**

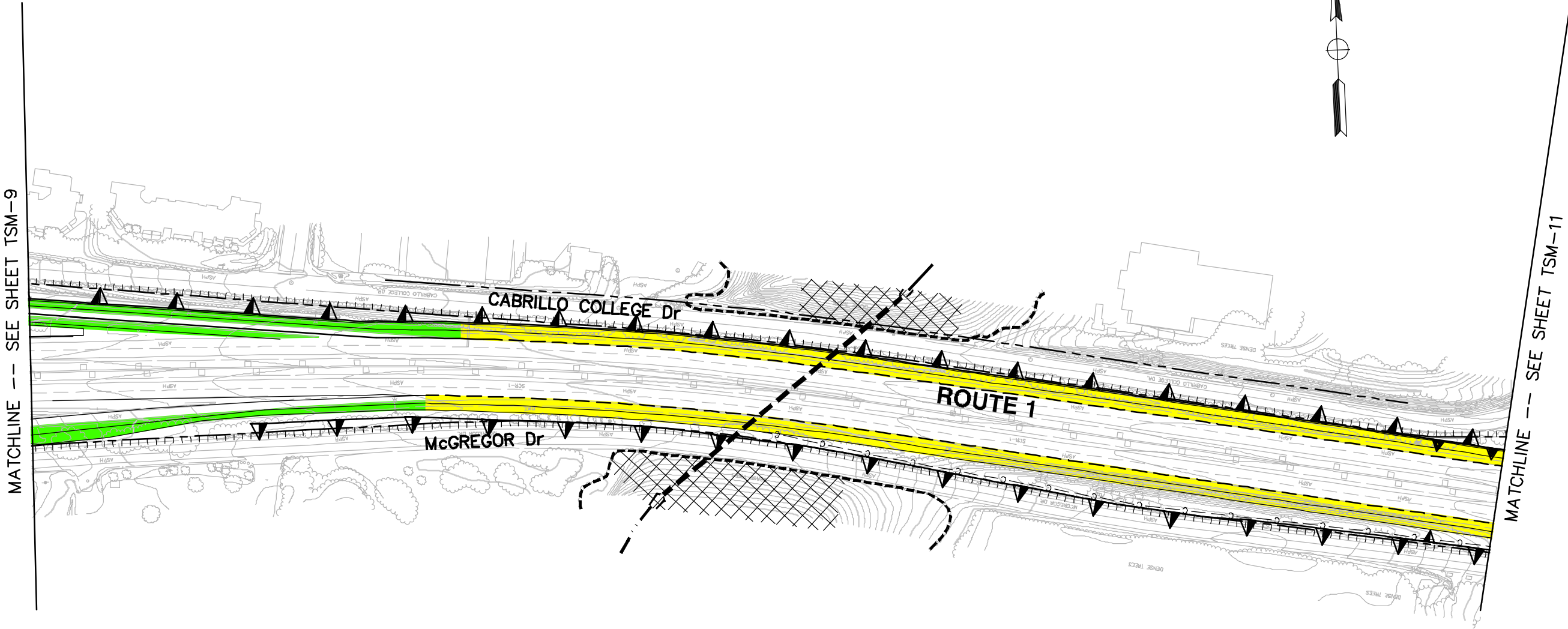




DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	SCr	1	R 7.24/16.13	10	20



TYPICAL SECTION  
NO SCALE



PLANNING CONCEPT LEGEND:

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE

- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

CONCEPT NOTES:

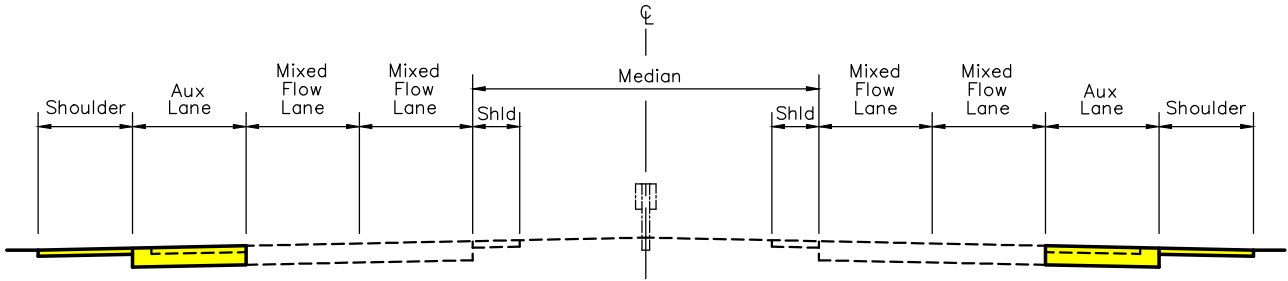
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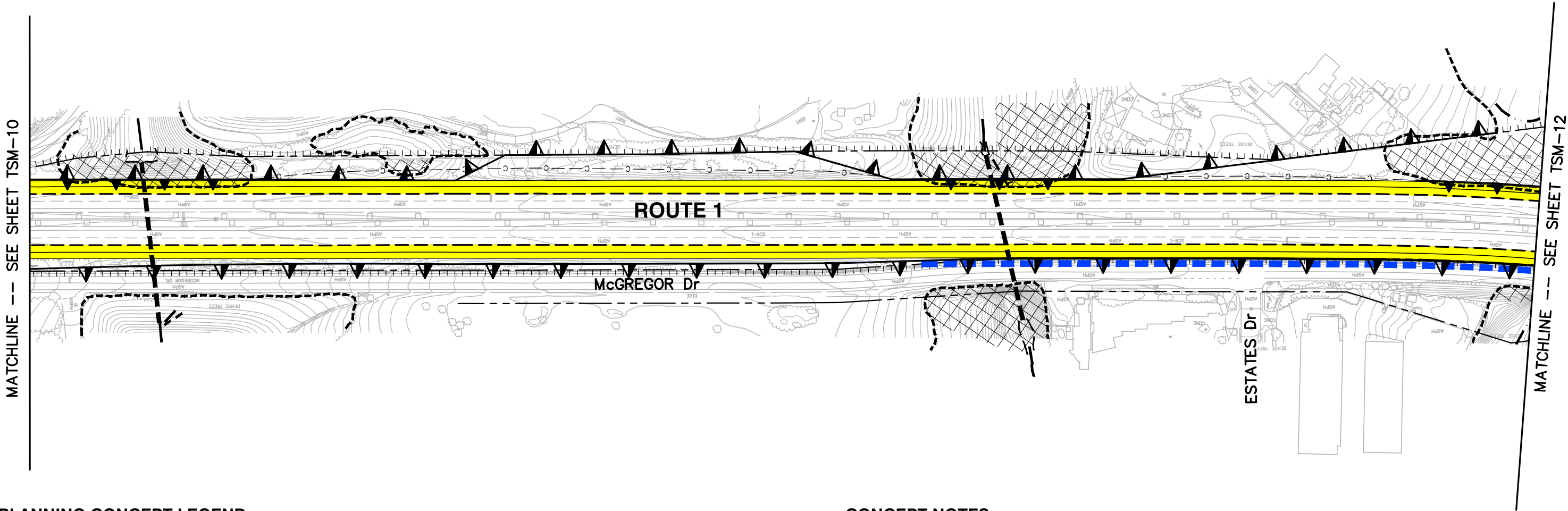
TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE



DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	SCr	1	R 7.24/16.13	11	20



TYPICAL SECTION  
NO SCALE



PLANNING CONCEPT LEGEND:

- |  |                          |  |                                       |
|--|--------------------------|--|---------------------------------------|
|  | EXISTING WETLANDS        |  | PROPOSED SOUND WALL                   |
|  | PROPOSED HIGHWAY PAVING  |  | PROPOSED RETAINING WALL               |
|  | PROPOSED RAMP PAVING     |  | PROPOSED SOUND WALL ON RETAINING WALL |
|  | PROPOSED LOCAL ROAD WORK |  | EXISTING HIGHWAY ACCESS CONTROL       |
|  | PROPOSED BIKE PATH       |  | PLANNING CONCEPT FOOTPRINT            |
|  | PROPOSED BRIDGE          |  | EXISTING CULVERT                      |
|  |                          |  | ORDINARY HIGH WATER MARK (OHWM)       |
|  |                          |  | PAVEMENT REMOVAL                      |

CONCEPT NOTES:

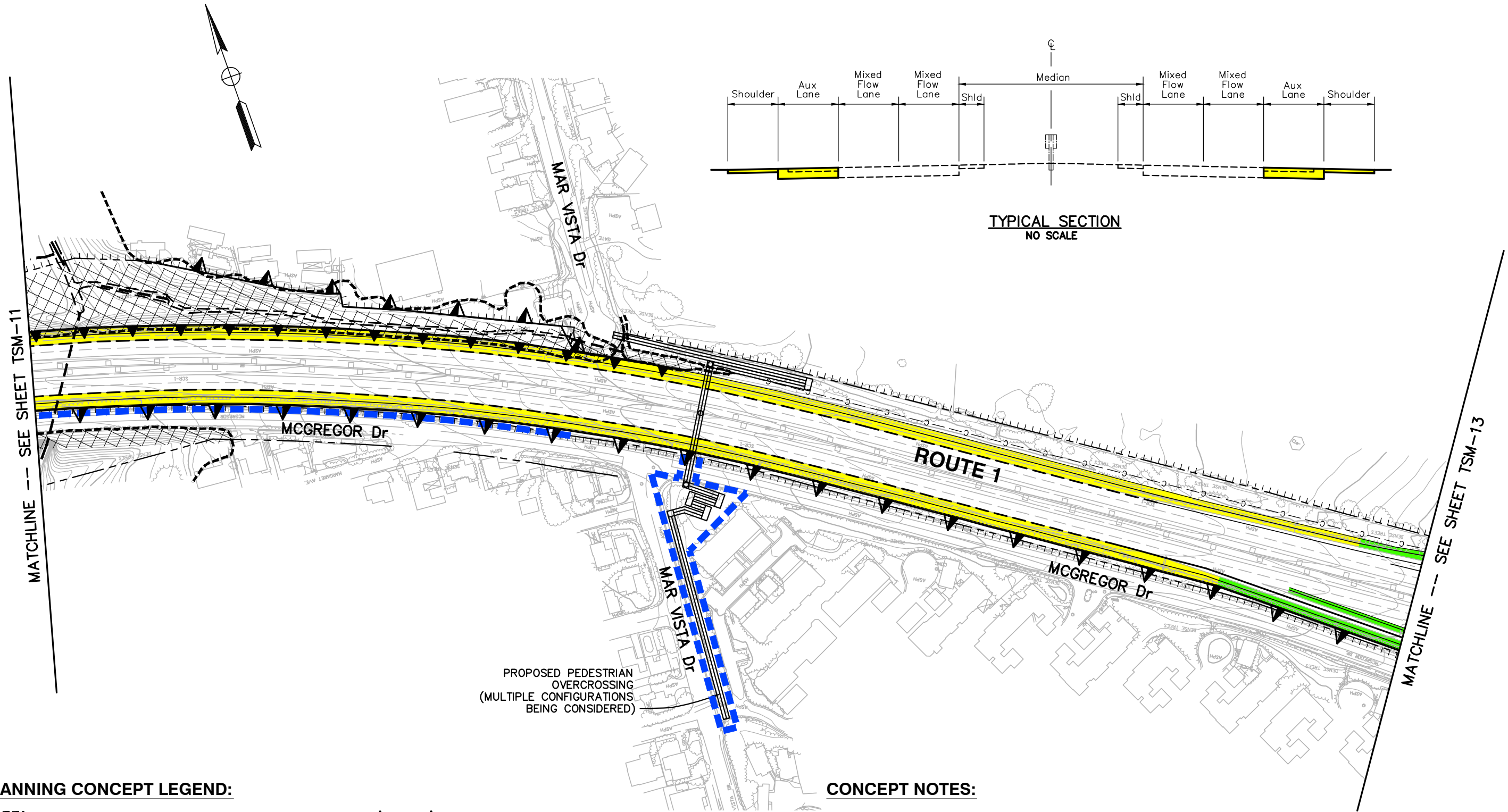
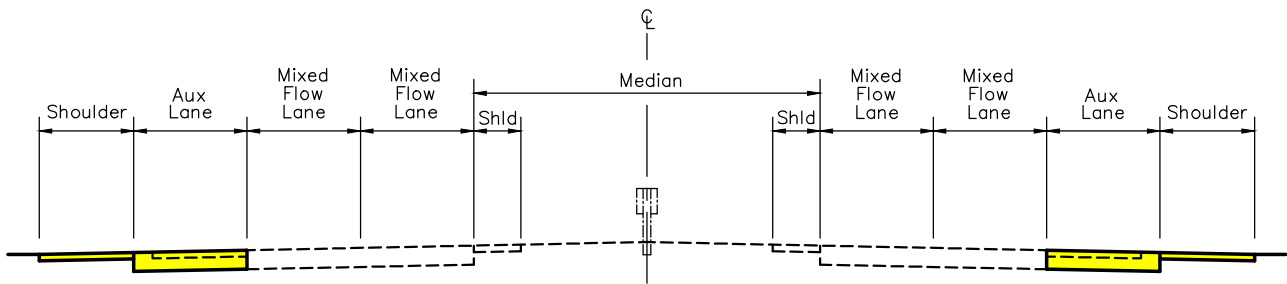
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TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE



DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	12	20



**PLANNING CONCEPT LEGEND:**

- |  |                          |  |                                       |
|--|--------------------------|--|---------------------------------------|
|  | EXISTING WETLANDS        |  | PROPOSED SOUND WALL                   |
|  | PROPOSED HIGHWAY PAVING  |  | PROPOSED RETAINING WALL               |
|  | PROPOSED RAMP PAVING     |  | PROPOSED SOUND WALL ON RETAINING WALL |
|  | PROPOSED LOCAL ROAD WORK |  | EXISTING HIGHWAY ACCESS CONTROL       |
|  | PROPOSED BIKE PATH       |  | PLANNING CONCEPT FOOTPRINT            |
|  | PROPOSED BRIDGE          |  | EXISTING CULVERT                      |
|  |                          |  | ORDINARY HIGH WATER MARK (OHWM)       |
|  |                          |  | PAVEMENT REMOVAL                      |

**CONCEPT NOTES:**

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**TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE**








DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	SCr	1	R 7.24/16.13	13	20


**PLANNING CONCEPT LEGEND:**


- 


EXISTING WETLANDS
- 


PROPOSED HIGHWAY PAVING
- 


PROPOSED RAMP PAVING
- 


PROPOSED LOCAL ROAD WORK
- 


PROPOSED BIKE PATH
- 

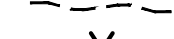
PROPOSED BRIDGE
- 


PROPOSED SOUND WALL
- 

PROPOSED RETAINING WALL
- 

PROPOSED SOUND WALL ON RETAINING WALL
- 

EXISTING HIGHWAY ACCESS CONTROL
- 

PLANNING CONCEPT FOOTPRINT
- 

EXISTING CULVERT
- 

ORDINARY HIGH WATER MARK (OHWM)  
PAVEMENT REMOVAL

MATCHLINE -- SEE SHEET TSM-12

MATCHLINE -- SEE SHEET TSM-14

**CONCEPT NOTES:**

THE TSM ALTERNATIVE CONCEPT DESIGN IS A PLANNING LEVEL DRAWING WITHOUT THE DETAIL AND PRECISION REQUIRED FOR PROJECT-LEVEL DECISIONS AND ACTIONS.

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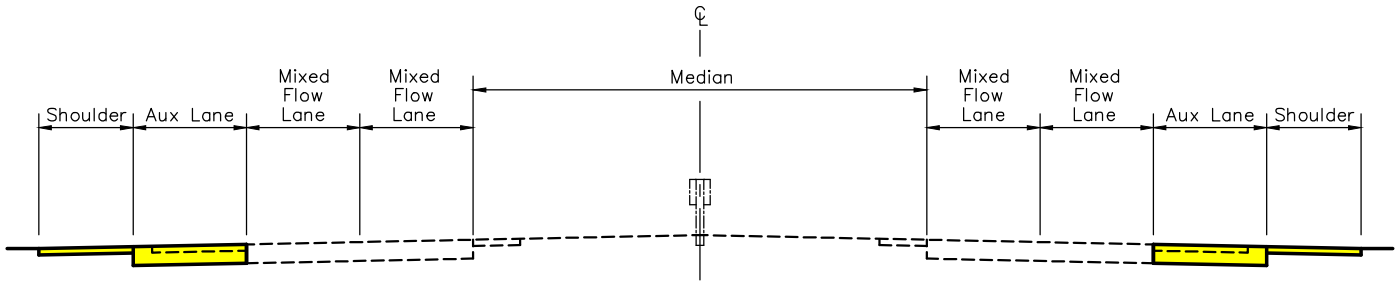
**TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE**

**TSM-13**

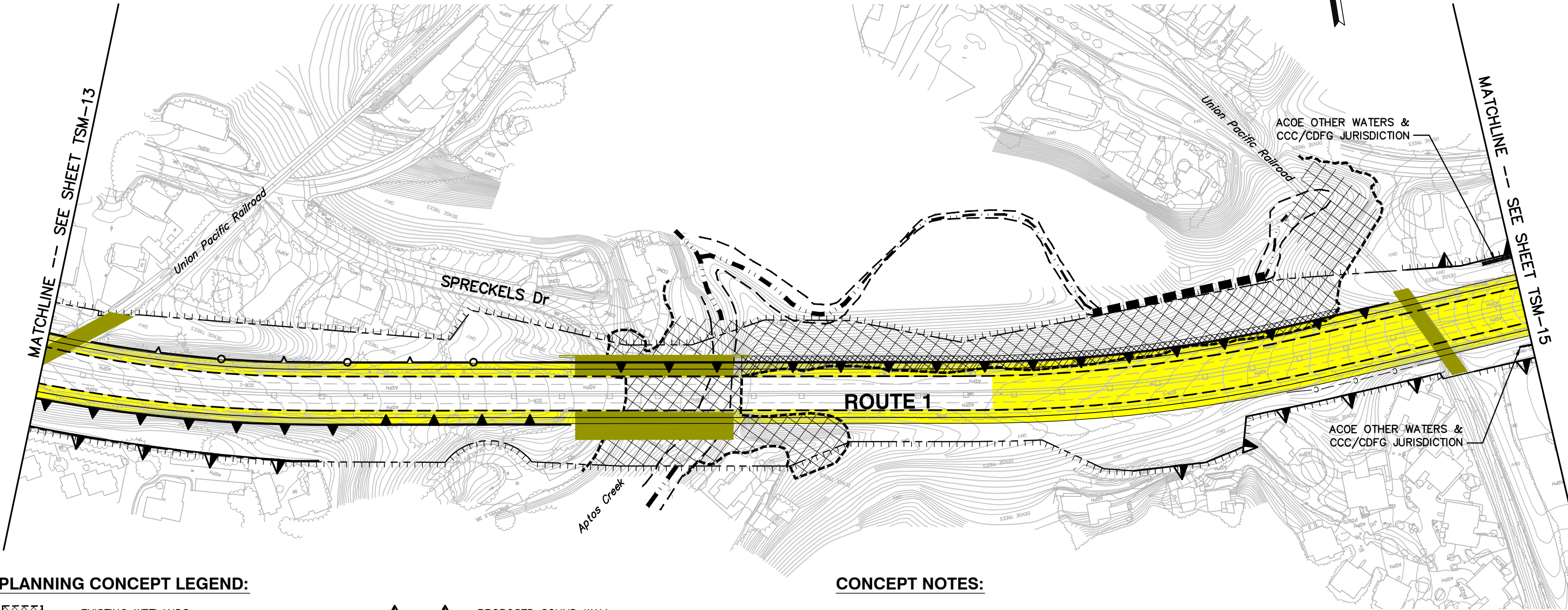




DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	14	20



TYPICAL SECTION  
NO SCALE



PLANNING CONCEPT LEGEND:

- |  |                          |  |                                       |
|--|--------------------------|--|---------------------------------------|
|  | EXISTING WETLANDS        |  | PROPOSED SOUND WALL                   |
|  | PROPOSED HIGHWAY PAVING  |  | PROPOSED RETAINING WALL               |
|  | PROPOSED RAMP PAVING     |  | PROPOSED SOUND WALL ON RETAINING WALL |
|  | PROPOSED LOCAL ROAD WORK |  | EXISTING HIGHWAY ACCESS CONTROL       |
|  | PROPOSED BIKE PATH       |  | PLANNING CONCEPT FOOTPRINT            |
|  | PROPOSED BRIDGE          |  | EXISTING CULVERT                      |
|  |                          |  | ORDINARY HIGH WATER MARK (OHWM)       |
|  |                          |  | PAVEMENT REMOVAL                      |

CONCEPT NOTES:

THE TSM ALTERNATIVE CONCEPT DESIGN IS A PLANNING LEVEL DRAWING WITHOUT THE DETAIL AND PRECISION REQUIRED FOR PROJECT-LEVEL DECISIONS AND ACTIONS.

INTERCHANGE CONCEPTS ARE PARTICULARLY SUBJECT TO CHANGE BASED ON CURRENT DESIGN STANDARDS AND FIELD CONDITIONS WHEN FUNDING IS IDENTIFIED TO ADVANCE THE PROJECT DEVELOPMENT PROCESS. UPDATED ENGINEERING DRAWINGS AND ENVIRONMENTAL ANALYSIS WILL BE MADE AVAILABLE TO THE PUBLIC IN THE FUTURE AS THE PROJECT OR INCREMENTAL PHASES ADVANCE TOWARD CONSTRUCTION.

TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE

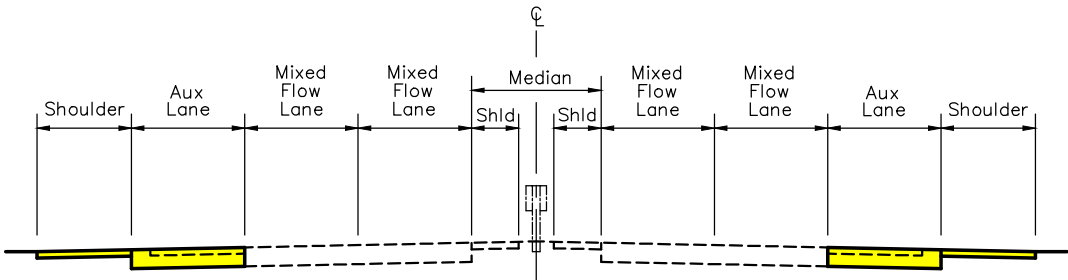


DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	15	20

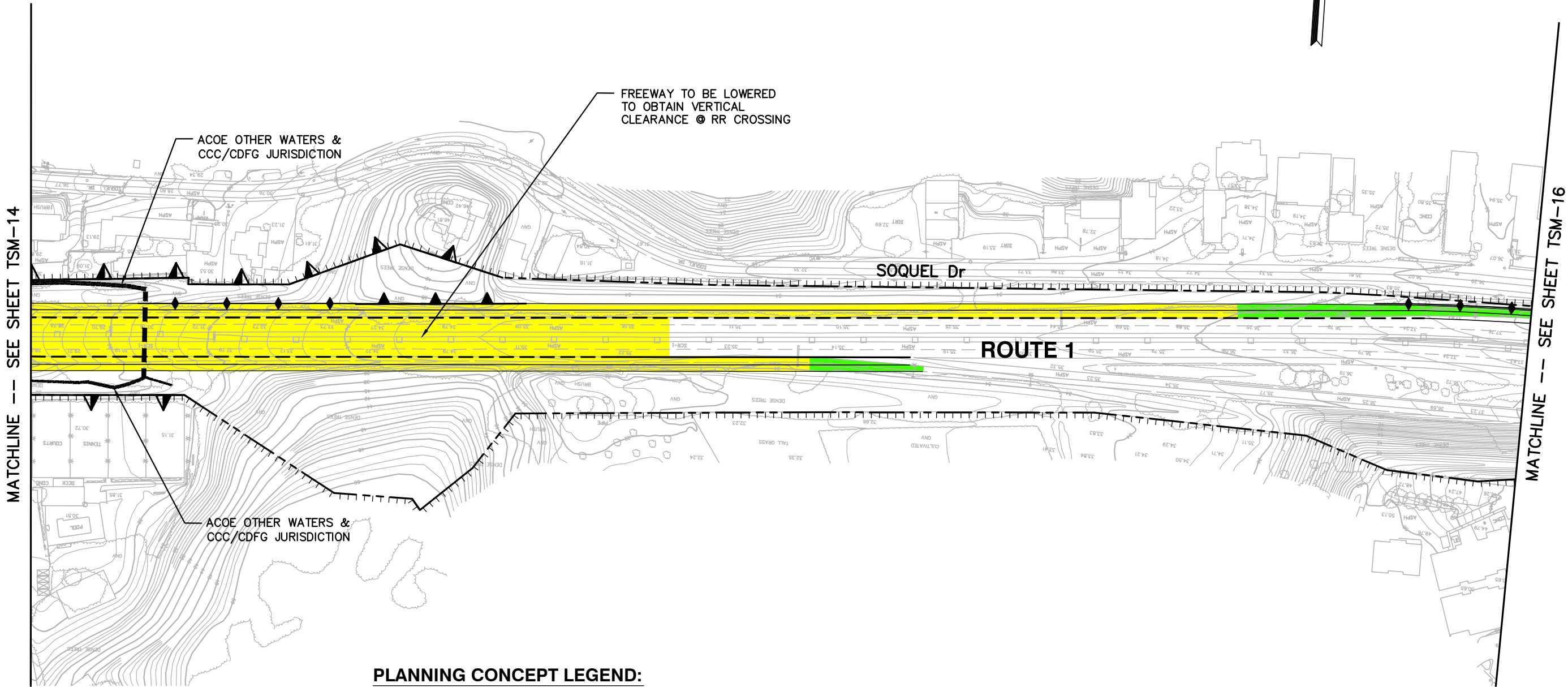
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**TYPICAL SECTION**  
NO SCALE



**PLANNING CONCEPT LEGEND:**

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE

- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL


**TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE**








DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	16	20


PLANNING CONCEPT LEGEND:


- 


EXISTING WETLANDS
- 


PROPOSED HIGHWAY PAVING
- 


PROPOSED RAMP PAVING
- 


PROPOSED LOCAL ROAD WORK
- 


PROPOSED BIKE PATH
- 


PROPOSED BRIDGE
- 

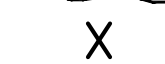
PROPOSED SOUND WALL
- 

PROPOSED RETAINING WALL
- 

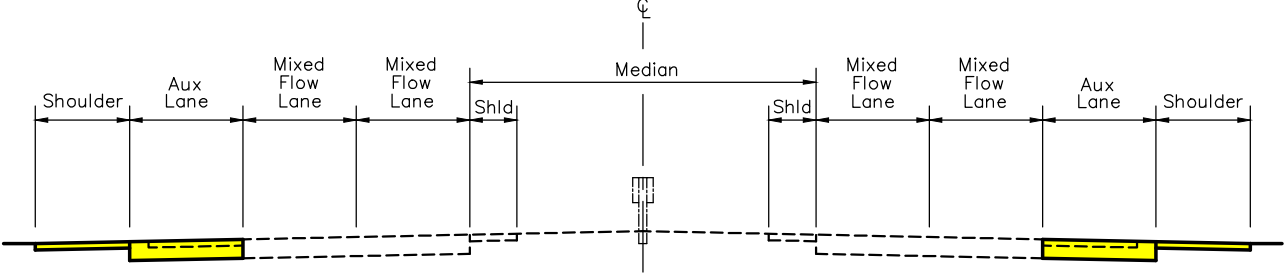
PROPOSED SOUND WALL ON RETAINING WALL
- 

EXISTING HIGHWAY ACCESS CONTROL
- 

PLANNING CONCEPT FOOTPRINT
- 

EXISTING CULVERT
- 

ORDINARY HIGH WATER MARK (OHWM)  
PAVEMENT REMOVAL

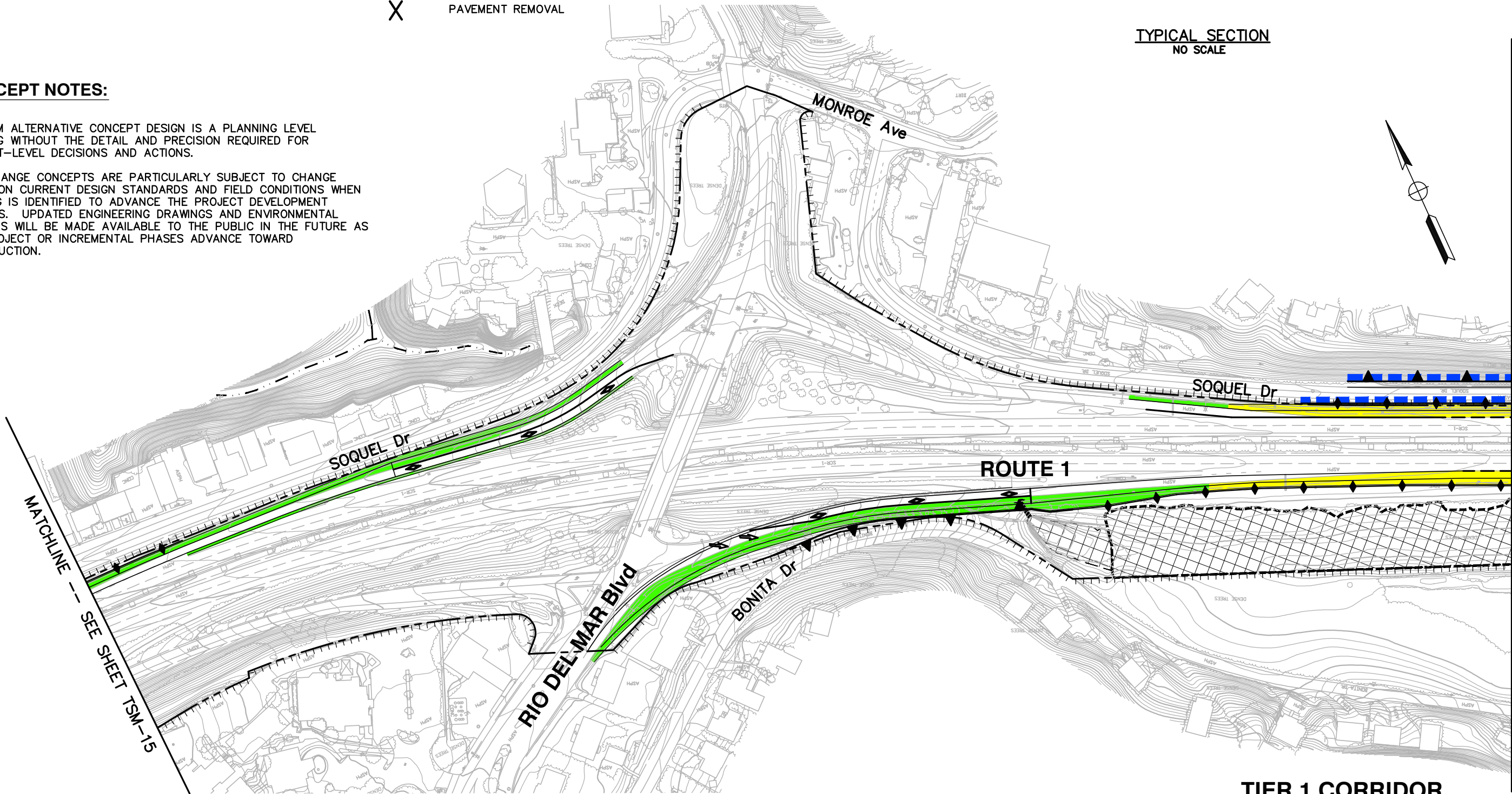


TYPICAL SECTION  
NO SCALE

CONCEPT NOTES:

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TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE

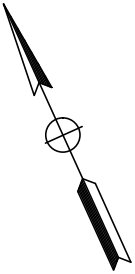
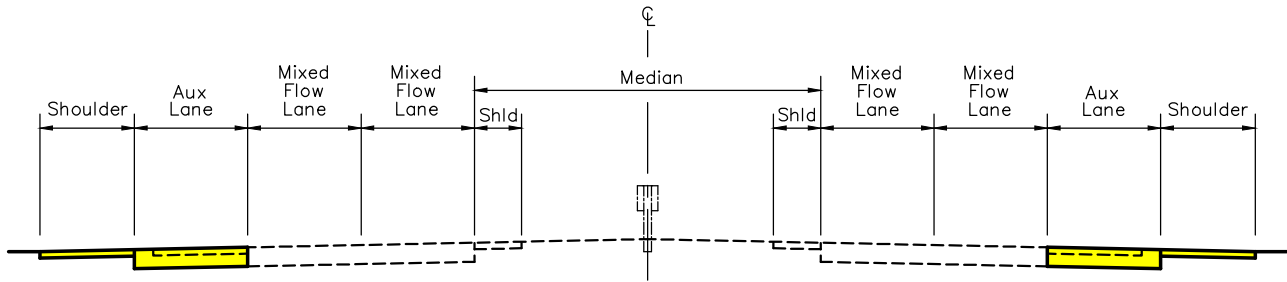
MATCHLINE -- SEE SHEET TSM-17

MATCHLINE -- SEE SHEET TSM-15



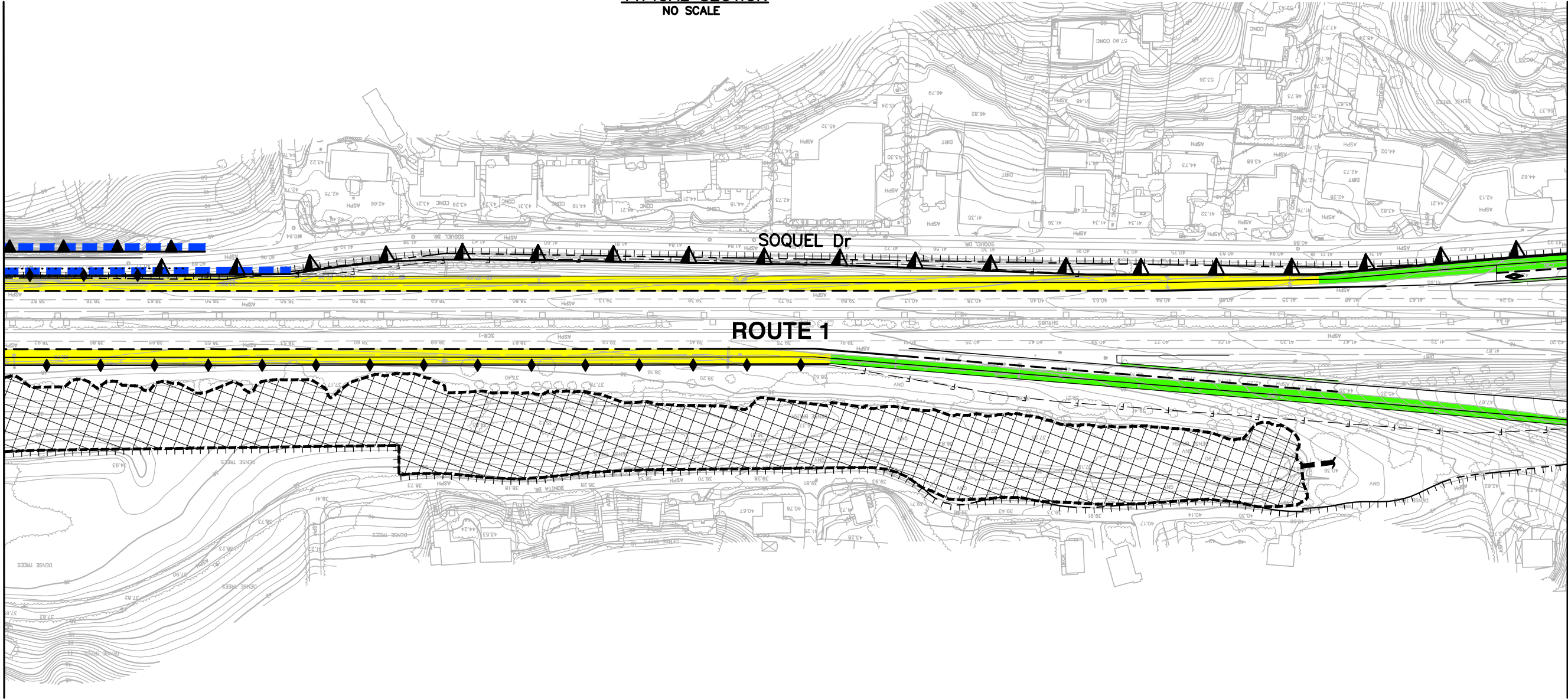


DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	17	20



TYPICAL SECTION  
NO SCALE

MATCHLINE -- SEE SHEET TSM-16



MATCHLINE -- SEE SHEET TSM-18

PLANNING CONCEPT LEGEND:

- |  |                          |  |                                       |
|--|--------------------------|--|---------------------------------------|
|  | EXISTING WETLANDS        |  | PROPOSED SOUND WALL                   |
|  | PROPOSED HIGHWAY PAVING  |  | PROPOSED RETAINING WALL               |
|  | PROPOSED RAMP PAVING     |  | PROPOSED SOUND WALL ON RETAINING WALL |
|  | PROPOSED LOCAL ROAD WORK |  | EXISTING HIGHWAY ACCESS CONTROL       |
|  | PROPOSED BIKE PATH       |  | PLANNING CONCEPT FOOTPRINT            |
|  | PROPOSED BRIDGE          |  | EXISTING CULVERT                      |
|  |                          |  | ORDINARY HIGH WATER MARK (OHWM)       |
|  |                          |  | PAVEMENT REMOVAL                      |

CONCEPT NOTES:

THE TSM ALTERNATIVE CONCEPT DESIGN IS A PLANNING LEVEL DRAWING WITHOUT THE DETAIL AND PRECISION REQUIRED FOR PROJECT-LEVEL DECISIONS AND ACTIONS.

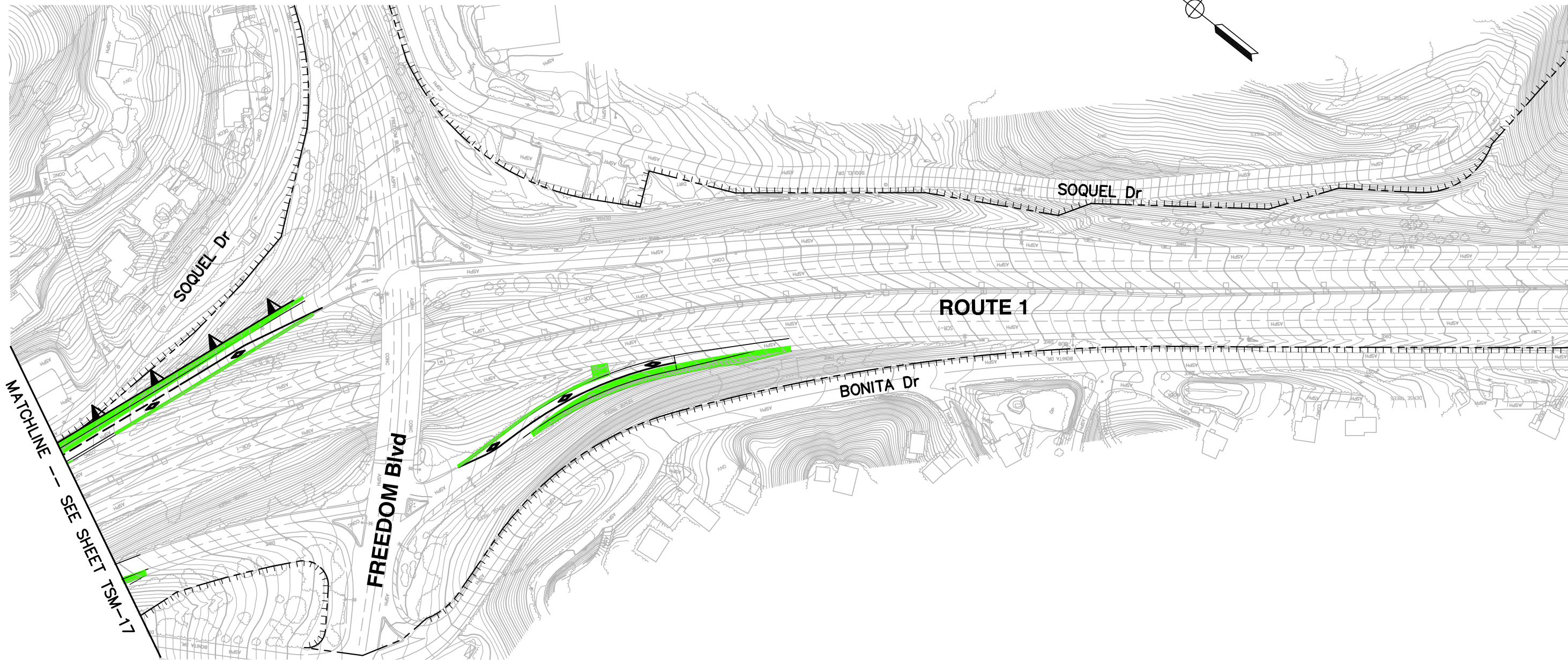
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TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE





DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	18	20



#### PLANNING CONCEPT LEGEND:

	EXISTING WETLANDS		PROPOSED SOUND WALL
	PROPOSED HIGHWAY PAVING		PROPOSED RETAINING WALL
	PROPOSED RAMP PAVING		PROPOSED SOUND WALL ON RETAINING WALL
	PROPOSED LOCAL ROAD WORK		EXISTING HIGHWAY ACCESS CONTROL
	PROPOSED BIKE PATH		PLANNING CONCEPT FOOTPRINT
	PROPOSED BRIDGE		EXISTING CULVERT
			ORDINARY HIGH WATER MARK (OHWM)
			PAVEMENT REMOVAL

#### CONCEPT NOTES:

THE TSM ALTERNATIVE CONCEPT DESIGN IS A PLANNING LEVEL DRAWING WITHOUT THE DETAIL AND PRECISION REQUIRED FOR PROJECT-LEVEL DECISIONS AND ACTIONS.

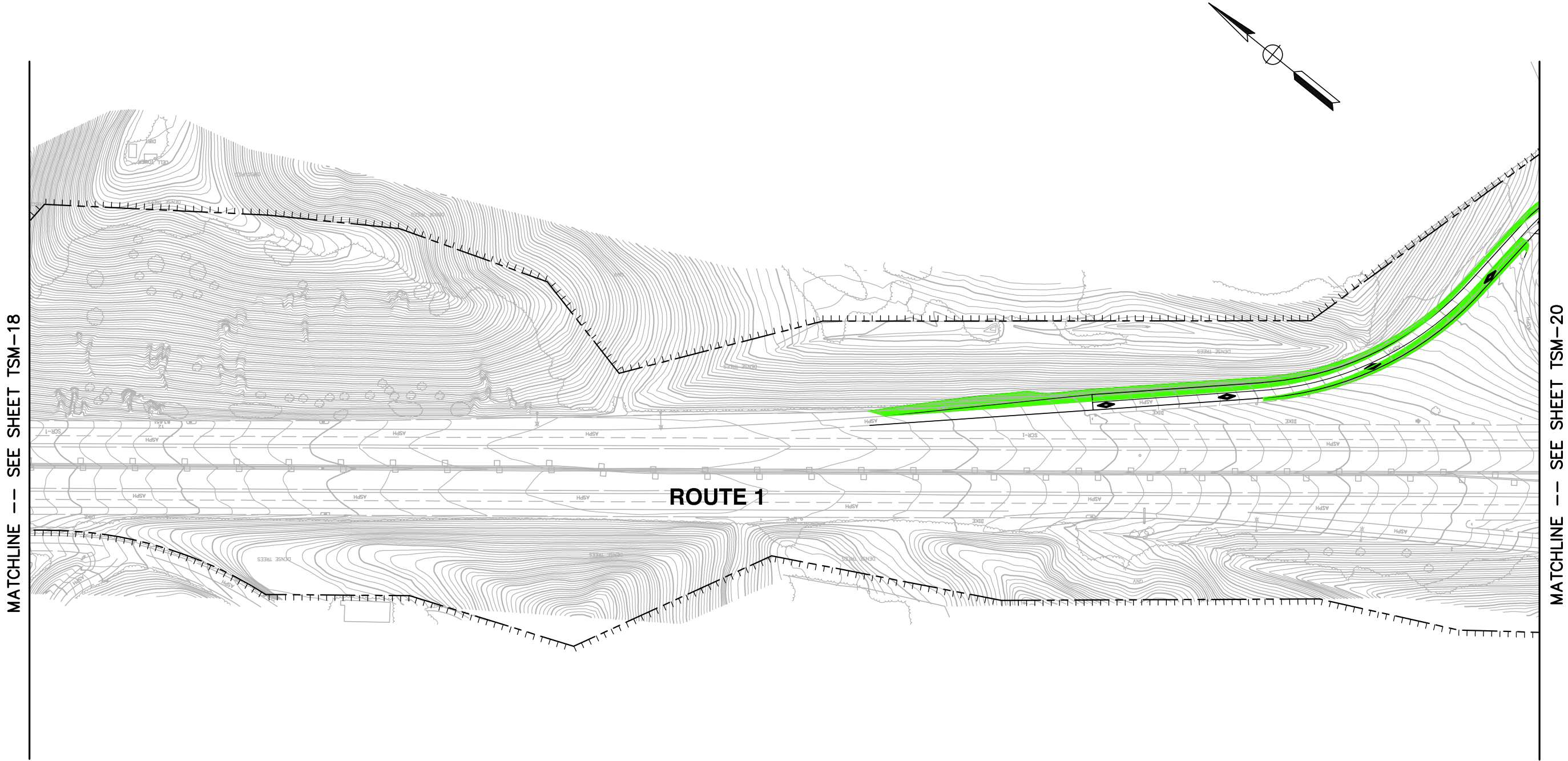
INTERCHANGE CONCEPTS ARE PARTICULARLY SUBJECT TO CHANGE BASED ON CURRENT DESIGN STANDARDS AND FIELD CONDITIONS WHEN FUNDING IS IDENTIFIED TO ADVANCE THE PROJECT DEVELOPMENT PROCESS. UPDATED ENGINEERING DRAWINGS AND ENVIRONMENTAL ANALYSIS WILL BE MADE AVAILABLE TO THE PUBLIC IN THE FUTURE AS THE PROJECT OR INCREMENTAL PHASES ADVANCE TOWARD CONSTRUCTION.

### TIER 1 CORRIDOR TRANSPORTATION SYSTEM MANAGEMENT ALTERNATIVE





DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	SCr	1	R 7.24/16.13	19	20



**PLANNING CONCEPT LEGEND:**

- EXISTING WETLANDS
- PROPOSED HIGHWAY PAVING
- PROPOSED RAMP PAVING
- PROPOSED LOCAL ROAD WORK
- PROPOSED BIKE PATH
- PROPOSED BRIDGE
- PROPOSED SOUND WALL
- PROPOSED RETAINING WALL
- PROPOSED SOUND WALL ON RETAINING WALL
- EXISTING HIGHWAY ACCESS CONTROL
- PLANNING CONCEPT FOOTPRINT
- EXISTING CULVERT
- ORDINARY HIGH WATER MARK (OHWM)
- PAVEMENT REMOVAL

**CONCEPT NOTES:**

THE TSM ALTERNATIVE CONCEPT DESIGN IS A PLANNING LEVEL DRAWING WITHOUT THE DETAIL AND PRECISION REQUIRED FOR PROJECT-LEVEL DECISIONS AND ACTIONS.

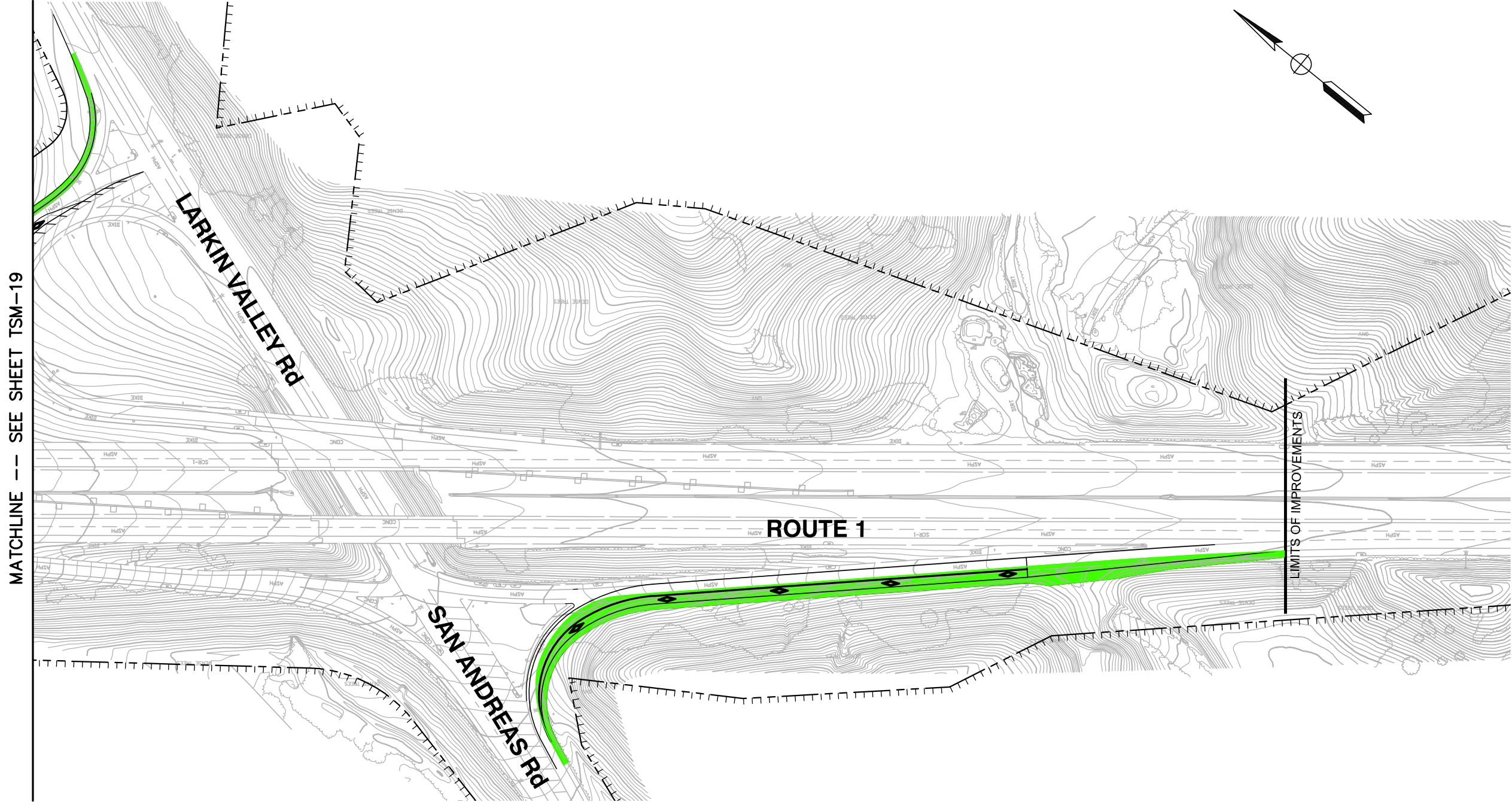
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**TIER 1 CORRIDOR  
TRANSPORTATION SYSTEM  
MANAGEMENT ALTERNATIVE**





DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	Scr	1	R 7.24/16.13	20	20



**PLANNING CONCEPT LEGEND:**

- |  |                          |  |                                       |
|--|--------------------------|--|---------------------------------------|
|  | EXISTING WETLANDS        |  | PROPOSED SOUND WALL                   |
|  | PROPOSED HIGHWAY PAVING  |  | PROPOSED RETAINING WALL               |
|  | PROPOSED RAMP PAVING     |  | PROPOSED SOUND WALL ON RETAINING WALL |
|  | PROPOSED LOCAL ROAD WORK |  | EXISTING HIGHWAY ACCESS CONTROL       |
|  | PROPOSED BIKE PATH       |  | PLANNING CONCEPT FOOTPRINT            |
|  | PROPOSED BRIDGE          |  | EXISTING CULVERT                      |
|  |                          |  | ORDINARY HIGH WATER MARK (OHWM)       |
|  |                          |  | PAVEMENT REMOVAL                      |

**CONCEPT NOTES:**

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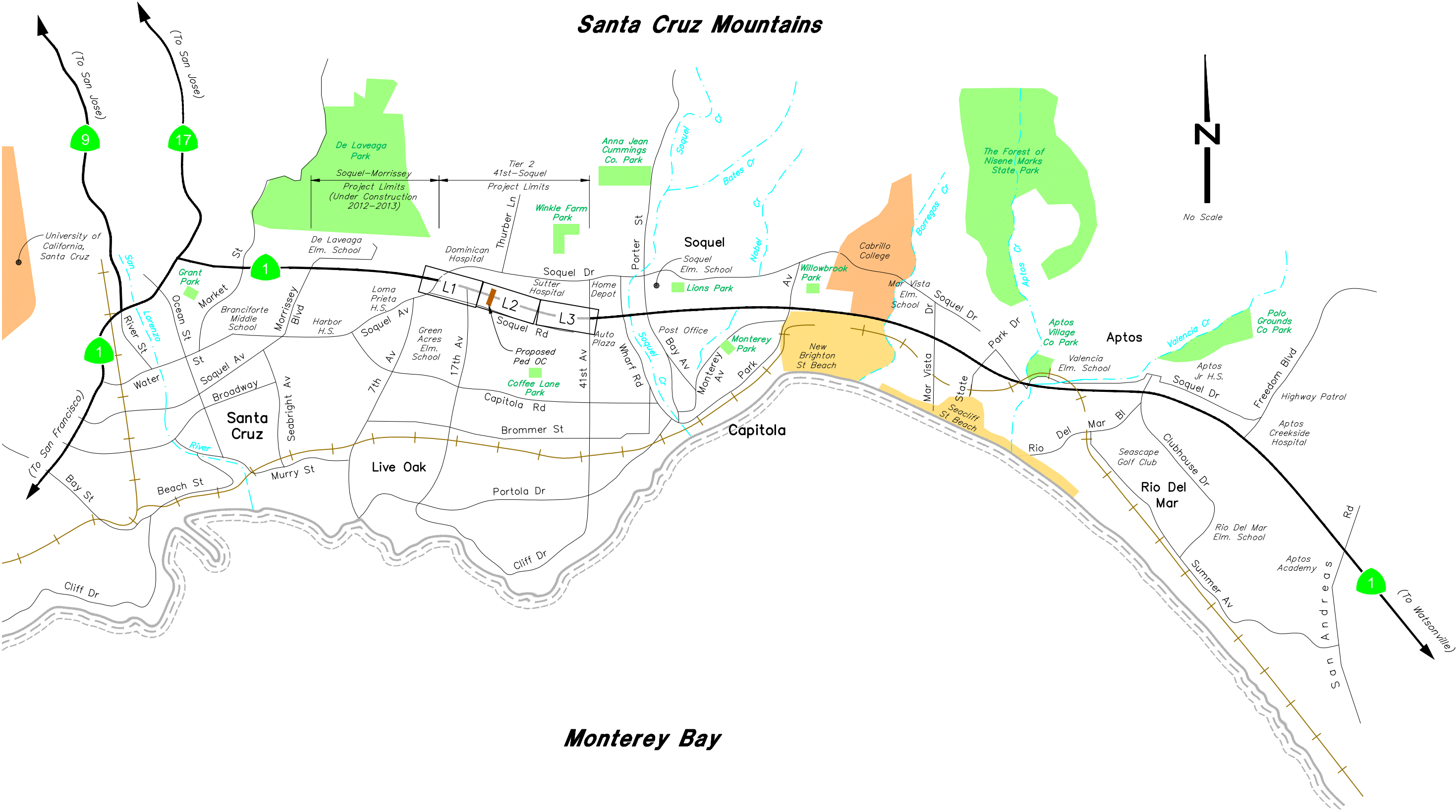


# **Appendix I**

## **Tier II Auxiliary Lane Alternative Plan Drawings**



**Santa Cruz Mountains**








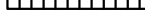






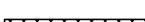
**KEYMAP  
TIER 2 CORRIDOR**







LEGEND & ABBREVIATIONS

-  WETLANDS RESOURCE AGENCY JURISDICTION (ACOE, CCC, CDFG)
-  PERIMETER OF WETLANDS RESOURCE AGENCY JURISDICTION
-  RETAINING WALL
-  CONCRETE BARRIER
-  EXISTING ACCESS CONTROL
-  PROPOSED ACCESS CONTROL
-  LOCAL PROPERTY LINE
-  STORM CULVERT
-  DITCH FLOW LINE
-  EXISTING PAVEMENT TO BE REMOVED
-  NEW STRUCTURE
-  NEW PAVEMENT
-  PROPOSED STORM TREATMENT AREA
- ACOE

ARMY CORP OF ENGINEERS
- CB

CONCRETE BARRIER
- CCC

CALIFORNIA COASTAL COMMISSION
- CDFG

CALIFORNIA DEPARTMENT OF FISH & GAME
- DTBB

DOUBLE THRIE BEAM BARRIER
- ETW

EDGE OF TRAVELED WAY
- Med

MEDIAN
- OG

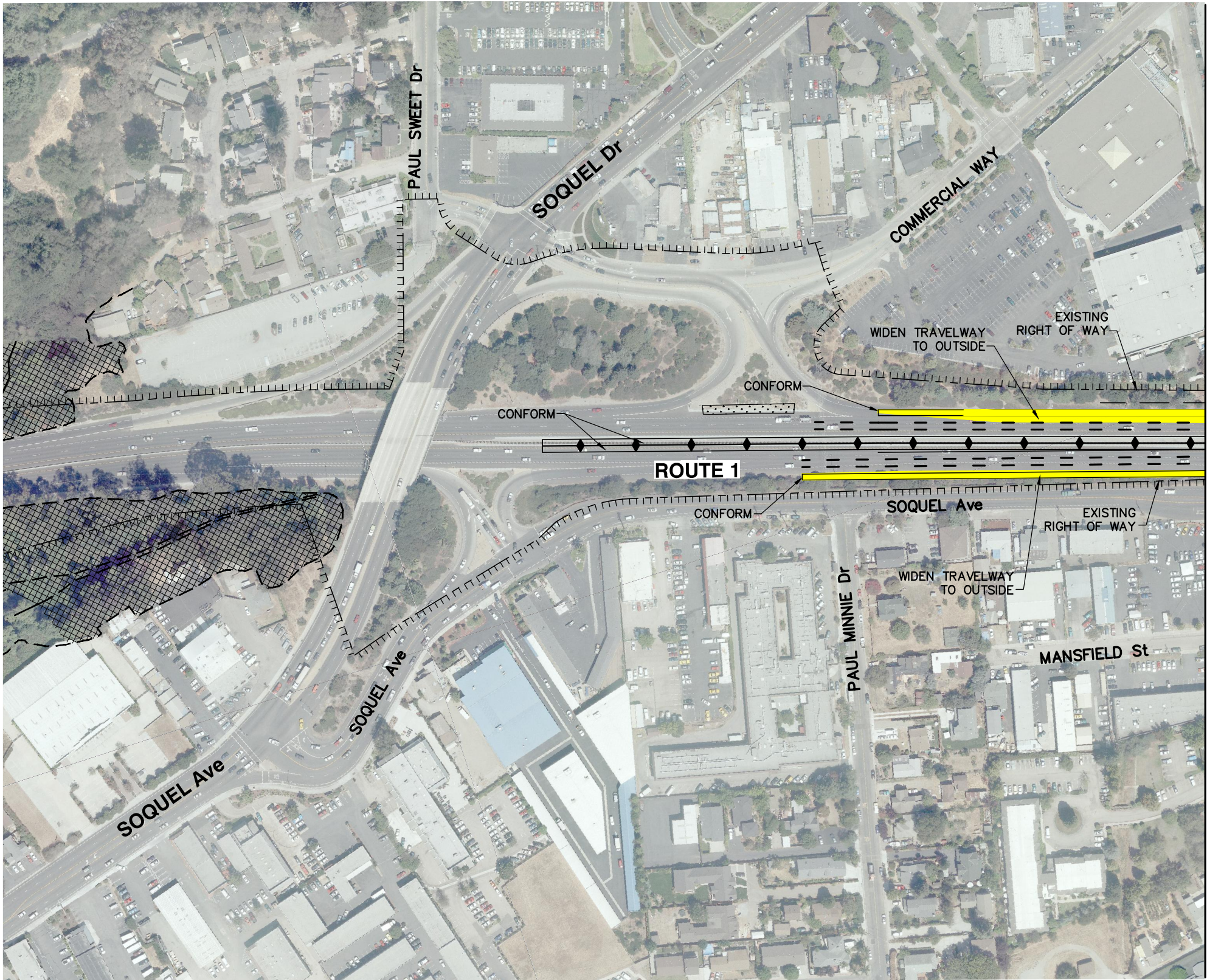
ORIGINAL GROUND
- RCP

REINFORCED CONCRETE PIPE
- RW 4

RETAINING WALL No.
- Shld

SHOULDER
- TBD

TO BE DETERMINED



MATCHLINE --- SEE SHEET T2-L2

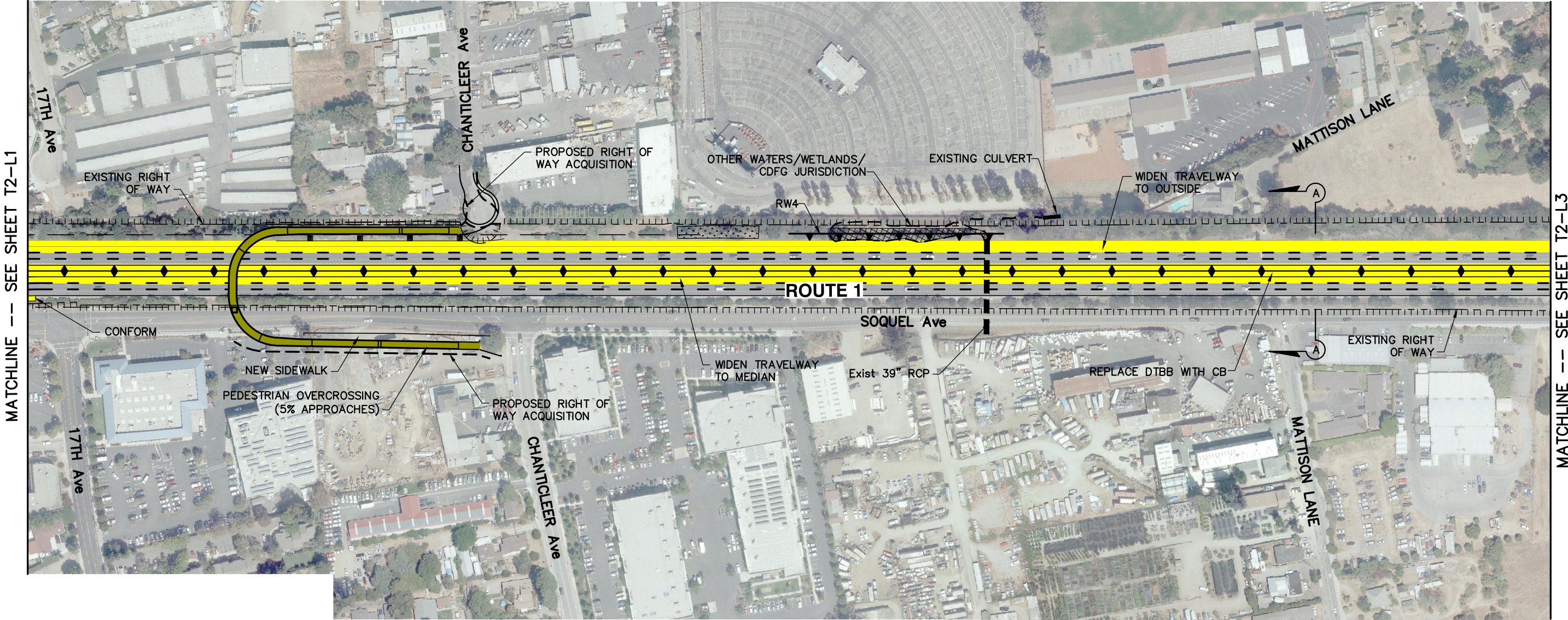
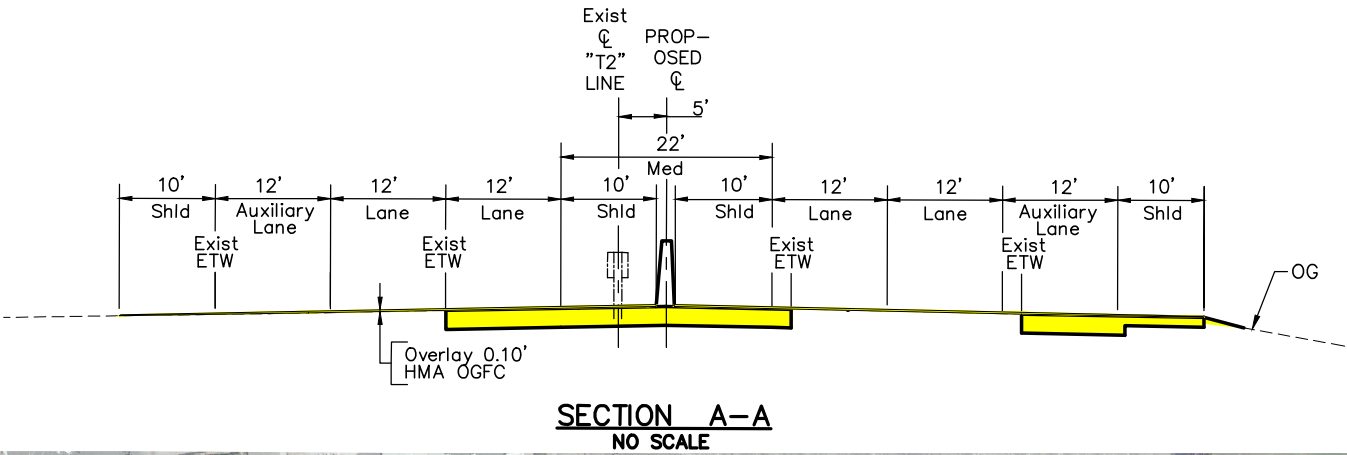
TIER 2  
AUXILIARY LANE ALTERNATIVE







DIST	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
05	SCr	1	13.5/14.9	2	3



**LEGEND & ABBREVIATIONS**

- WETLANDS RESOURCE AGENCY JURISDICTION (ACOE, CCC, CDFG)
- PERIMETER OF WETLANDS RESOURCE AGENCY JURISDICTION
- RETAINING WALL
- CONCRETE BARRIER
- EXISTING ACCESS CONTROL
- PROPOSED ACCESS CONTROL
- LOCAL PROPERTY LINE

- STORM CULVERT
- DITCH FLOW LINE
- EXISTING PAVEMENT TO BE REMOVED
- NEW STRUCTURE
- NEW PAVEMENT
- PROPOSED STORM TREATMENT AREA

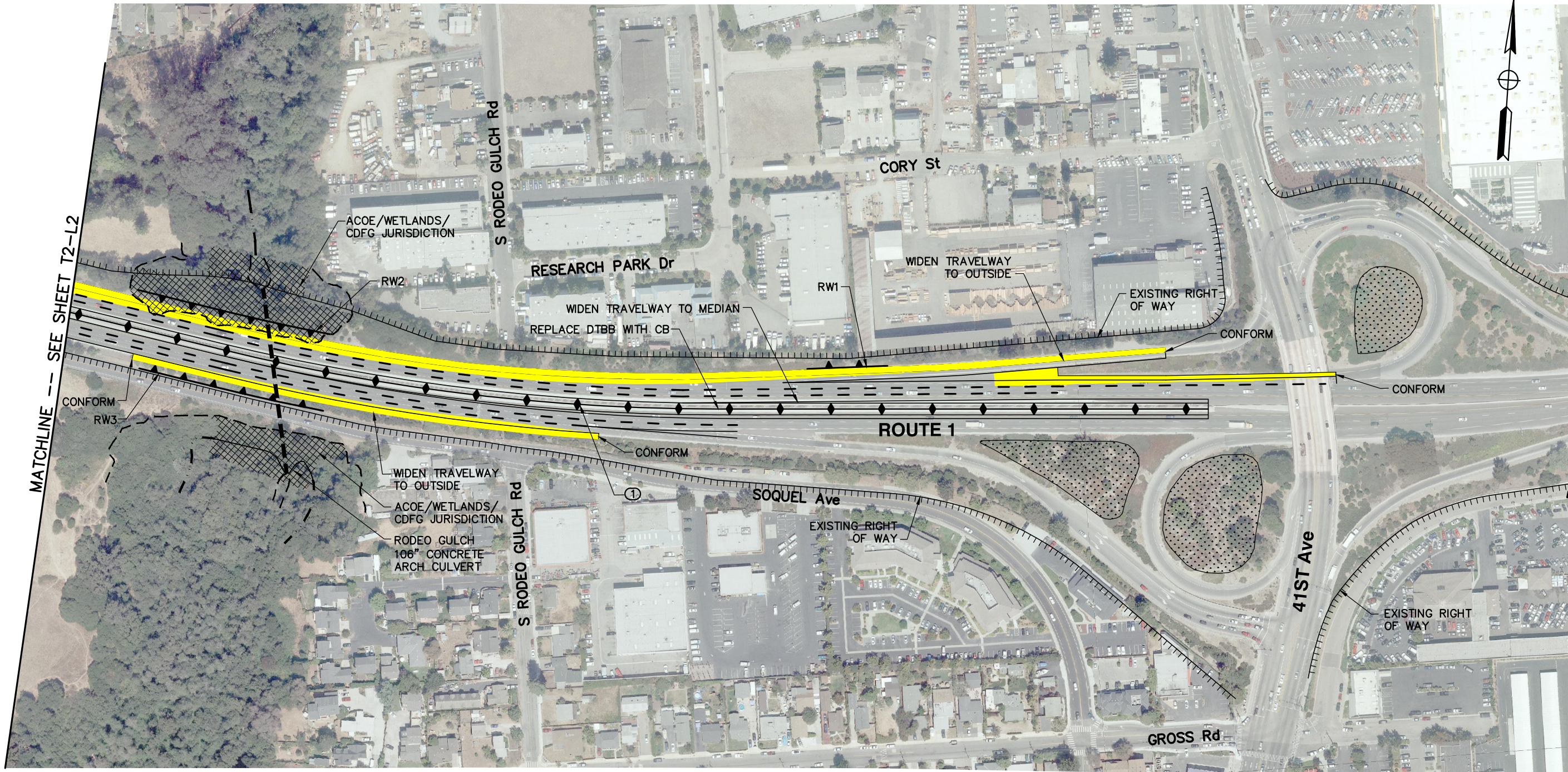
- ACOE ARMY CORP OF ENGINEERS
- CB CONCRETE BARRIER
- CCC CALIFORNIA COASTAL COMMISSION
- CDFG CALIFORNIA DEPARTMENT OF FISH & GAME
- DTBB DOUBLE THRIE BEAM BARRIER
- ETW EDGE OF TRAVELED WAY
- Med MEDIAN
- OG ORIGINAL GROUND
- RCP REINFORCED CONCRETE PIPE
- RW 4 RETAINING WALL No.
- Shld SHOULDER
- TBD TO BE DETERMINED

**TIER 2  
AUXILIARY LANE ALTERNATIVE**









**LEGEND & ABBREVIATIONS**

- WETLANDS RESOURCE AGENCY JURISDICTION (ACOE, CCC, CDFG)
- PERIMETER OF WETLANDS RESOURCE AGENCY JURISDICTION
- RETAINING WALL
- CONCRETE BARRIER
- EXISTING ACCESS CONTROL
- PROPOSED ACCESS CONTROL
- LOCAL PROPERTY LINE

- STORM CULVERT
- DITCH FLOW LINE
- EXISTING PAVEMENT TO BE REMOVED
- NEW STRUCTURE
- NEW PAVEMENT
- PROPOSED STORM TREATMENT AREA

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- DTBB DOUBLE THRIE BEAM BARRIER
- ETW EDGE OF TRAVELED WAY
- Med MEDIAN
- OG ORIGINAL GROUND
- RCP REINFORCED CONCRETE PIPE
- RW 4 RETAINING WALL No.
- Shld SHOULDER
- TBD TO BE DETERMINED

**TIER 2  
AUXILIARY LANE ALTERNATIVE**





## **Appendix J**

### **Agency Correspondence**





# Selected Elements by Scientific Name

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Query Criteria:** Quad is (Davenport (3712212) or Felton (3712211) or Laurel (3712118) or Loma Prieta (3712117) or Moss Landing (3612177) or Mt. Madonna (3712116) or Prunedale (3612176) or Santa Cruz (3612281) or Soquel (3612188) or Watsonville East (3612186) or Watsonville West (3612187))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Accipiter cooperii</i></b> Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
<b><i>Adela oplerella</i></b> Opler's longhorn moth	IILEE0G040	None	None	G2	S2	
<b><i>Agelaius tricolor</i></b> tricolored blackbird	ABPBXB0020	None	Endangered	G2G3	S1S2	SSC
<b><i>Agrostis blasdalei</i></b> Blasdale's bent grass	PMPOA04060	None	None	G2	S2	1B.2
<b><i>Ambystoma californiense</i></b> California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	SSC
<b><i>Ambystoma macrodactylum croceum</i></b> Santa Cruz long-toed salamander	AAAAA01082	Endangered	Endangered	G5T1T2	S1S2	FP
<b><i>Amsinckia lunaris</i></b> bent-flowered fiddleneck	PDBOR01070	None	None	G2?	S2?	1B.2
<b><i>Anniella pulchra nigra</i></b> black legless lizard	ARACC01011	None	None	G3G4T2T3Q	S2	SSC
<b><i>Anniella pulchra pulchra</i></b> silvery legless lizard	ARACC01012	None	None	G3G4T3T4Q	S3	SSC
<b><i>Anomobryum julaceum</i></b> slender silver moss	NBMUS80010	None	None	G4G5	S2	4.2
<b><i>Antrozous pallidus</i></b> pallid bat	AMACC10010	None	None	G5	S3	SSC
<b><i>Arctostaphylos andersonii</i></b> Anderson's manzanita	PDERI04030	None	None	G2	S2	1B.2
<b><i>Arctostaphylos glutinosa</i></b> Schreiber's manzanita	PDERI040G0	None	None	G1	S1	1B.2
<b><i>Arctostaphylos hookeri ssp. hookeri</i></b> Hooker's manzanita	PDERI040J1	None	None	G3T2	S2	1B.2
<b><i>Arctostaphylos ohloneana</i></b> Ohlone manzanita	PDERI042Y0	None	None	G1	S1	1B.1
<b><i>Arctostaphylos pajaroensis</i></b> Pajaro manzanita	PDERI04100	None	None	G1	S1	1B.1
<b><i>Arctostaphylos silvicola</i></b> Bonny Doon manzanita	PDERI041F0	None	None	G1	S1	1B.2
<b><i>Ardea herodias</i></b> great blue heron	ABNGA04010	None	None	G5	S4	
<b><i>Arenaria paludicola</i></b> marsh sandwort	PDCAR040L0	Endangered	Endangered	G1	S1	1B.1



Selected Elements by Scientific Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Asio flammeus</i></b> short-eared owl	ABNSB13040	None	None	G5	S3	SSC
<b><i>Athene cunicularia</i></b> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<b><i>Calyptridium parryi</i> var. <i>hesseae</i></b> Santa Cruz Mountains pussypaws	PDPOR09052	None	None	G3G4T2	S2	1B.1
<b><i>Campanula californica</i></b> swamp harebell	PDCAM02060	None	None	G3	S3	1B.2
<b><i>Carex comosa</i></b> bristly sedge	PMCYP032Y0	None	None	G5	S2	2B.1
<b><i>Carex saliniformis</i></b> deceiving sedge	PMCYP03BY0	None	None	G2	S2	1B.2
<b><i>Ceanothus ferrisiae</i></b> Coyote ceanothus	PDRHA041N0	Endangered	None	G2	S2	1B.1
<b><i>Central Dune Scrub</i></b> Central Dune Scrub	CTT21320CA	None	None	G2	S2.2	
<b><i>Central Maritime Chaparral</i></b> Central Maritime Chaparral	CTT37C20CA	None	None	G2	S2.2	
<b><i>Centromadia parryi</i> ssp. <i>congdonii</i></b> Congdon's tarplant	PDAST4R0P1	None	None	G3T2	S2	1B.1
<b><i>Charadrius alexandrinus nivosus</i></b> western snowy plover	ABNNB03031	Threatened	None	G3T3	S2	SSC
<b><i>Chorizanthe pungens</i> var. <i>hartwegiana</i></b> Ben Lomond spineflower	PDPGN040M1	Endangered	None	G2T1	S1	1B.1
<b><i>Chorizanthe pungens</i> var. <i>pungens</i></b> Monterey spineflower	PDPGN040M2	Threatened	None	G2T2	S2	1B.2
<b><i>Chorizanthe robusta</i> var. <i>hartwegii</i></b> Scotts Valley spineflower	PDPGN040Q1	Endangered	None	G2T1	S1	1B.1
<b><i>Chorizanthe robusta</i> var. <i>robusta</i></b> robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
<b><i>Cicindela hirticollis grvida</i></b> sandy beach tiger beetle	IICOL02101	None	None	G5T2	S1	
<b><i>Cicindela ohlone</i></b> Ohlone tiger beetle	IICOL026L0	Endangered	None	G1	S1	
<b><i>Clarkia concinna</i> ssp. <i>automixa</i></b> Santa Clara red ribbons	PDONA050A1	None	None	G5?T3	S3	4.3
<b><i>Coastal and Valley Freshwater Marsh</i></b> Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	G3	S2.1	
<b><i>Coastal Brackish Marsh</i></b> Coastal Brackish Marsh	CTT52200CA	None	None	G2	S2.1	
<b><i>Coelus globosus</i></b> globose dune beetle	IICOL4A010	None	None	G1G2	S1S2	





Selected Elements by Scientific Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Collinsia multicolor</i></b> San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
<b><i>Cordylanthus rigidus ssp. littoralis</i></b> seaside bird's-beak	PDSCR0J0P2	None	Endangered	G5T2	S2	1B.1
<b><i>Corynorhinus townsendii</i></b> Townsend's big-eared bat	AMACC08010	None	Candidate Threatened	G3G4	S2	SSC
<b><i>Cypseloides niger</i></b> black swift	ABNUA01010	None	None	G4	S2	SSC
<b><i>Dacryophyllum falcifolium</i></b> tear drop moss	NBMUS8Z010	None	None	G1	S1	1B.3
<b><i>Danaus plexippus pop. 1</i></b> monarch - California overwintering population	IILEPP2012	None	None	G4T2T3	S2S3	
<b><i>Dipodomys venustus venustus</i></b> Santa Cruz kangaroo rat	AMAFD03042	None	None	G4T1	S1	
<b><i>Dudleya abramsii ssp. setchellii</i></b> Santa Clara Valley dudleya	PDCRA040Z0	Endangered	None	G4T2	S2	1B.1
<b><i>Elanus leucurus</i></b> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<b><i>Emys marmorata</i></b> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<b><i>Ericameria fasciculata</i></b> Eastwood's goldenbush	PDAST3L080	None	None	G2	S2	1B.1
<b><i>Eriogonum nudum var. decurrens</i></b> Ben Lomond buckwheat	PDPGN08492	None	None	G5T1	S1	1B.1
<b><i>Eryngium aristulatum var. hooveri</i></b> Hoover's button-celery	PDAP10Z043	None	None	G5T1	S1	1B.1
<b><i>Erysimum ammophilum</i></b> sand-loving wallflower	PDBRA16010	None	None	G2	S2	1B.2
<b><i>Erysimum teretifolium</i></b> Santa Cruz wallflower	PDBRA160N0	Endangered	Endangered	G2	S2	1B.1
<b><i>Eucyclogobius newberryi</i></b> tidewater goby	AFCQN04010	Endangered	None	G3	S2S3	SSC
<b><i>Euphilotes enoptes smithi</i></b> Smith's blue butterfly	IILEPG2026	Endangered	None	G5T1T2	S1S2	
<b><i>Euphydryas editha bayensis</i></b> Bay checkerspot butterfly	IILEPK4055	Threatened	None	G5T1	S1	
<b><i>Fissidens pauperculus</i></b> minute pocket moss	NBMUS2W0U0	None	None	G3?	S1	1B.2
<b><i>Fissilicreagris imperialis</i></b> Empire Cave pseudoscorpion	ILARAE5010	None	None	G1	S1	
<b><i>Fritillaria liliacea</i></b> fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2



Selected Elements by Scientific Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Geothlypis trichas sinuosa</i></b> saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
<b><i>Gilia tenuiflora ssp. arenaria</i></b> Monterey gilia	PDPLM041P2	Endangered	Threatened	G3G4T2	S2	1B.2
<b><i>Hesperocyparis abramsiana var. abramsiana</i></b> Santa Cruz cypress	PGCUP04081	Endangered	Endangered	G1T1	S1	1B.2
<b><i>Hoita strobilina</i></b> Loma Prieta hoita	PDFAB5Z030	None	None	G2	S2	1B.1
<b><i>Holocarpa macradenia</i></b> Santa Cruz tarplant	PDAST4X020	Threatened	Endangered	G1	S1	1B.1
<b><i>Horkelia cuneata var. sericea</i></b> Kellogg's horkelia	PDROS0W043	None	None	G4T2	S2?	1B.1
<b><i>Horkelia marinensis</i></b> Point Reyes horkelia	PDROS0W0B0	None	None	G2	S2	1B.2
<b><i>Lasiurus cinereus</i></b> hoary bat	AMACC05030	None	None	G5	S4	
<b><i>Lessingia micradenia var. glabrata</i></b> smooth lessingia	PDAST5S062	None	None	G2T2	S2	1B.2
<b><i>Linderiella occidentalis</i></b> California linderiella	ICBRA06010	None	None	G2G3	S2S3	
<b><i>Lytta moesta</i></b> moestan blister beetle	IICOL4C020	None	None	G2	S2	
<b><i>Malacothamnus arcuatus</i></b> arcuate bush-mallow	PDMAL0Q0E0	None	None	G1Q	S1	1B.2
<b><i>Malacothamnus hallii</i></b> Hall's bush-mallow	PDMAL0Q0F0	None	None	G2Q	S2	1B.2
<b><i>Margaritifera falcata</i></b> western pearlshell	IMBIV27020	None	None	G4G5	S1S2	
<b><i>Maritime Coast Range Ponderosa Pine Forest</i></b> Maritime Coast Range Ponderosa Pine Forest	CTT84132CA	None	None	G1	S1.1	
<b><i>Meta dolloff</i></b> Dolloff Cave spider	ILARA17010	None	None	G1	S1	
<b><i>Microseris paludosa</i></b> marsh microseris	PDAST6E0D0	None	None	G2	S2	1B.2
<b><i>Mielichhoferia elongata</i></b> elongate copper moss	NBMUS4Q022	None	None	G4	S2	2B.2
<b><i>Monardella sinuata ssp. nigrescens</i></b> northern curly-leaved monardella	PDLAM18162	None	None	G3T2	S2	1B.2
<b><i>Monolopia gracilens</i></b> woodland woollythreads	PDAST6G010	None	None	G2G3	S2S3	1B.2
<b><i>Monterey Pine Forest</i></b> Monterey Pine Forest	CTT83130CA	None	None	G1	S1.1	



# Selected Elements by Scientific Name

## California Department of Fish and Wildlife

### California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Neochthonius imperialis</i></b> Empire Cave pseudoscorpion	ILARAD1010	None	None	G1	S1	
<b><i>Neotoma fuscipes annectens</i></b> San Francisco dusky-footed woodrat	AMAFF08082	None	None	G5T2T3	S2S3	SSC
<b><i>North Central Coast Drainage Sacramento Sucker/Roach River</i></b> North Central Coast Drainage Sacramento Sucker/Roach River	CARA2623CA	None	None	GNR	SNR	
<b><i>North Central Coast Short-Run Coho Stream</i></b> North Central Coast Short-Run Coho Stream	CARA2632CA	None	None	GNR	SNR	
<b><i>Northern Coastal Salt Marsh</i></b> Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
<b><i>Northern Interior Cypress Forest</i></b> Northern Interior Cypress Forest	CTT83220CA	None	None	G2	S2.2	
<b><i>Northern Maritime Chaparral</i></b> Northern Maritime Chaparral	CTT37C10CA	None	None	G1	S1.2	
<b><i>Oncorhynchus kisutch</i></b> coho salmon - central California coast ESU	AFCHA02034	Endangered	Endangered	G4	S2?	
<b><i>Oncorhynchus mykiss irideus</i></b> steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T2T3Q	S2S3	
<b><i>Oncorhynchus mykiss irideus</i></b> steelhead - south/central California coast DPS	AFCHA0209H	Threatened	None	G5T2Q	S2	SSC
<b><i>Pandion haliaetus</i></b> osprey	ABNKC01010	None	None	G5	S4	WL
<b><i>Pedicularis dudleyi</i></b> Dudley's lousewort	PDSCR1K0D0	None	Rare	G2	S2	1B.2
<b><i>Penstemon rattanii</i> var. <i>kleei</i></b> Santa Cruz Mountains beardtongue	PDSCR1L5B1	None	None	G4T2	S2	1B.2
<b><i>Pentachaeta bellidiflora</i></b> white-rayed pentachaeta	PDAST6X030	Endangered	Endangered	G1	S1	1B.1
<b><i>Philanthus nasalis</i></b> Antioch specid wasp	IIHYM20010	None	None	G1	S1	
<b><i>Pinus radiata</i></b> Monterey pine	PGPIN040V0	None	None	G1	S1	1B.1
<b><i>Piperia candida</i></b> white-flowered rein orchid	PMORC1X050	None	None	G3?	S2	1B.2
<b><i>Piperia yadonii</i></b> Yadon's rein orchid	PMORC1X070	Endangered	None	G2	S2	1B.1
<b><i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i></b> Choris' popcornflower	PDBOR0V061	None	None	G3T2Q	S2	1B.2
<b><i>Plagiobothrys diffusus</i></b> San Francisco popcornflower	PDBOR0V080	None	Endangered	G1Q	S1	1B.1
<b><i>Polygonum hickmanii</i></b> Scotts Valley polygonum	PDPGN0L310	Endangered	Endangered	G1	S1	1B.1



Selected Elements by Scientific Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Polyphylla barbata</i></b> Mount Hermon (=barbate) June beetle	IICOL68030	Endangered	None	G1	S1	
<b><i>Rallus longirostris obsoletus</i></b> California clapper rail	ABNME05016	Endangered	Endangered	G5T1	S1	FP
<b><i>Rana boylei</i></b> foothill yellow-legged frog	AAABH01050	None	None	G3	S3	SSC
<b><i>Rana draytonii</i></b> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<b><i>Reithrodontomys megalotis distichlis</i></b> Salinas harvest mouse	AMAFF02032	None	None	G5T1	S1	
<b><i>Riparia riparia</i></b> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<b><i>Rosa pinetorum</i></b> pine rose	PDROS1J0W0	None	None	G2Q	S2	1B.2
<b><i>Senecio aphanactis</i></b> chaparral ragwort	PDAST8H060	None	None	G3?	S2	2B.2
<b><i>Sidalcea malachroides</i></b> maple-leaved checkerbloom	PDMAL110E0	None	None	G3	S3	4.2
<b><i>Spirinchus thaleichthys</i></b> longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	SSC
<b><i>Stebbinsoseris decipiens</i></b> Santa Cruz microseris	PDAST6E050	None	None	G2	S2	1B.2
<b><i>Streptanthus albidus ssp. peramoenus</i></b> most beautiful jewelflower	PDBRA2G012	None	None	G2T2	S2	1B.2
<b><i>Stygobromus mackenziei</i></b> Mackenzie's Cave amphipod	ICMAL05530	None	None	G1	S1	
<b><i>Taxidea taxus</i></b> American badger	AMAJF04010	None	None	G5	S3	SSC
<b><i>Thaleichthys pacificus</i></b> eulachon	AFCHB04010	Threatened	None	G5	S3	SSC
<b><i>Trifolium buckwestiorum</i></b> Santa Cruz clover	PDFAB402W0	None	None	G2	S2	1B.1
<b><i>Trifolium hydrophilum</i></b> saline clover	PDFAB400R5	None	None	G2	S2	1B.2
<b><i>Trimerotropis infantilis</i></b> Zayante band-winged grasshopper	IIORT36030	Endangered	None	G1	S1	
<b><i>Tryonia imitator</i></b> mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	

Record Count: 122

# My project

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## *IPaC Trust Resource Report*

Generated June 10, 2015 02:13 PM MDT





US Fish &amp; Wildlife Service

# IPaC Trust Resource Report



## Project Description

NAME

My project

PROJECT CODE

VTWNL-7UATZ-GY5BG-G5FPH-6KPESA

LOCATION

Santa Cruz County, California

DESCRIPTION

No description provided



## U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

**Ventura Fish And Wildlife Office**

2493 Portola Road, Suite B

Ventura, CA 93003-7726

(805) 644-1766

**Sacramento Fish And Wildlife Office**

Federal Building

2800 COTTAGE WAY, ROOM W-2605

Sacramento, CA 95825-1846

(916) 414-6600

# Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the [Endangered Species Program](#) and should be considered as part of an effect analysis for this project.

## Amphibians

### California Red-legged Frog *Rana draytonii*

**Threatened**

MANAGED BY

Ventura Fish And Wildlife Office

Sacramento Fish And Wildlife Office

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=D02D>

### California Tiger Salamander *Ambystoma californiense*

**Threatened**

MANAGED BY

Ventura Fish And Wildlife Office

Sacramento Fish And Wildlife Office

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=D01T>

### Santa Cruz Long-toed Salamander *Ambystoma macrodactylum croceum*

**Endangered**

MANAGED BY

Ventura Fish And Wildlife Office

CRITICAL HABITAT

**No critical habitat** has been designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=D000>

## Birds

### California Clapper Rail *Rallus longirostris obsoletus*

**Endangered****MANAGED BY**

Ventura Fish And Wildlife Office

**CRITICAL HABITAT****No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B04A>

### California Condor *Gymnogyps californianus*

**Endangered****MANAGED BY**

Ventura Fish And Wildlife Office

**CRITICAL HABITAT**There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B002>

### California Least Tern *Sterna antillarum browni*

**Endangered****MANAGED BY**

Ventura Fish And Wildlife Office

Sacramento Fish And Wildlife Office

**CRITICAL HABITAT****No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B03X>

### Least Bell's Vireo *Vireo bellii pusillus*

**Endangered****MANAGED BY**

Ventura Fish And Wildlife Office

**CRITICAL HABITAT**There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B067>

### Marbled Murrelet *Brachyramphus marmoratus*

**Threatened****MANAGED BY**

Ventura Fish And Wildlife Office

Sacramento Fish And Wildlife Office

**CRITICAL HABITAT**There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B08C>

### Southwestern Willow Flycatcher *Empidonax traillii extimus*

**Endangered****MANAGED BY**

Sacramento Fish And Wildlife Office

Ventura Fish And Wildlife Office

**CRITICAL HABITAT**There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B094>

**Western Snowy Plover** *Charadrius alexandrinus nivosus***Threatened**

## MANAGED BY

Ventura Fish And Wildlife Office

## CRITICAL HABITAT

There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B07C>

## Conifers and Cycads

**Santa Cruz Cypress** *Cupressus abramsiana***Endangered**

## MANAGED BY

Sacramento Fish And Wildlife Office

Ventura Fish And Wildlife Office

## CRITICAL HABITAT

**No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=R005>

## Fishes

**Delta Smelt** *Hypomesus transpacificus***Threatened**

## MANAGED BY

Sacramento Fish And Wildlife Office

## CRITICAL HABITAT

There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=E070>**Steelhead** *Oncorhynchus (=Salmo) mykiss***Threatened**

## MANAGED BY

Sacramento Fish And Wildlife Office

## CRITICAL HABITAT

There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=E08D>**Tidewater Goby** *Eucyclogobius newberryi***Endangered**

## MANAGED BY

Ventura Fish And Wildlife Office

Sacramento Fish And Wildlife Office

## CRITICAL HABITAT

There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=E071>



## Flowering Plants

### **Ben Lomond Spineflower** *Chorizanthe pungens* var. *hartwegiana*

**Endangered****MANAGED BY**

Ventura Fish And Wildlife Office

**CRITICAL HABITAT****No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q30Y>

### **Ben Lomond Wallflower** *Erysimum teretifolium*

**Endangered****MANAGED BY**

Ventura Fish And Wildlife Office

**CRITICAL HABITAT****No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q29X>

### **Marsh Sandwort** *Arenaria paludicola*

**Endangered****MANAGED BY**

Ventura Fish And Wildlife Office

**CRITICAL HABITAT****No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q25H>

### **Menzies' Wallflower** *Erysimum menziesii*

**Endangered****MANAGED BY**

Sacramento Fish And Wildlife Office

Ventura Fish And Wildlife Office

**CRITICAL HABITAT****No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q29W>

### **Monterey Gilia** *Gilia tenuiflora* ssp. *arenaria*

**Endangered****MANAGED BY**

Ventura Fish And Wildlife Office

**CRITICAL HABITAT****No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q2AJ>

### **Monterey Spineflower** *Chorizanthe pungens* var. *pungens*

**Threatened****MANAGED BY**

Ventura Fish And Wildlife Office

**CRITICAL HABITAT**There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q271>



**San Mateo Woolly Sunflower** *Eriophyllum latilobum***Endangered**

## MANAGED BY

Sacramento Fish And Wildlife Office

## CRITICAL HABITAT

**No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q2TK>**Santa Cruz Tarplant** *Holocarpha macradenia***Threatened**

## MANAGED BY

Ventura Fish And Wildlife Office

Sacramento Fish And Wildlife Office

## CRITICAL HABITAT

There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q0ZL>**Scotts Valley Polygonum** *Polygonum hickmanii***Endangered**

## MANAGED BY

Ventura Fish And Wildlife Office

## CRITICAL HABITAT

There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q3HV>**Scotts Valley Spineflower** *Chorizanthe robusta* var. *hartwegii***Endangered**

## MANAGED BY

Sacramento Fish And Wildlife Office

Ventura Fish And Wildlife Office

## CRITICAL HABITAT

There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q3IB>**White-rayed Pentachaeta** *Pentachaeta bellidiflora***Endangered**

## MANAGED BY

Ventura Fish And Wildlife Office

## CRITICAL HABITAT

**No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q2F3>

## Insects

### Bay Checkerspot Butterfly *Euphydryas editha bayensis*

**Threatened****MANAGED BY**

Sacramento Fish And Wildlife Office

**CRITICAL HABITAT**There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=I021>

### Mount Hermon June Beetle *Polyphylla barbata*

**Endangered****MANAGED BY**

Ventura Fish And Wildlife Office

**CRITICAL HABITAT****No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=I0OV>

### Ohlone Tiger Beetle *Cicindela ohlone*

**Endangered****MANAGED BY**

Ventura Fish And Wildlife Office

**CRITICAL HABITAT****No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=I0OW>

### San Bruno Elfin Butterfly *Callophrys mossii bayensis*

**Endangered****MANAGED BY**

Sacramento Fish And Wildlife Office

**CRITICAL HABITAT****No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=I00Q>

### Smith's Blue Butterfly *Euphilotes enoptes smithi*

**Endangered****MANAGED BY**

Ventura Fish And Wildlife Office

**CRITICAL HABITAT****No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=I00R>

### Zayante Band-winged Grasshopper *Trimerotropis infantilis*

**Endangered****MANAGED BY**

Ventura Fish And Wildlife Office

**CRITICAL HABITAT**There is **final** critical habitat designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=I0OY>

## Mammals

### San Joaquin Kit Fox *Vulpes macrotis mutica*

**Endangered**

MANAGED BY

Ventura Fish And Wildlife Office

CRITICAL HABITAT

**No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A006>

### Southern Sea Otter *Enhydra lutris nereis*

**Threatened**

MANAGED BY

Ventura Fish And Wildlife Office

CRITICAL HABITAT

**No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A0A7>

## Reptiles

### Blunt-nosed Leopard Lizard *Gambelia silus*

**Endangered**

MANAGED BY

Ventura Fish And Wildlife Office

CRITICAL HABITAT

**No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=C001>

### San Francisco Garter Snake *Thamnophis sirtalis tetrataenia*

**Endangered**

MANAGED BY

Sacramento Fish And Wildlife Office

Ventura Fish And Wildlife Office

CRITICAL HABITAT

**No critical habitat** has been designated for this species.<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=C002>

## Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

**California Red-legged Frog Critical Habitat** Final designated

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=D02D#crithab>

**Marbled Murrelet Critical Habitat** Final designated

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B08C#crithab>

**Monterey Spineflower Critical Habitat** Final designated

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q271#crithab>

**Robust Spineflower Critical Habitat** Final designated

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q3O7#crithab>

**Santa Cruz Tarplant Critical Habitat** Final designated

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q0ZL#crithab>

**Scotts Valley Polygonum Critical Habitat** Final designated

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q3HV#crithab>

**Scotts Valley Spineflower Critical Habitat** Final designated

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q3IB#crithab>

**Steelhead Critical Habitat** Final designated

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=E08D#crithab>

**Steelhead Critical Habitat** Final designated

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=E08D#crithab>

**Tidewater Goby Critical Habitat** Final designated

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=E071#crithab>

**Western Snowy Plover Critical Habitat** Final designated

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B07C#crithab>

**Zayante Band-winged Grasshopper Critical Habitat** Final designated

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=I0OY#crithab>



# Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

## **Allen's Hummingbird** *Selasphorus sasin*

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0LI>

**Bird of conservation concern**

## **Ashy Storm-petrel** *Oceanodroma homochroa*

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0AV>

**Bird of conservation concern**

## **Bald Eagle** *Haliaeetus leucocephalus*

Year-round

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008>

**Bird of conservation concern**

## **Bell's Sparrow** *Amphispiza belli*

Year-round

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HE>

**Bird of conservation concern**

## **Black Oystercatcher** *Haematopus bachmani*

Year-round

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0KJ>

**Bird of conservation concern**

## **Black Swift** *Cypseloides niger*

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FW>

**Bird of conservation concern**

## **Black-chinned Sparrow** *Spizella atrogularis*

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0IR>

**Bird of conservation concern**

## **Black-vented Shearwater** *Puffinus opisthomelas*

Season: Wintering

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0LF>

**Bird of conservation concern**

## **Burrowing Owl** *Athene cunicularia*

Year-round

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0NC>

**Bird of conservation concern**

## **California Spotted Owl** *Strix occidentalis occidentalis*

Year-round

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B08L>

**Bird of conservation concern**



<b>Cassin's Auklet</b> <i>Ptychoramphus aleuticus</i> Year-round <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FP">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FP</a>	Bird of conservation concern
<b>Common Yellowthroat</b> <i>Geothlypis trichas sinuosa</i> Season: Breeding <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B080">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B080</a>	Bird of conservation concern
<b>Costa's Hummingbird</b> <i>Calypte costae</i> Season: Breeding <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JE">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JE</a>	Bird of conservation concern
<b>Flammulated Owl</b> <i>Otus flammeolus</i> Season: Breeding <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0DK">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0DK</a>	Bird of conservation concern
<b>Fox Sparrow</b> <i>Passerella iliaca</i> Season: Wintering <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0NE">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0NE</a>	Bird of conservation concern
<b>Lawrence's Goldfinch</b> <i>Carduelis lawrencei</i> Season: Breeding <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0J8">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0J8</a>	Bird of conservation concern
<b>Least Bittern</b> <i>Ixobrychus exilis</i> Season: Breeding <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JW">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JW</a>	Bird of conservation concern
<b>Lesser Yellowlegs</b> <i>Tringa flavipes</i> Season: Wintering <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0MD">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0MD</a>	Bird of conservation concern
<b>Lewis's Woodpecker</b> <i>Melanerpes lewis</i> Season: Wintering <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HQ">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HQ</a>	Bird of conservation concern
<b>Loggerhead Shrike</b> <i>Lanius ludovicianus</i> Season: Wintering <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FY">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FY</a>	Bird of conservation concern
<b>Long-billed Curlew</b> <i>Numenius americanus</i> Season: Wintering <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06S">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06S</a>	Bird of conservation concern
<b>Marbled Godwit</b> <i>Limosa fedoa</i> Season: Wintering <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JL">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JL</a>	Bird of conservation concern
<b>Nuttall's Woodpecker</b> <i>Picoides nuttallii</i> Year-round <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HT">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HT</a>	Bird of conservation concern
<b>Oak Titmouse</b> <i>Baeolophus inornatus</i> Year-round <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0MJ">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0MJ</a>	Bird of conservation concern

<b>Olive-sided Flycatcher</b> Contopus cooperi	<b>Bird of conservation concern</b>
Season: Breeding <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0AN">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0AN</a>	
<b>Peregrine Falcon</b> Falco peregrinus	<b>Bird of conservation concern</b>
Year-round <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FU">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FU</a>	
<b>Pink-footed Shearwater</b> Puffinus creatopus	<b>Bird of conservation concern</b>
Year-round <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0KZ">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0KZ</a>	
<b>Short-billed Dowitcher</b> Limnodromus griseus	<b>Bird of conservation concern</b>
Season: Wintering <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JK">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JK</a>	
<b>Short-eared Owl</b> Asio flammeus	<b>Bird of conservation concern</b>
Season: Wintering <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HD">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HD</a>	
<b>Swainson's Hawk</b> Buteo swainsoni	<b>Bird of conservation concern</b>
Season: Breeding <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B070">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B070</a>	
<b>Tricolored Blackbird</b> Agelaius tricolor	<b>Bird of conservation concern</b>
Year-round <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06P">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06P</a>	
<b>Whimbrel</b> Numenius phaeopus	<b>Bird of conservation concern</b>
Season: Wintering <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JN">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0JN</a>	
<b>Yellow Warbler</b> dendroica petechia ssp. brewsteri	<b>Bird of conservation concern</b>
Season: Breeding <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0EN">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0EN</a>	
<b>Red Knot</b> Calidris canutus ssp. roselaari	<b>Bird of conservation concern</b>
Season: Wintering <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0G6">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0G6</a>	

# Refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

## **Ellicott Slough National Wildlife Refuge**

301.21 acres

PHONE (510) 792-0222

ADDRESS

1100 Fiesta Way

Watsonville, CA 95076

<http://www.fws.gov/refuges/profiles/index.cfm?id=81643>



# Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

## DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

## DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

## DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Wetland data is unavailable at this time.

December 15, 2006

RECEIVED

DEC 18 2006

Tami Grove  
California Coastal Commission  
Central Coast District Office  
725 Front Street, Suite 300  
Santa Cruz, CA 95060

CALIFORNIA  
COASTAL COMMISSION  
CENTRAL COAST AREA

Re: SCCRTC Highway 1 HOV Lane Widening Project-Santa Cruz, California  
EA 05-0C730

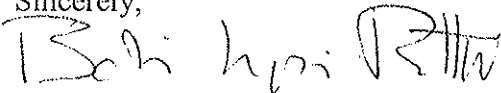
Dear Tami:

Enclosed you will find habitat mapping for the proposed High Occupancy Vehicle Lane Widening Project on Highway 1 developed in 2004. The study boundary has evolved in the interim but is generally contained within that shown. The enclosed are:

- Compact disc of related Biological Assessment mapping
- Printed version of related Biological Assessment mapping

If you have any questions or concerns, please give me a call at (559) 243-8178. We look forward to the January 16<sup>th</sup> meeting.

Sincerely,



Bobi Lyon-Ritter  
Senior Environmental Planner-Caltrans





U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CALIFORNIA DIVISION  
650 Capitol Mall, Suite 4-100  
Sacramento, CA. 95814  
November 25, 2003

IN REPLY REFER TO  
HDA-CA  
File #: 5-SCR-01 PM 7.6/15.9  
Document #: P47207

Mr. Gregg R. Albright, District Director  
California Department of Transportation  
District 5  
50 Higuera Street  
San Luis Obispo, CA 93401-5415

Attention: Bobi Lyon-Ritter

Dear Mr. Albright:

This is in response to your proposal of inferring presence of Santa Cruz long-toed salamander (SCLTS) in the Valencia Lagoon, located at the southern end of the proposed State Route 1 HOV Widening project. The proposed project limits are from San Andreas Road to 0.3 kilometers north of Morrissey Drive in Santa Cruz County, California.

The rationale for inferring presence is that a preponderance of available evidence supports the determination that the species is likely to be present in the biological study area, affected by the action, and that additional survey data is not likely to change the presence determination or benefit of the species. Based on the evidence you provided, we concur that inferring presence of SCLTS in the Valencia Lagoon in place of protocol surveys is appropriate. We also agree that pre-construction surveys are appropriate as an avoidance and minimization measure.

If needed, please call Dominic Hoang at (916) 498-5002, or Gary Sweeten at (916) 498-5128.

Sincerely,

For

Gary N. Hamby  
Division Administrator

Attachment 1



October 22, 2003

Mr. Rob Wood  
Native American Heritage Commission  
915 Capitol Mall, Room 364  
Sacramento, CA 95814

Dear Mr. Wood:

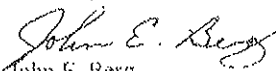
Far Western Anthropological Research Group, Inc. has been contracted to conduct cultural resources studies along an 8.25 mile stretch of State Route 1 (SR 1) in Santa Cruz County. The Santa Cruz County Regional Transportation Commission (SCCRTC) plans improvements along this portion of SR 1 which entail widening of the highway to add an additional lane for High Occupancy Vehicles (HOV) in order to improve traffic flow. Far Western will be conducting a pedestrian survey and test excavations within the project area.

The Project Area lies within portions of T11S, R1W, Sections 7, 8, and 9; and Landgrants Shoquel and Aptos; and T11S, R1E, Landgrants Aptos and San Andres. The project area is depicted on the Santa Cruz, Soquel, and Watsonville West 7.5' quadrangle maps accompanying this letter. A records search conducted at the Northwest Information Center indicates the presence of several archaeological sites within and in the vicinity of the project area.

Please examine your sacred lands file to see if any cultural resources or sacred sites are listed as being in or near the project area, and send a list of potentially concerned Native American individuals and organizations so that they can be informed and consulted regarding the proposed project.

If you have any questions or concerns, please do not hesitate to contact me at 530 756-3941 or [johnb@farwestern.com](mailto:johnb@farwestern.com).

Sincerely,

  
John E. Berg  
Staff Archaeologist

Attachments: Santa Cruz, Soquel, and Watsonville West 7.5' quadrangle maps

---

MAIN OFFICE 7727 DEL RIO PLACE SUITE A, DAVIS, CALIFORNIA 95618 • PHONE: 530-756-3941 • FAX: 530-756-0911  
CENTRAL COAST OFFICE 1726 PABLO DRIVE, SAN LUIS OBISPO, CALIFORNIA 95065 • PHONE: 805-847-0489  
NEVADA OFFICE PO BOX 759, VIRGINIA CITY, NEVADA 89402 • PHONE: 775-847-0273 • FAX: 775-847-0274



FAR WESTERN  
ANTHROPOLOGICAL RESEARCH GROUP, INC.

---

November 2003

Ms. Debbie Pilas-Treadway  
Native American Heritage Commission  
915 Capitol Mall, Room 364  
Sacramento, CA 95814

Dear Debbie:


Far Western Anthropological Research Group, Inc. has been contracted to conduct cultural resources studies along an 8.25 mile stretch of State Route 1 (SR 1) in Santa Cruz County. The Santa Cruz County Regional Transportation Commission (SCCRTC) plans improvements along this portion of SR 1 which entail widening of the highway to add an additional lane for High Occupancy Vehicles (HOV) in order to improve traffic flow. Far Western will be conducting a pedestrian survey and test excavations within the project area.

The project area, on the maps which accompanying this letter, is depicted on the USGS, 7.5 minute Santa Cruz, Soquel, and Watsonville West quadrangles in T11S/R1W & R1E. A records search conducted at the Northwest Information Center, Sonoma State University indicates the presence of several archaeological sites within, and in the vicinity of, the project area.

Please examine your sacred lands file to see if any cultural resources or sacred sites are listed as being in or near the project area, and also please send a list of potentially concerned Native American individuals and organizations so that they can be informed and consulted regarding the proposed project.

If you have any questions or concerns, please do not hesitate to contact me or Pat Mikkelsen at 530 756-3941; or [john@farwestern.com](mailto:john@farwestern.com) and [pat@farwestern.com](mailto:pat@farwestern.com).

Sincerely,

  
John E. Berg  
Staff Archaeologist

Attachments: Project Area Map

## NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-4082  
Fax (916) 657-5390  
Web Site www.nahc.ca.gov



November 18, 2003

John Berg  
Far Western  
Anthropological Research Group, Inc.  
2727 Del Rio Place, Suite A  
Davis, CA 95616

Sent by Fax: 530-756-0811  
No of Pages 3

RE: Proposed road improvements of State Route 1, Santa Cruz County.

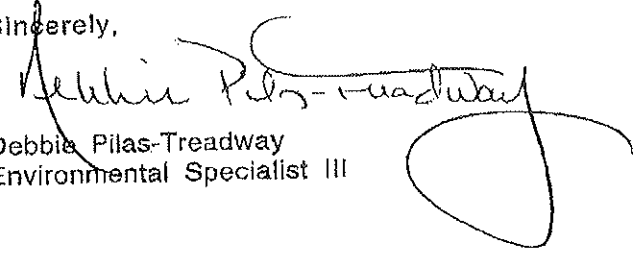
Dear Mr. Berg:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend other with specific knowledge. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4038.

Sincerely,

  
Debbie Pilas-Treadway  
Environmental Specialist III

**NATIVE AMERICAN CONTACTS**  
**Santa Cruz County**  
**November 17, 2003**

<p>Ella Rodriguez            PO Box 1411            Salinas , CA 93902            (831) 632-0490 - home            (831) 261-5827 - cell</p>	<p>Ohlone/Costanoan            Esselen</p>	<p>Amah San Juan Band            Marion Martinez            26206 Coleman Avenue            Hayward , CA 94544            (510) 732-6806 - home            comncompy@hotmail.com -            email</p>	<p>Ohlone/Costanoan</p>
<p>Jakki Kehl            720 North 2nd Street            Patterson , CA 95363            (209) 892-2436            (209) 892-2435 - Fax            jakki@bigvalley.net</p>	<p>Ohlone/Costanoan</p>	<p>Amah San Juan Band            Valentin Lopez            3095 Eastern Ave            Sacramento , CA 95821            (916) 481-5785</p>	<p>Ohlone/Costanoan</p>
<p>Katherine Erolinda Perez            1234 Luna Lane            Stockton , CA 95206            (209) 462-2680</p>	<p>Ohlone/Costanoan            Northern Valley Yokut            Bay Miwok</p>	<p>Amah/Mutsun Tribal Band            Michelle Zimmer            4952 McCoy Avenue            San Jose , CA 95130            (408) 378-7705</p>	<p>Ohlone/Costanoan</p>
<p>Linda G. Yamane            1585 Mira Mar Ave.            Seaside , CA 93955-3326            (831) 394-5915</p>	<p>Ohlone/Costanoan</p>	<p>Amah/Mutsun Tribal Band            Irene Zwierlein, Chairperson            789 Canada Road            Woodside , CA 94062            (650) 851-7747 - Home            (650) 851-7489 - Fax            (408) 364-1393 - Cell</p>	<p>Ohlone/Costanoan</p>

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regards to cultural resources assessment for the proposed road improvements of State Route 1, Santa Cruz County



NATIVE AMERICAN CONTACTS  
Santa Cruz County  
November 17, 2003

Coastanoan Ohlone Rumsen-Mutsen Tribe  
Patrick Orozco  
644 Peartree Drive  
Watsonville, CA 95075  
(831) 728-8471  
Ohlone/Costanoan

Indian Canyon Mutsun Band of Costanoan  
Ann Marie Sayers, Chairperson  
P.O. Box 28  
Hollister, CA 95024  
(831) 637-4238  
Ohlone/Costanoan

Thomas P. Soto  
Howard S. Soto  
P.O. Box 56802  
Hayward, CA 94541  
(530) 889-2444  
sotoland@sbcglobal.net  
(510) 733-6158 Fax  
hss001@aol.com  
Ohlone/Costanoan

Trina Marine Ruano Family  
Ramona Garibay, Representative  
16101 5th Street  
Lathrop, CA 95330  
(510) 792-1642  
(510) 673-5029 - Cell  
Ohlone/Costanoan  
Bay Miwok  
Plains Miwok  
Patwin

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regards to cultural resources assessment for the proposed road improvements of State Route 1, Santa Cruz County



FAR WESTERN  
ANTHROPOLOGICAL RESEARCH GROUP, INC.

---

November 25, 2003

Trina Marine Ruano Family  
Ramona Garibay, Representative  
16101 5<sup>th</sup> Street  
Lathrop, CA 95330

Dear Ms. Garibay:

Far Western Anthropological Research Group, Inc. has been contracted to conduct cultural resources studies along an 8.25 mile stretch of State Route 1 (SR 1) in Santa Cruz County. The Santa Cruz County Regional Transportation Commission (SCCRTC) plans improvements along this portion of SR 1 which entail widening of the highway to add an additional lane for High Occupancy Vehicles (HOV) in order to improve traffic flow. Far Western will be conducting a pedestrian survey and test excavations within the project area.

The project area is depicted on the map accompanying this letter. A records search conducted at the Northwest Information Center indicates the presence of several archaeological sites within and in the vicinity of the project area.

If you know of any additional cultural resources, or have any specific concerns regarding the proposed project, please do not hesitate to contact me or Pat Mikkelsen at 530 756-3941 or [johnb@farwestern.com](mailto:johnb@farwestern.com).

Sincerely,

John E. Berg  
Staff Archaeologist

Attachments: Project Area Map

Cc: Jakki Kehl, Valentine Lopez, Marion Martinez, Patrick Orozco, Katherine Erolinda Perez, Ella Mae Rodriguez, Ann Marie Sayers, Thomas P. Soto, Howard S. Soto, Linda G. Yamane, Michelle Zimmer, Irene Zwierlein



FAR WESTERN  
ANTHROPOLOGICAL RESEARCH GROUP, INC.

---

November 1, 2004

Amah Mutsun Band of Ohlone/Costanoan Indians  
Ed Ketchum  
35867 Yosemite Avenue  
Davis, CA 95616

Dear Mr. Ketchum:

Far Western Anthropological Research Group, Inc. has been contracted to conduct cultural resources studies along an 8.25 mile stretch of State Route 1 (SR 1) in Santa Cruz County. The Santa Cruz County Regional Transportation Commission (SCCRTC) plans improvements along this portion of SR 1 which entail widening of the highway to add an additional lane for High Occupancy Vehicles (HOV) in order to improve traffic flow. Far Western will be conducting a pedestrian survey and test excavations within the project area.

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If you know of any additional cultural resources, or have any specific concerns regarding the proposed project, please do not hesitate to contact me or Pat Mikkelsen at 530 756-3941 or [johnb@farwestern.com](mailto:johnb@farwestern.com).

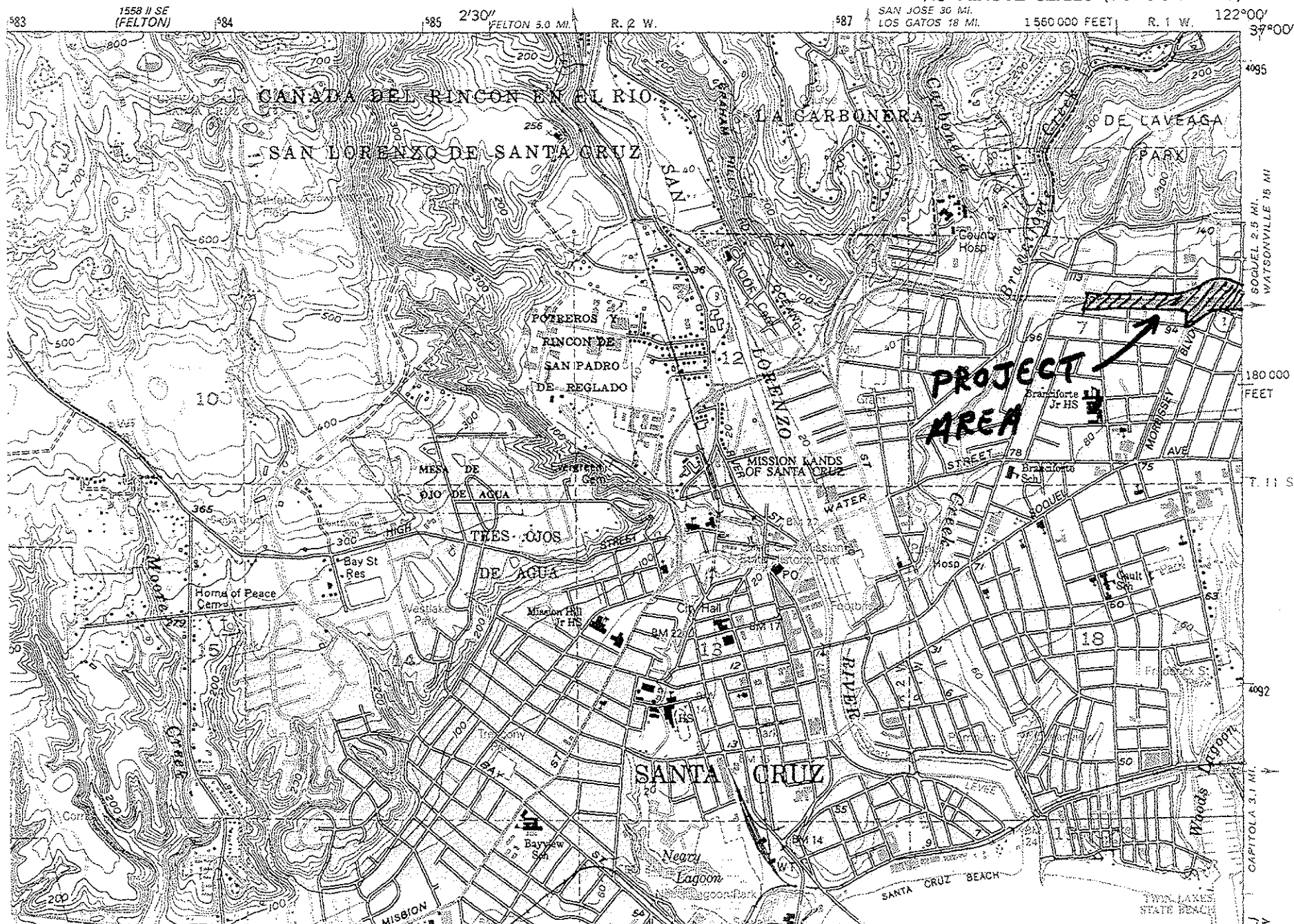
Sincerely,

John E. Berg  
Staff Archaeologist

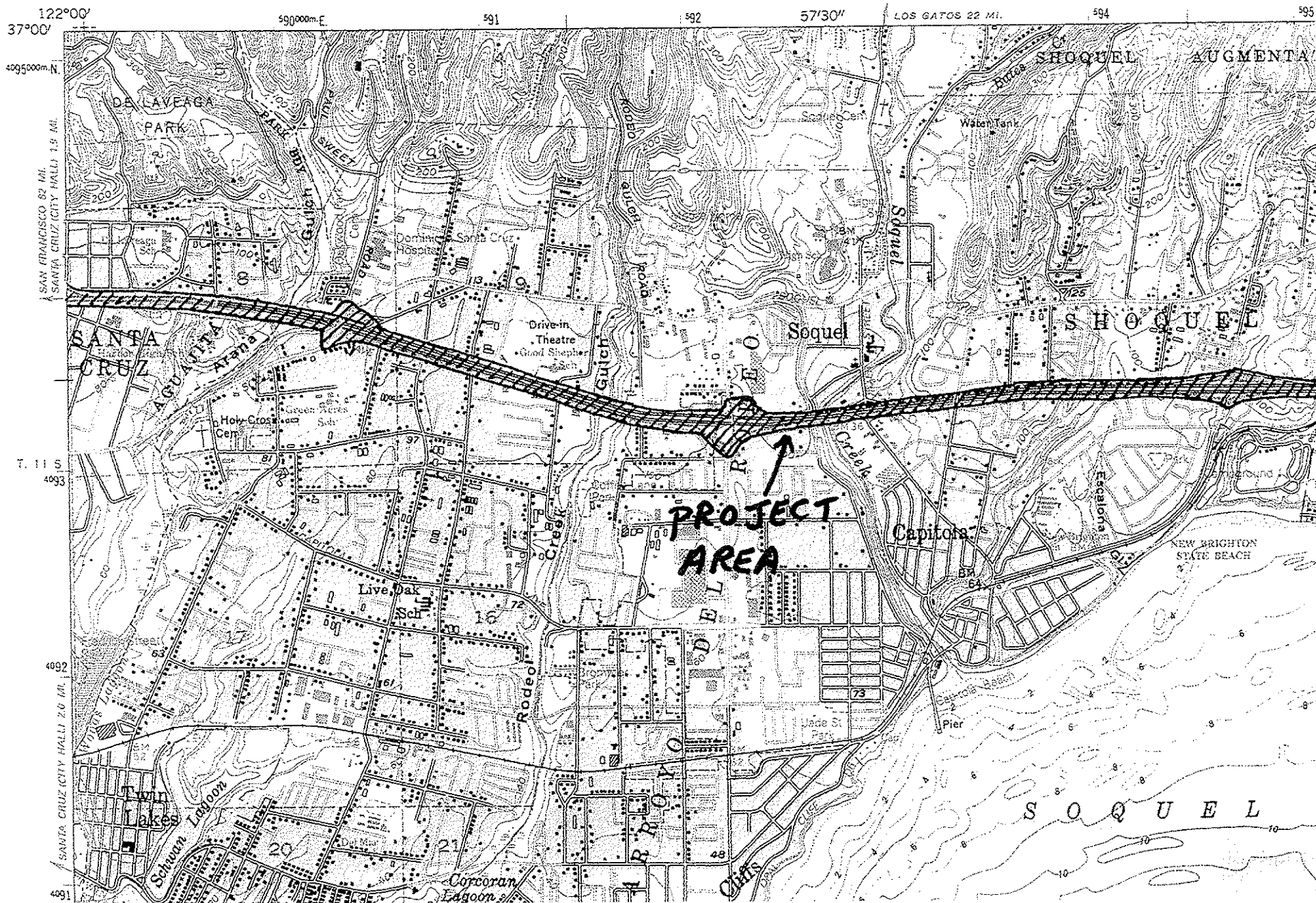
Attachments: Project Area Map  
Cc: Juanita Ingals, Paul Mondragon, Quirina Luna

SANTA CRUZ QUADRANGLE  
CALIFORNIA-SANTA CRUZ CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)

1558 II SW  
(LAUREL)



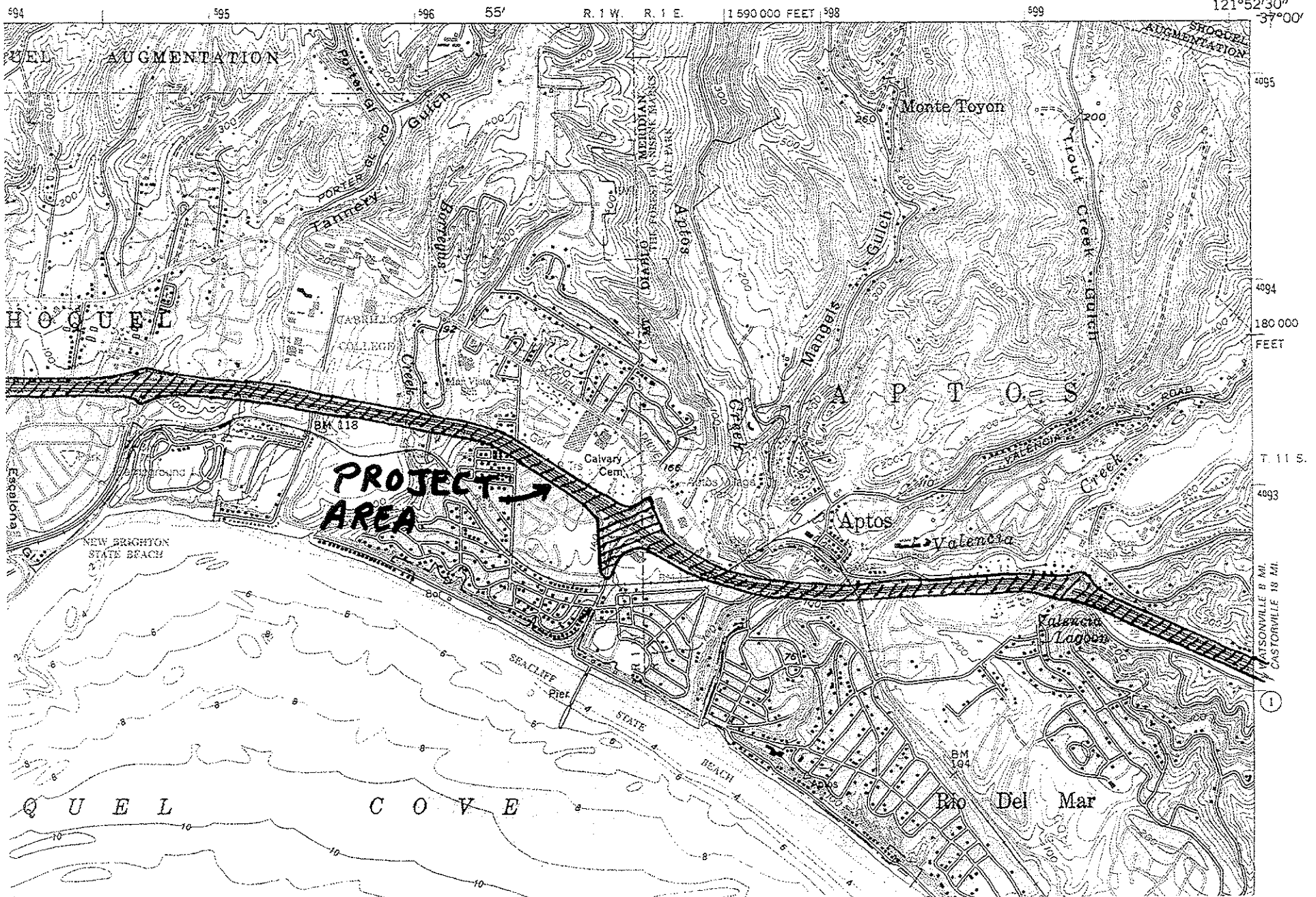
SOQUEL CALIF.  
1954  
REVISED 1994



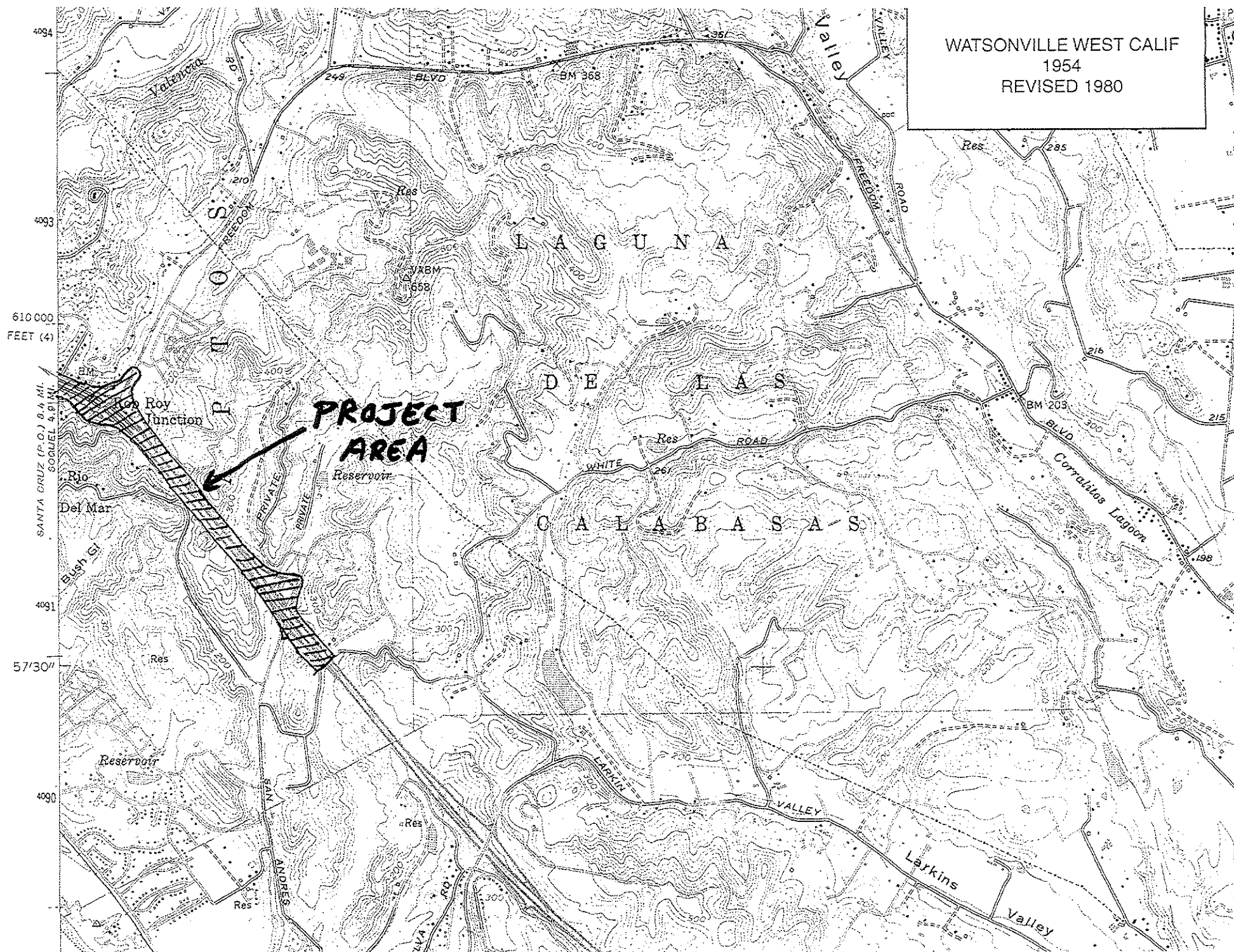


SOQUEL QUADRANGLE  
CALIFORNIA-SANTA CRUZ CO.

7.5-MINUTE SERIES (TOPOGRAPHIC/BATHYMETRIC)



WATSONVILLE WEST CALIF  
1954  
REVISED 1980



Partners  
**Rand F. Herbert**  
**Stephen R. Wee**  
**Meta Bunse**



January 6, 2004

RE: Highway 1 Widening / HOV Project, San Andreas Road to Morrissey Boulevard

To Whom It May Concern:

As you may already know, the Santa Cruz County Regional Transportation Commission (SCCRTC) is proposing a project to widen State Route 1 from San Andreas/Larkin Valley Road to 0.3 Km (0.2 mi) north of Morrissey Boulevard in Santa Cruz County. SCCRTC is currently in the Project Approval / Environmental Document phase for this project and is performing the necessary studies in accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA).

The purpose of the project is to widen Highway 1 to six lanes by adding High Occupancy Vehicle (HOV) lanes in the median. The new lanes would be available to carpools and buses during commute hours. Widening this portion of State Route 1 has been a high priority project since 1986, and was confirmed by the SCCRTC as the region's highest priority project in the 2001 Regional Transportation Plan. The County and three cities have passed resolutions supporting the widening of Route 1. Please see the attached Fact Sheet for a general project map and additional information.

The SCCRTC has formed a consultant team to perform preliminary engineering and environmental technical studies to meet state and federal environmental requirements. JRP Historical Consulting is part of this team and is responsible for the preparing a technical study of the historic architectural and engineering resources in the proposed project area to determine if any historic properties are potentially eligible for the National Register of Historic Places or the California Register of Historical Resources. As part of this process we are also reviewing national, state, and local historic properties inventories and previous evaluations of historic architectural properties in the study area.

If you or your organization has any concerns regarding specific historic resources within the project area, please respond in writing to me at the above address citing your concerns within the next thirty days. You may also contact Kim Shultz at SCCRTC, 1523 Pacific Avenue, Santa Cruz, CA 95060, (831) 460-3208.

Sincerely,

A handwritten signature in blue ink that reads "Meta Bunse". The signature is fluid and cursive, with the first and last names clearly legible.

Meta Bunse  
Project Manager

**List of recipients:**

Santa Cruz County Historic Resources Commission  
Santa Cruz County Planning Department  
701 Ocean Street, 4th Floor  
Santa Cruz, CA 95060

Santa Cruz Historic Preservation Commission  
Don Lauritson  
Planning Department  
809 Center Street, Room 206  
Santa Cruz, CA 95060

Santa Cruz Historical Society  
P.O. Box 246  
Santa Cruz 95061

The Scotts Valley Historical Society  
Civic Center Drive  
Scotts Valley, CA 95066

Pajaro Valley Historical Association  
261 East Beach Street  
Watsonville, CA 95076

Aptos History Museum  
7605-A Old Dominion Court  
Aptos, CA 95003

Capitola Historical Museum  
410 Capitol Avenue  
Capitola, CA 95010

The Museum of Art and History  
McPherson Center  
705 Front Street  
Santa Cruz, CA 95060

### Project Funding

- Funding other than regional share dollars, including federal sources and matching local tax dollars, will be needed for such a regionally significant project.
- The SCCRTC has passed a resolution to place a sales tax measure on the ballot in November 2004 to secure matching funds for the State Route 1 Widening/HOV project.
- The SCCRTC has programmed \$8 million in its allotment of Regional Surface Transportation Program (RSTP) and Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds for project development work on the Highway 1 Widening/HOV Project.

### Project Approval/Environmental Documentation

The SCCRTC has retained a consultant team in the Summer 2003 to perform preliminary engineering and environmental technical studies to meet state and federal environmental requirements. A consultant team approach was selected to expedite this stage of the project. The SCCRTC is investigating innovative project delivery methods such as flexible funding and design-build or design sequencing for subsequent project stages.

### Schedule/Funding

In November 2002 and April 2003, the SCCRTC programmed a total of \$8 million in Regional Surface Transportation Program (RSTP) and Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds for the Project Approval/ Environmental Document phase. Securing additional funds for future phases of the project still needs to be addressed. The SCCRTC is currently developing an expenditure plan for a local ballot measure scheduled for November 2004 to raise matching funds for transportation projects including the Route 1 Widening/HOV project.

Cost estimates for the section between Morrissey Boulevard and State Park Drive are as follows:

<b>Project Components</b>	<b>Schedule</b>	<b>Cost Estimate (in millions)*</b>	<b>Funds Programmed</b>
Project Study Report	complete		
Project Approval/Environmental Documentation	2003 – 2007	\$ 8	yes
Plans, Specifications & Engineering	2007 – 2010	\$ 11.5	no
Right of Way - Support and Acquisition	2008 – 2010	\$ 30	no
Construction and Support	2011 – 2013	\$ 257	no
<b>TOTAL</b>		<b>\$ 306.5 *</b>	

\* Costs are escalated based on estimated completion dates in the Caltrans Project Study Report, but do not include anticipated debt service. Unescalated costs would total approximately \$230 million. Costs for the southern extension to San Andreas Road have not yet been studied, but are anticipated to be 1/3 the cost of the initial segment.

### Related Projects

#### **State Route 1/ 17 Merge Lanes (State Transportation Improvement Program Funds: \$52 million)**

-This project adds an auxiliary lane in each direction on State Route 1 between State Route 17 and the Morrissey/La Fonda area. Construction scheduled in late 2004 is subject to delay due to State funding constraints.

**High Occupancy Toll (HOT) Lanes Feasibility Study** – Variable-pricing lanes were assessed for State Route 1 using a Federal Highway Administration grant. Although HOT lanes were not pursued, HOV lanes could be converted to a HOT lane at a later date, should demand warrant it.

### For More Information

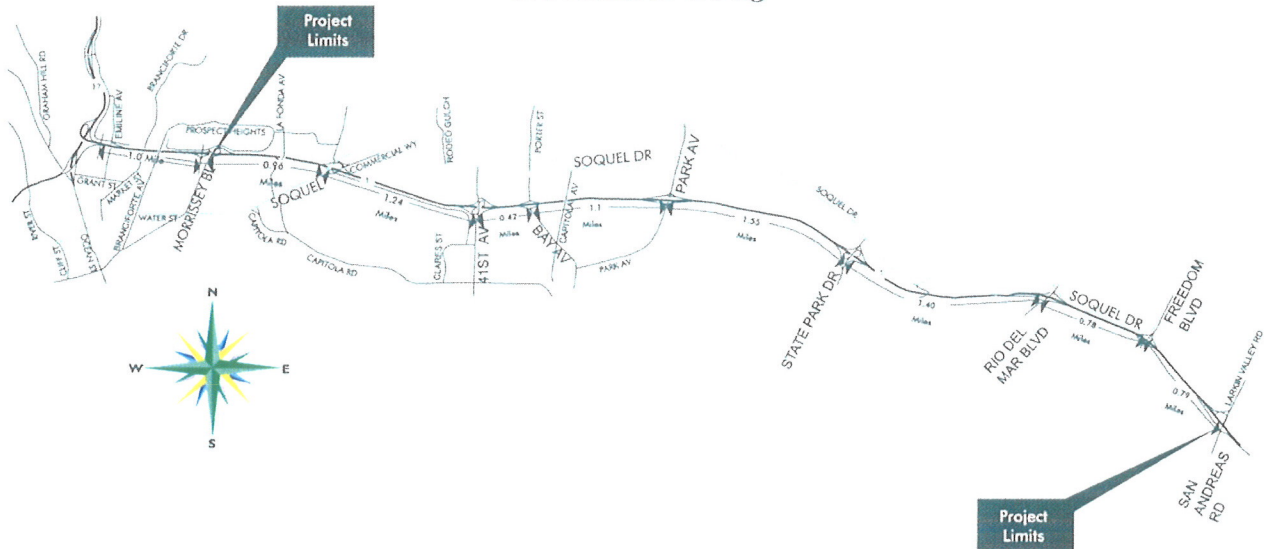
Contact the Santa Cruz County Regional Transportation Commission at (831) 460-3200, e-mail [info@scrtc.org](mailto:info@scrtc.org) or visit the Commission's website at [www.scrtc.org](http://www.scrtc.org).



# Fact Sheet

## State Route 1 Widening for High Occupancy Vehicle Lanes

Santa Cruz County Regional Transportation Commission  
November 2003



### Project Background

- Widening State Route 1 from San Andreas/Larkin Valley Road to 0.3 Km (0.2 mi) north of Morrissey has been a high priority project since 1986, and was confirmed by the Santa Cruz County Regional Transportation Commission as the region's highest priority project in the 2001 Regional Transportation Plan.
- The County and three cities have passed resolutions supporting the widening of Route 1.
- State Route 1 serves heavy commuter, local and visitor traffic.
- Santa Cruz County serves 4.5 million visitors annually, and is the most popular beach destination in northern California.
- Tourism and agriculture are the top revenue generators in the county, both are highway dependent.
- Highway 1 serves the growing campus population of the University of California at Santa Cruz.
- In 1988 it was determined a high occupancy vehicle lane was both feasible and desirable to increase the effective capacity and minimize environmental effects.

### Project Purpose and Objectives

- Highway 1 now operates at Level of Service F (total congestion) during extended peak periods.
- Average daily traffic on Highway 1 increased by 129% between 1975 and 2000.
- Heavy congestion is now experienced on Highway 1 for three and a half hours in the morning (6:30 am to 10 am) and for four and a half hours in the evening (2:00 pm to 6:30 pm)
- Projections show that peak periods of congestion will grow to five hours in the am peak and five and a half hours in the pm peak, and that the average peak speeds will be four times slower if the project is not built.
- Average delay for the peak period is expected to be up to three times worse without the project.
- Route 1 is the only highway through the county running between the mountains and the ocean and connecting Watsonville, Aptos, Soquel, Capitola, Santa Cruz and the University of California.
- State Route 1 is the terminus for state highways 9 and 17, highly utilized by commuters to Silicon Valley, visitors from the San Francisco Bay Area and beyond, and commercial truck traffic.
- State Route 1 is the terminus for state highways 129 and 152, used for commuter, recreational and commercial truck traffic, connected to State Route 101.

ZONING/PERMIT PROCESSING  
831/420-5100 • FAX 831/420-5101  
INSPECTION SERVICES  
831/420-5120 • FAX 831/420-5101



COMPREHENSIVE PLANNING,  
HOUSING AND  
COMMUNITY DEVELOPMENT  
831/420-6250 • FAX 831/420-6458

P L A N N I N G   D E P A R T M E N T

809 Center Street • Room 206 • Santa Cruz, CA 95060 • cityplan@ci.santa-cruz.ca.us  
EUGENE O. ARNER, DIRECTOR

February 9, 2004

Meta Bunse  
Project Manager  
JRP Historical Consulting  
1490 Drew Avenue, Suite 110  
Davis, CA 95616

**SUBJECT:   HIGHWAY 1 WIDENING/HOV PROJECT**

Dear Mr. Bunse:

This letter responds to your January 6, 2004 letter regarding the above project. I have enclosed the following historic-related documents for your review.

Historic Context Report  
Alphabetical List of Listed City Historic Buildings  
Volumes I and II of City Historic Building Survey  
Original Volume II List (with crossed-out/non-listed properties)  
Initial List of Potential Volume III Historic Buildings (not adopted)

I believe the alphabetical list will be key reference which will allow identification of listed historic properties near the freeway project. Since the two Volumes were completed in 1976 and 1989, all 50-year old properties are not identified in them. You are welcome to come to any Commission meeting. They meet every third Wednesday of each month at 7:30 in the City Council Chambers at 809 Center Street in Santa Cruz. Please contact me at 831-420-5117 if you have questions or would like to make a presentation at our Commission meeting.

Sincerely,

Don Lauritson  
Senior Planner  
Staff to Historic Preservation Commission

**OFFICE OF HISTORIC PRESERVATION  
DEPARTMENT OF PARKS AND RECREATION**

1725 23<sup>rd</sup> Street, Suite 100  
SACRAMENTO, CA 95816-7100  
(916) 445-7000 Fax: (916) 445-7053  
calshpo@parks.ca.gov  
www.ohp.parks.ca.gov



March 17, 2011

Reply To: FHWA101215A

Valerie Levulett  
Chief, Central Coast Technical Studies Branch  
Heritage Resource Coordinator  
Caltrans District 5, San Luis Obispo  
50 Higuera Street  
San Luis Obispo, CA 93401-5415

Re: Determination of Eligibility for the Proposed Highway 1 High Occupancy Vehicle Lane Project, Santa Cruz County, CA

Dear Ms. Levulett:

Thank you for consulting with me about the subject undertaking in accordance with the *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA)*.

Caltrans has determined that the following properties are not eligible for the National Register of Historic Places.

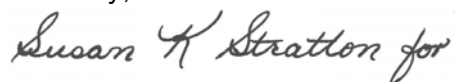
- 9384 Monroe Ave, Aptos, CA
- 9310, 9320 Monroe Ave, Aptos, CA
- 9292 Monroe Ave, Aptos, CA
- 762 Rio Del Mar Blvd, Aptos, CA
- Redwood Village, 9099 Soquel Dr, Aptos, CA
- 9051 Soquel Dr, Aptos, CA
- 9028 Soquel Dr, Aptos, CA
- 9018 Soquel Dr, Aptos, CA
- 9012 Soquel Dr, Aptos, CA
- Bridge 36-0003 – South Aptos UP
- Bridge 36-0011 – Aptos Creek
- Bridge 36-0012 – North Aptos UP
- Jose Arano House – 7996 Aptos Wharf Rd, Aptos, CA
- Rice House – 7992 Aptos Wharf Road, Aptos, CA
- 361 Moosehead Dr, Aptos, CA
- 140 Rancho Del Mar Blvd, Aptos, CA
- Poor Clares Monastery, 280 State Park Dr, Aptos, CA
- Calvary Cemetery, 7600 Soquel Dr, Aptos, CA
- 503 Margaret Ave, Aptos, CA
- 518 Margaret Ave, Aptos, CA
- 2500 Orchard St, Soquel, CA
- 310 Kennedy Dr, Capitola, CA
- 2500-2510 Rosedale Ave, Soquel, CA
- 300 Kennedy Dr, Capitola, CA
- 2501 Rosedale Ave, Soquel, CA
- 200 Kennedy Dr, Capitola, CA
- 920 Capitola Ave, Capitola, CA
- Bridge 36-0024 – Capitola Ave OC
- 5070 Wilder Dr, Soquel, CA
- Bridge 36-0013 – Soquel Creek
- 2265 41<sup>st</sup> Ave, Capitola, CA
- 2185 41<sup>st</sup> Ave, Capitola, CA
- 2701 Mattison Lane, Santa Cruz, CA
- 5960 Soquel Ave, Santa Cruz, CA
- 2260 Soquel Ave, Santa Cruz, CA
- 2600, 2604, 2606 17<sup>th</sup> Ave, Santa Cruz, CA

- 2617 17<sup>th</sup> Ave, Santa Cruz, CA
- 3550 Soquel Ave, Santa Cruz, CA
- 1527 Commercial Way, Santa Cruz, CA
- 2960 Soquel Ave, Santa Cruz, CA
- Santa Cruz Inn, 2950 Soquel Ave, Santa Cruz, CA
- Bridge 36-0064 – Soquel Dr OC
- 3053, 3055, 3057 Salisbury Dr, Santa Cruz, CA
- Bridge 36-0018 – La Fonda Ave OC
- 104 Holway Dr, Santa Cruz, CA
- 1025 Morrissey Blvd, Santa Cruz, CA
- 1015 Morrissey Blvd, Santa Cruz, CA
- 1011 Morrissey Blvd, Santa Cruz, CA
- 905 Morrissey Blvd, Santa Cruz, CA
- 817-825 Morrissey Blvd, Santa Cruz, CA
- 525 Trevethan Ave, Santa Cruz, CA
- 516 Marnell Ave, Santa Cruz, CA
- 723 Morrissey Blvd, Santa Cruz, CA
- 719 Morrissey Blvd, Santa Cruz, CA
- 715 Morrissey Blvd, Santa Cruz, CA
- 615 Marnell Ave, Santa Cruz, CA
- 630 San Juan Ave, Santa Cruz, CA
- 626 San Juan Ave, Santa Cruz, CA
- 118 Allerton St, Santa Cruz, CA
- 112 Allerton St, Santa Cruz, CA
- 631 San Juan Ave, Santa Cruz, CA
- 505 San Juan Ave, Santa Cruz, CA
- 429 San Juan Ave, Santa Cruz, CA
- 530 Pacheco Ave, Santa Cruz, CA
- 522 Pacheco Ave, Santa Cruz, CA
- Bridge 36-0066 – Morrissey Blvd OC
- 517 Pacheco Ave, Santa Cruz, CA
- 511 Pacheco Ave, Santa Cruz, CA
- 371 Fairmount Ave, Santa Cruz, CA
- 353 Fairmount Ave, Santa Cruz, CA
- 114 Elk St, Santa Cruz, CA
- 102 Elk St, Santa Cruz, CA
- 101 Elk St, Santa Cruz, CA
- 147 Rooney St, Santa Cruz, CA
- 143 Rooney St, Santa Cruz, CA
- 115 Rooney St, Santa Cruz, CA
- 107 Rooney St, Santa Cruz, CA
- 448 Morrissey Blvd, Santa Cruz, CA
- CA-SCR-200
- CA-SCR-215H
- CA-SCR-353/H

Based on review of the submitted documentation, I concur.

Thank you for considering historic properties during project planning. If you have any questions, please contact Natalie Lindquist of my staff at (916) 445-7014 or email at [nlindquist@parks.ca.gov](mailto:nlindquist@parks.ca.gov).

Sincerely,



Milford Wayne Donaldson, FAIA  
State Historic Preservation Officer





## **Appendix K**

### **Noise Receiver Tables and Barrier Locations**



**Table 1: Results of Noise Modeling for the Tier I Corridor HOV Lane Alternative**

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R1 – Vista Grande Drive, Aptos	57	58	59	No	N/A	N/A	N/A	N/A	N/A	N/A
R2 – Vista Grande Drive, Aptos	57	58	60	No	N/A	N/A	N/A	N/A	N/A	N/A
R3 – Vista Grande Drive, Aptos	61	62	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R4 – Bonita Drive, Aptos	61	62	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R5 – Bonita Drive, Aptos	58	59	61	No	N/A	N/A	N/A	N/A	N/A	N/A
R6 – Sonata Lane, Aptos	60	61	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R7 – Bonita Drive, Aptos	63	64	67	Yes	63	62	61	60	59	Feasible
R8 – Bonita Drive, Aptos	61	62	63	No	61	60	59	58	58	N/A
R9 – Bonita Drive, Aptos	64	65	68	Yes	64	63	62	61	60	Feasible
R10 – Encino Drive, Aptos	65	66	67	Yes	62	62	61	60	60	Feasible
R10A** – Encino Drive, Aptos	71	72	74	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R11 – Loma Prieta Drive, Aptos	73	73	75	Yes	74	74	74	73	73	Not Feasible
R12 – Encino Drive, Aptos	67	67	70	Yes	63	62	62	61	61	Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R13 – Encino Drive, Aptos	66	66	69	Yes	69	69	69	68	68	Not Feasible
R14 – Soquel Drive, Aptos	60	62	65	No	N/A	N/A	N/A	N/A	N/A	N/A
R15 – Bonita Drive, Aptos	61	60	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R16 – Bonita Drive, Aptos	67	66	67	Yes	64	63	62	61	60	Feasible
R17 – Bonita Drive, Aptos	71	70	70	Yes	67	66	65	63	63	Feasible
R18 – Bonita Drive, Aptos	69	68	71	Yes	68	67	66	65	63	Feasible
R18A – Bonita Drive, Aptos	64	64	66	Yes	65	64	64	62	59	Feasible
R19 – Bonita Drive, Aptos	63	63	65	No	63	62	61	58	57	Feasible
R20 – Bonita Drive, Aptos	70	70	72	Yes	69	67	66	64	63	Feasible
R21 – Loma Prieta Drive, Aptos	73	73	74	Yes	74	74	74	74	74	Not Feasible
R22 – Loma Prieta Drive, Aptos	70	70	71	Yes	71	71	71	71	71	Not Feasible
R24 – Soquel Drive, Aptos	57	58	60	No	N/A	N/A	N/A	N/A	N/A	N/A
R25 – Soquel Drive, Aptos	63	64	65	No	62	61	60	59	58	Feasible
R26 – Soquel Drive, Aptos	69	70	71	Yes	64	62	61	60	59	Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R27 – Monroe Avenue, Aptos	68	69	71	Yes	71	70	69	68	67	Not Feasible
R28 – Monroe Avenue, Aptos	62	63	67	Yes	64	64	63	62	60	Feasible
R29 – Soquel Drive, Aptos	67	68	71	Yes	65	63	62	61	60	Feasible
R30 – Soquel Drive, Aptos	69	70	72	Yes	66	64	63	62	61	Feasible
R31 – Soquel Drive, Aptos	70	71	73	Yes	66	64	63	62	61	Feasible
R32 – Soquel Drive, Aptos	63	64	69	Yes	64	62	60	60	59	Feasible
R33 – Monroe Avenue, Aptos	66	67	69	Yes	68	67	67	66	64	Feasible
R34 – Monroe Avenue, Aptos	59	59	61	No	N/A	N/A	N/A	N/A	N/A	N/A
R35 – Monroe Avenue, Aptos	72	72	75	Yes	74	74	74	74	74	Not Feasible
R35A – Monroe Avenue, Aptos	71	71	73	Yes	73	73	72	72	71	Not Feasible
R36 – Monroe Avenue, Aptos	72	72	73	Yes	72	71	70	68	66	Feasible
R37 – Robin Drive, Aptos	58	60	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R38 – Sandal Wood Drive, Aptos	61	63	68	Yes	64	62	62	61	60	Feasible
R39 – Coronado Drive, Aptos	55	56	58	No	N/A	N/A	N/A	N/A	N/A	N/A



Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R39A – Palo Verde Court, Aptos	55	56	59	No	N/A	N/A	N/A	N/A	N/A	N/A
R40 – Soquel Drive, Aptos	67	70	73	Yes	73	73	73	73	73	Not Feasible
R40A – Soquel Drive, Aptos	70	73	77	Yes	66	63	62	62	61	Feasible
R41 – Soquel Drive, Aptos	70	73	77	Yes	66	64	63	63	62	Feasible
R42 – Carrera Circle, Aptos	74	76	79	Yes	69	68	66	65	64	Feasible
R43 – Carrera Circle, Aptos	61	63	63	No	58	57	57	56	55	Feasible
R44 – Carrera Circle, Aptos	65	67	70	Yes	64	62	60	59	58	Feasible
R45 – Moosehead Drive, Aptos	67	69	72	Yes	70	70	70	69	69	Not Feasible
R45A**– Moosehead Drive, Aptos	68	70	73	N/A	69	68	67	67	66	N/A
R46 – Moosehead Drive, Aptos	69	71	75	Yes	74	74	73	73	72	Not Feasible
R47 – Moosehead Drive/Route 1	72	74	77	No	N/A	N/A	N/A	N/A	N/A	N/A
R48 – Moosehead Drive/Route 1	72	74	76	No	68	68	64	63	62	N/A
R49 – Moosehead Drive, Aptos	67	69	73	Yes	66	66	64	64	63	Feasible
R50 – Moosehead Drive, Aptos	62	64	65	No	61	60	60	59	59	Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R51 – Seacliff Drive, Aptos	58	61	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R52 – Seacliff Drive, Aptos	71	74	77	Yes	68	68	68	67	67	Feasible
R53 – Seacliff Drive, Aptos	60	63	66	Yes	63	62	61	61	61	Feasible
R53A – Seacliff Drive, Aptos	61	64	68	Yes	62	61	60	60	59	Feasible
R54 – Seacliff Drive, Aptos	58	61	65	No	62	62	62	61	61	N/A
R55 – North Avenue, Aptos	57	60	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R56 – North Avenue, Aptos	53	56	59	No	N/A	N/A	N/A	N/A	N/A	N/A
R57 – North Avenue, Aptos	50	53	56	No	N/A	N/A	N/A	N/A	N/A	N/A
R58 – North Avenue, Aptos	49	52	55	No	N/A	N/A	N/A	N/A	N/A	N/A
R59 – Skate Park Drive, Aptos	53	56	59	No	N/A	N/A	N/A	N/A	N/A	N/A
R62 – Soquel Drive, Aptos	65	64	68	Yes	67	66	65	68	64	Not Feasible
R63 – Spreckels Drive, Aptos	72	71	72	Yes	66	65	67	63	62	Feasible
R64 – Spreckels Drive, Aptos	73	72	76	Yes	70	69	70	66	64	Feasible
R65 – Spreckels Drive, Aptos	77	76	80	Yes	72	71	69	67	66	Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R66 – Sailfish Drive, Aptos	63	66	67	Yes	64	63	62	61	60	Feasible
R66A – Sailfish Drive, Aptos	68	71	72	Yes	66	64	63	62	61	Feasible
R67 – Marlin Court, Aptos	65	68	68	Yes	64	62	61	60	60	Feasible
R67A – Sailfish Drive, Aptos	69	72	74	Yes	71	69	67	65	63	Feasible
R68 – Bonefish Court, Aptos	70	73	75	Yes	70	68	66	64	63	Feasible
R68A – Perch Way, Aptos	67	70	72	Yes	67	66	64	63	61	Feasible
R69 – Silverfish Court, Aptos	68	71	73	Yes	67	65	63	62	61	Feasible
R69A – Barkentine Court, Aptos	66	69	71	Yes	67	65	63	62	61	Feasible
R70 – Barkentine Court, Aptos	66	69	71	Yes	67	66	63	62	61	Feasible
R71 – Margaret Avenue, Aptos	66	70	73	Yes	68	66	64	63	62	Feasible
R72 – Margaret Avenue, Aptos	69	73	75	Yes	71	69	67	66	65	Feasible
R73 – Margaret Avenue, Aptos	59	63	67	Yes	63	62	62	61	61	Feasible
R74 – Mar Vista, Aptos	53	57	61	No	N/A	N/A	N/A	N/A	N/A	N/A
R75 – Estates Drive, Aptos	63	63	66	Yes	65	64	63	63	63	Not Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R76 – Route 1, Aptos	65	67	70	Yes	66	65	65	64	64	Feasible
R77 – Route 1, Aptos	69	71	73	Yes	70	68	67	65	64	Feasible
R78 – Route 1, Aptos	67	69	72	Yes	68	66	65	64	63	Feasible
R78A – Route 1, Aptos	72	74	75	Yes	70	69	67	67	66	Feasible
R79 – Pinetree Lane, Aptos	57	59	62	No	60	59	58	58	57	N/A
R80 – Pinetree Lane, Aptos	59	61	64	No	63	62	61	61	60	N/A
R81 – Old Dominion Court, Aptos	65	68	70	Yes	67	66	64	64	63	Feasible
R82 – Old Dominion Court, Aptos	56	56	58	No	58	58	57	57	56	N/A
R83 – Soquel Drive, Aptos	60	60	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R84 – Primrose Street, Aptos	53	57	60	No	N/A	N/A	N/A	N/A	N/A	N/A
R84A – Primrose Street, Aptos	53	57	60	No	N/A	N/A	N/A	N/A	N/A	N/A
R85 – Primrose Street, Aptos	55	59	62	No	60	60	59	58	57	Feasible
R86 – Primrose Street, Aptos	57	61	64	No	63	62	60	60	59	Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R87 – Mar Vista, Aptos	62	66	68	Yes	68	67	65	64	63	Feasible
R88 – Millie Court, Aptos	65	69	71	Yes	66	65	63	62	62	Feasible
R89 – Mar Vista, Aptos	70	74	76	Yes	68	66	64	63	61	Feasible
R89A** – Mar Vista, Aptos	65	69	71	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R90 – Mar Vista, Aptos	69	73	74	Yes	67	65	64	62	61	Feasible
R91** – Mar Vista, Aptos	61	65	67	Yes	66	66	66	66	66	N/A
R92 – Borregas Drive, Aptos	62	66	68	Yes	67	66	64	64	63	Feasible
R93 – Borregas Drive, Aptos	71	75	76	Yes	67	65	64	63	61	Feasible
R94 – Estates Drive, Aptos	63	67	69	Yes	66	64	63	63	62	Feasible
R95 – Soquel Drive, Aptos	66	67	69	Yes	65	64	63	62	61	Feasible
R96 – Soquel Drive, Aptos	69	70	72	Yes	67	65	65	64	62	Feasible
R97 – Soquel Drive, Aptos	70	71	73	Yes	69	67	66	64	63	Feasible
R98 – Cabrillo College Drive, Aptos	71	72	75	Yes	73	72	71	70	68	Feasible
R99 – Cabrillo College Drive, Aptos	66	67	71	Yes	67	65	64	63	62	Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R100 – Willowbrook Lane, Aptos	73	73	74	Yes	69	67	66	65	64	Feasible
R101 – Willowbrook Lane, Aptos	74	74	76	Yes	71	69	68	66	66	Feasible
R102 – Willowbrook Lane, Aptos	73	73	75	Yes	71	70	69	69	68	Feasible
R103 – Sillis Court, Capitola	72	72	72	Yes	67	65	64	63	62	Feasible
R104 – Sutherland Lane, Capitola	72	72	73	Yes	64	63	62	62	61	Feasible
R105 – Callas Lane, Capitola	71	71	72	Yes	64	62	61	60	60	Feasible
R106 – Callas Lane, Capitola	73	73	74	Yes	67	65	64	63	62	Feasible
R107 – Callas Lane, Capitola	72	72	74	Yes	66	65	64	63	63	Feasible
R108 – Ponselle Lane, Capitola	74	74	76	Yes	72	71	71	71	71	Feasible
R109 – Plum Street, Capitola	61	61	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R110 – Chittenden Lane, Capitola	69	70	72	Yes	69	68	67	67	66	Feasible
R111 – Rosedale Avenue, Capitola	62	63	66	Yes	64	64	64	63	63	Not Feasible
R112 – Capitola Avenue, Capitola	62	63	66	Yes	N/A	N/A	N/A	63	62	Not Feasible
R113 – Capitola Avenue, Capitola	63	64	67	Yes	N/A	N/A	N/A	64	63	Not Feasible



Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R114 – Capitola Avenue, Capitola	66	67	71	Yes	N/A	N/A	N/A	70	70	Not Feasible
R115 – Balboa Avenue, Capitola	61	62	65	No	N/A	N/A	N/A	N/A	N/A	N/A
R116 – Balboa Avenue, Capitola	66	67	70	Yes	N/A	N/A	69	69	68	Not Feasible
R117 – Bay Avenue, Capitola	65	65	67	Yes	N/A	N/A	67	67	67	Not Feasible
R118 – Bay Avenue, Capitola	67	67	70	Yes	N/A	N/A	69	69	69	Not Feasible
R119 – Soquel Drive, Aptos	66	69	69	Yes	61	61	58	56	55	Feasible
R120 – Cabrillo College Drive, Soquel	61	64	66	Yes	62	61	60	59	58	Feasible
R121 – Alturas Way, Soquel	58	61	62	No	59	58	57	56	55	N/A
R122 – Monterey Avenue, Soquel	62	65	67	Yes	62	61	59	58	58	Feasible
R123 – Monterey Avenue, Soquel	63	66	68	Yes	63	61	60	59	58	Feasible
R124 – Monterey Avenue, Soquel	64	67	69	Yes	67	67	66	64	62	Feasible
R125 – Orchard Street, Soquel	65	68	71	Yes	64	63	62	61	61	Feasible
R126 – Orchard Street, Soquel	70	73	74	Yes	70	68	66	64	62	Feasible
R127 – Orchard Street, Soquel	69	72	75	Yes	66	64	63	61	60	Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R128 – Orchard Street, Soquel	67	68	69	Yes	66	64	63	61	60	Feasible
R129 – Orchard Street, Soquel	67	68	71	Yes	67	64	63	62	62	Feasible
R130 – Gary Drive, Soquel	65	70	73	Yes	64	63	62	62	61	Feasible
R131 – Gary Drive, Soquel	67	72	75	Yes	66	64	62	61	60	Feasible
R131A – Gary Drive, Soquel	67	72	74	Yes	65	63	62	61	59	Feasible
R132 – Gary Drive, Soquel	64	69	73	Yes	64	63	61	60	59	Feasible
R133 – Wilder Drive, Soquel	58	61	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R134 – Wilder Drive, Soquel	58	61	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R135 – Wilder Drive, Soquel	62	65	68	Yes	N/A	N/A	68	68	67	Not Feasible
R136 – Wilder Drive, Soquel	59	62	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R137 – Wharf Road, Soquel	67	69	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R138 – Wharf Road, Soquel	60	61	62	No	N/A	N/A	N/A	N/A	N/A	N/A
R139 – Wharf Road, Soquel	61	62	62	No	N/A	N/A	N/A	N/A	N/A	N/A
R140 – Wharf Road, Soquel	60	61	56	No	N/A	N/A	N/A	N/A	N/A	N/A

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R141 – Suncatcher Court, Soquel	60	63	68	Yes	65	64	64	64	63	Feasible
R142 – Suncatcher Court, Soquel	58	60	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R143 – Topsail Court, Soquel	69	69	72	Yes	64	62	61	60	59	Feasible
R144 – Rodeo Gulch Road, Santa Cruz	59	64	67	Yes	65	65	64	64	64	Not Feasible
R145 – Femm Way, Santa Cruz	56	61	64	No	62	62	62	62	62	N/A
R146A – Cory Street, Santa Cruz	57	58	66	Yes	63	62	61	61	61	Feasible
R146 – Mattison Lane, Santa Cruz	68	69	71	Yes	66	66	65	64	63	Feasible
R147 – Mattison Lane, Santa Cruz	76	77	80	Yes	70	68	66	65	64	Feasible
R148 – Mattison Lane, Santa Cruz	64	65	69	Yes	65	65	64	63	62	Feasible
R149 – Soquel Avenue, Santa Cruz	71	72	75	Yes	68	67	66	66	65	Feasible
R150 – Paul Minnie Avenue, Santa Cruz	68	69	72	Yes	67	66	65	64	64	Feasible
R151 – Soquel Avenue, Santa Cruz	56	57	60	No	N/A	N/A	N/A	N/A	N/A	N/A
R153 – Soquel Avenue, Santa Cruz	62	63	66	Yes	62	61	61	60	59	Feasible
R154 – La Fonda, Santa Cruz	63	64	66	Yes	61	61	60	59	59	Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R155 – La Fonda, Santa Cruz	66	67	69	Yes	66	65	64	64	62	Feasible
R156 – La Fonda, Santa Cruz	59	60	63	No	61	61	61	60	59	N/A
R157 <sup>1</sup> – La Fonda, Santa Cruz	76	77	78	Yes	N/A	N/A	N/A	N/A	N/A	N/A
R158A-1** – La Fonda, Santa Cruz	53	54	55	Yes	52	50	49	47	46	Feasible
R158A-2** – La Fonda, Santa Cruz	44	45	46	No	41	40	39	37	36	N/A
R158B – La Fonda, Santa Cruz	70	71	72	Yes	68	67	66	64	63	Feasible
R158 – Park Way, Santa Cruz	71	72	73	Yes	67	67	65	64	64	Feasible
R159 – Park Way, Santa Cruz	63	67	69	Yes	N/A	N/A	N/A	65	65	Not Feasible
R160 – Roxas Street, Santa Cruz	62	66	68	Yes	N/A	N/A	N/A	65	65	Not Feasible
R161 – Marnell Avenue, Santa Cruz	58	62	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R162 – San Juan Avenue, Santa Cruz	58	62	62	No	N/A	N/A	N/A	N/A	N/A	N/A
R163 – San Juan Avenue, Santa Cruz	56	60	61	No	N/A	N/A	N/A	N/A	N/A	N/A
R164 – Pacheco Avenue, Santa Cruz	54	58	56	No	N/A	N/A	N/A	N/A	N/A	N/A
R165A – Salisbury Drive, Santa Cruz	59	62	66	Yes	61	60	60	59	58	Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R165 – Salisbury Drive, Santa Cruz	62	65	65	No	63	62	61	60	60	N/A
R166 – Oak Way, Santa Cruz	71	68	69	Yes	N/A	69	69	69	69	Not Feasible
R167 – Oak Way, Santa Cruz	66	63	65	No	N/A	N/A	N/A	N/A	N/A	N/A
R167A – Oak Way, Santa Cruz	63	60	61	No	N/A	N/A	N/A	N/A	N/A	N/A
R168 – Oak Way, Santa Cruz	62	59	61	No	N/A	N/A	N/A	N/A	N/A	N/A
R169 – La Fonda Avenue, Santa Cruz	67	60	62	No	N/A	N/A	N/A	N/A	N/A	N/A
R170 – Holway Drive, Santa Cruz	64	57	59	No	N/A	N/A	N/A	N/A	N/A	N/A
R171 – Morrissey Boulevard, Santa Cruz	66	67	68	Yes	N/A	N/A	66	65	64	N/A
R172 – Morrissey Boulevard, Santa Cruz	66	67	68	Yes	N/A	N/A	N/A	68	68	N/A
R173 – Morrissey Boulevard, Santa Cruz	62	63	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R174 – Trevehan Avenue, Santa Cruz	63	64	65	No	N/A	N/A	N/A	N/A	N/A	N/A
R175 – Morrissey Boulevard, Santa Cruz	62	63	64	No	N/A	N/A	N/A	N/A	N/A	N/A

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R176 – San Juan Avenue, Santa Cruz	62	63	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R176A – Pacheco Avenue, Santa Cruz	64	65	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R178 – Fairmount Avenue, Santa Cruz	54	58	57	No	N/A	N/A	N/A	N/A	N/A	N/A
R179 – Fairmount Avenue, Santa Cruz	55	59	59	No	N/A	N/A	N/A	N/A	N/A	N/A
R180 – Fairmount Avenue, Santa Cruz	58	62	60	No	N/A	N/A	N/A	N/A	N/A	N/A
R181 – Fairmount Avenue, Santa Cruz	54	58	59	No	N/A	N/A	N/A	N/A	N/A	N/A
R182 – Dellview Avenue, Santa Cruz	55	59	60	No	N/A	N/A	N/A	N/A	N/A	N/A
R183 – Elk Street, Santa Cruz	61	65	66	Yes	N/A	N/A	N/A	65	64	Not Feasible
R184 – Elk Street, Santa Cruz	64	68	68	Yes	N/A	N/A	N/A	65	64	Not Feasible
R185 – Rooney Street, Santa Cruz	62	66	68	Yes	N/A	N/A	N/A	66	65	Not Feasible
R186 – Rooney Street, Santa Cruz	60	64	66	Yes	N/A	N/A	N/A	N/A	65	Not Feasible
R187 – Rooney Street, Santa Cruz	60	64	66	Yes	N/A	N/A	N/A	N/A	65	Not Feasible

\* Reasonableness and feasibility of soundwalls would be identified in each future Tier II environmental document prepared for future phases of the HOV Lane Alternative.

\*\* Measurement or modeling purposes only; no outdoor use area.

<sup>1</sup>This receiver was identified as “severely impacted” receiver as part of Highway 1 Soquel to Morrissey Auxiliary Lane Project, and noise mitigation were provided. No further action is required.



**Table 2: Results of Noise Modeling for the Tier I Corridor TSM Alternative**

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
				8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R1 – Vista Grande Drive, Aptos	54	No Changes in Roadway or Ramp Alignments							
R2 – Vista Grande Drive, Aptos	55								
R3 – Vista Grande Drive, Aptos	58								
R4 – Bonita Drive, Aptos	59								
R5 – Bonita Drive, Aptos	56								
R6 – Sonata Lane, Aptos	59								
R7 – Bonita Drive, Aptos	63								
R8 – Bonita Drive, Aptos	60								
R9 – Bonita Drive, Aptos	64								
R10 – Encino Drive, Aptos	64								
R10A** – Encino Drive, Aptos	71								
R11 – Loma Prieta Drive, Aptos	74								
R12 – Encino Drive, Aptos	68								
R13 – Encino Drive, Aptos	68								
R14 – Soquel Drive, Aptos	60								

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
				8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R15 – Bonita Drive, Aptos	61	62	No	N/A	N/A	N/A	N/A	N/A	N/A
R16 – Bonita Drive, Aptos	65	65	No	64	62	61	60	59	N/A
R17 – Bonita Drive, Aptos	68	70	Yes	66	65	63	62	61	Feasible
R18 – Bonita Drive, Aptos	69	70	Yes	68	67	65	63	61	Feasible
R18A – Bonita Drive, Aptos	64	65	No	64	63	63	61	58	N/A
R19 – Bonita Drive, Aptos	63	64	No	62	61	60	57	55	N/A
R20 – Bonita Drive, Aptos	70	72	Yes	69	67	65	63	62	Feasible
R21 – Loma Prieta Drive, Aptos	72	73	Yes	73	73	73	72	72	Not Feasible
R22 – Loma Prieta Drive, Aptos	69	70	Yes	70	69	68	67	66	Not Feasible
R23 – Loma Prieta Drive, Aptos	66	66	Yes	65	65	65	65	64	Not Feasible
R24 – Soquel Drive, Aptos	58	61	No	N/A	N/A	N/A	N/A	N/A	N/A
R25 – Soquel Drive, Aptos	63	66	Yes	63	62	61	59	58	Not Feasible
R26 – Soquel Drive, Aptos	68	72	Yes	65	63	62	61	60	Not Feasible
R27 – Monroe Avenue, Aptos	68	71	Yes	71	70	69	68	67	Not Feasible
R28 – Monroe Avenue, Aptos	64	64	No	64	63	62	60	59	N/A
R29 – Soquel Drive, Aptos	68	72	Yes	65	63	62	61	60	Not Feasible
R30 – Soquel Drive, Aptos	69	72	Yes	66	64	63	62	61	Not Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
				8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R31 – Soquel Drive, Aptos	71	74	Yes	66	64	63	62	61	Not Feasible
R32 – Soquel Drive, Aptos	66	67	Yes	61	59	59	58	57	Not Feasible
R33 – Monroe Avenue, Aptos	67	69	Yes	67	67	65	65	63	Not Feasible
R34 – Monroe Avenue, Aptos	59	61	No	N/A	N/A	N/A	N/A	N/A	N/A
R35 – Monroe Avenue, Aptos	71	71	Yes	71	71	71	70	70	Not Feasible
R36 – Monroe Avenue, Aptos	67	70	Yes	69	68	66	64	62	Not Feasible
R37 – Robin Drive, Aptos	58	59	No	N/A	N/A	N/A	N/A	N/A	N/A
R38 – Sandal Wood Drive, Aptos	63	69	Yes	63	61	60	60	59	Not Feasible
R39 – Coronado Drive, Aptos	55	59	No	N/A	N/A	N/A	N/A	N/A	N/A
R39A – Palo Verde Court, Aptos	55	57	No	N/A	N/A	N/A	N/A	N/A	N/A
R40 – Soquel Drive, Aptos	68	71	Yes	68	68	67	67	66	Feasible
R40A – Soquel Drive, Aptos	71	75	Yes	66	64	62	61	60	Feasible
R41 – Soquel Drive, Aptos	70	74	Yes	63	62	61	60	59	Feasible
R42 – Carrera Circle, Aptos	74	77	Yes	67	66	64	63	62	Feasible
R43 – Carrera Circle, Aptos	58	61	No	57	56	56	55	55	N/A
R44 – Carrera Circle, Aptos	65	68	Yes	62	60	59	58	57	Feasible
R45 – Moosehead Drive, Aptos	68	72	Yes	69	68	68	68	67	Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
				8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R45A**– Moosehead Drive, Aptos	68	73	Yes	67	66	66	65	64	Not Feasible
R46 – Moosehead Drive, Aptos	70	73	Yes	72	71	71	71	70	Not Feasible
R47 – Moosehead Drive/Route 1	72	76	No	N/A	N/A	N/A	N/A	N/A	N/A
R48 – Moosehead Drive/Route 1	74	78	No	N/A	N/A	N/A	N/A	N/A	N/A
R49 – Moosehead Drive, Aptos	66	70	Yes	65	64	63	62	62	Feasible
R50 – Moosehead Drive, Aptos	59	63	No	67	59	58	58	57	N/A
R51 – Seacliff Drive, Aptos	58	61	No	N/A	N/A	N/A	N/A	N/A	N/A
R52 – Seacliff Drive, Aptos	73	76	Yes	67	67	66	66	66	Feasible
R53 – Seacliff Drive, Aptos	63	64	No	61	61	60	60	59	N/A
R54 – Seacliff Drive, Aptos	64	66	Yes	64	63	63	63	63	Not Feasible
R55 – North Avenue, Aptos	61	64	No	62	61	61	61	60	N/A
R56 – North Avenue, Aptos	57	60	No	N/A	N/A	N/A	N/A	N/A	N/A
R57 – North Avenue, Aptos	54	57	No	N/A	N/A	N/A	N/A	N/A	N/A
R58 – North Avenue, Aptos	53	56	No	N/A	N/A	N/A	N/A	N/A	N/A
R59 – Skate Park Drive, Aptos	62	65	No	N/A	N/A	N/A	N/A	N/A	N/A
R62 – Soquel Drive, Aptos	63	66	Yes	64	62	62	60	59	Feasible
R63 – Spreckels Drive, Aptos	72	74	Yes	66	64	63	62	61	Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
				8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R64 – Spreckels Drive, Aptos	75	76	Yes	70	69	68	67	67	Feasible
R65 – Spreckels Drive, Aptos	80	78	Yes	69	67	66	65	64	Feasible
R66 – Sailfish Drive, Aptos	65	67	Yes	63	61	59	58	57	Feasible
R67 – Marlin Court, Aptos	69	71	Yes	69	66	64	62	60	Feasible
R68 – Bonefish Court, Aptos	70	72	Yes	67	65	63	61	60	Feasible
R69 – Silverfish Court, Aptos	69	71	Yes	64	62	60	59	58	Feasible
R70 – Barkentine Court, Aptos	68	70	Yes	64	62	60	59	58	Feasible
R71 – Margaret Avenue, Aptos	70	72	Yes	65	63	61	60	59	Feasible
R72 – Margaret Avenue, Aptos	69	74	Yes	70	68	65	63	62	Feasible
R73 – Margaret Avenue, Aptos	61	66	Yes	61	60	59	58	57	Feasible
R74 – Mar Vista, Aptos	55	61	No	56	55	55	54	54	N/A
R75 – Estates Drive, Aptos	63	64	No	60	59	57	56	55	N/A
R76 – Route 1, Aptos	65	67	Yes	62	61	60	59	58	Feasible
R77 – Route 1, Aptos	68	71	Yes	67	65	63	62	61	Feasible
R78 – Route 1, Aptos	67	69	Yes	64	63	62	60	59	Feasible
R78A – Route 1, Aptos	70	71	Yes	67	65	64	63	62	Feasible
R79 – Pinetree Lane, Aptos	60	61	No	N/A	N/A	N/A	N/A	N/A	N/A
R80 – Pinetree Lane, Aptos	59	60	No	N/A	N/A	N/A	N/A	N/A	N/A
R81 – Old Dominion Court, Aptos	65	66	Yes	64	62	61	59	59	Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
				8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R82 – Old Dominion Court, Aptos	56	55	No	53	53	52	51	50	N/A
R83 – Soquel Drive, Aptos	60	60	No	N/A	N/A	N/A	N/A	N/A	N/A
R84 – Primrose Street, Aptos	62	62	No	N/A	N/A	N/A	N/A	N/A	N/A
R84A – Primrose Street, Aptos	63	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R85 – Primrose Street, Aptos	64	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R86 – Primrose Street, Aptos	65	65	No	N/A	N/A	N/A	N/A	N/A	N/A
R87 – Mar Vista, Aptos	65	65	No	63	63	62	60	59	N/A
R88 – Millie Court, Aptos	69	70	Yes	67	65	64	62	60	Feasible
R89 – Mar Vista, Aptos	71	74	Yes	64	62	61	60	59	Feasible
R90 – Mar Vista, Aptos	70	74	Yes	67	65	63	61	60	Feasible
R91 – Mar Vista, Aptos	65	69	Yes	69	66	62	59	57	Feasible
R92 – Borregas Drive, Aptos	63	66	Yes	60	59	58	57	56	Feasible
R93 – Borregas Drive, Aptos	71	75	Yes	65	63	62	60	59	Feasible
R94 – Estates Drive, Aptos	64	68	Yes	62	60	59	58	58	Feasible
R95 – Soquel Drive, Aptos	64	67	Yes	63	62	61	59	58	Feasible
R96 – Soquel Drive, Aptos	66	69	Yes	65	63	62	61	60	Feasible
R97 – Soquel Drive, Aptos	68	72	Yes	67	65	64	62	61	Feasible



Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
				8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R98 – Cabrillo College Drive, Aptos	71	72	Yes	70	69	67	66	64	Feasible
R99 – Cabrillo College Drive, Aptos	67	68	Yes	63	62	61	60	59	Feasible
R100 – Willowbrook Lane, Aptos	73	72	Yes	65	64	63	61	60	Feasible
R101 – Willowbrook Lane, Aptos	74	72	Yes	67	66	65	63	62	Feasible
R102 – Willowbrook Lane, Aptos	74	73	Yes	68	67	66	65	65	Feasible
R103 – Sillis Court, Capitola	70	72	Yes	66	65	64	62	61	Feasible
R104 – Sutherland Lane, Capitola	71	72	Yes	63	62	61	60	59	Feasible
R105 – Callas Lane, Capitola	70	71	Yes	63	61	60	59	58	Feasible
R106 – Callas Lane, Capitola	71	71	Yes	66	64	63	62	61	Feasible
R107 – Callas Lane, Capitola	72	73	Yes	65	64	63	62	61	Feasible
R108 – Ponselle Lane, Capitola	74	75	Yes	71	70	69	67	66	Not Feasible
R109 – Plum Street, Capitola	61	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R110 – Chittenden Lane, Capitola	68	72	Yes	69	68	67	67	66	Feasible
R111 – Rosedale Avenue, Capitola	62	65	No	63	62	60	60	59	N/A
R112 – Capitola Avenue, Capitola	62	65	No	64	64	63	62	61	N/A
R113 – Capitola Avenue, Capitola	63	66	Yes	N/A	N/A	64	63	62	Not Feasible
R114 – Capitola Avenue, Capitola	67	69	Yes	N/A	N/A	68	68	68	Not Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
				8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R115 – Balboa Avenue, Capitola	61	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R116 – Balboa Avenue, Capitola	66	68	Yes	N/A	N/A	68	67	67	Not Feasible
R117 – Bay Avenue, Capitola	65	66	Yes	N/A	N/A	65	65	65	Not Feasible
R118 – Bay Avenue, Capitola	68	69	Yes	N/A	N/A	67	67	67	Not Feasible
R119 – Soquel Drive, Aptos	62	68	Yes	62	60	59	58	58	Feasible
R120 – Cabrillo College Drive, Soquel	59	65	No	61	60	59	59	58	N/A
R121 – Alturas Way, Soquel	55	62	No	60	59	59	59	58	N/A
R122 – Monterey Avenue, Soquel	61	65	No	63	61	60	59	58	N/A
R123 – Monterey Avenue, Soquel	63	66	Yes	64	61	60	59	59	Feasible **
R124 – Monterey Avenue, Soquel	64	70	Yes	68	67	66	64	63	Feasible **
R125 – Orchard Street, Soquel	66	69	Yes	64	63	62	61	61	Feasible
R126 – Orchard Street, Soquel	69	75	Yes	68	66	65	63	62	Feasible
R127 – Orchard Street, Soquel	69	75	Yes	67	65	64	63	61	Feasible
R128 – Orchard Street, Soquel	63	70	Yes	67	65	63	62	61	Feasible
R129 – Orchard Street, Soquel	65	71	Yes	68	65	64	63	62	Feasible **
R130 – Gary Drive, Soquel	61	67	Yes	N/A	N/A	64	64	63	Not Feasible
R131 – Gary Drive, Soquel	67	67	Yes	N/A	N/A	65	64	63	Not Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
				8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R132 – Gary Drive, Soquel	66	66	Yes	N/A	N/A	65	63	63	Not Feasible
R133 – Wilder Drive, Soquel	58	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R134 – Wilder Drive, Soquel	58	62	No	N/A	N/A	N/A	N/A	N/A	N/A
R135 – Wilder Drive, Soquel	63	66	Yes	N/A	N/A	66	66	66	Not Feasible
R136 – Wilder Drive, Soquel	58	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R137 – Wharf Road, Soquel	64	68	Yes	63	62	62	62	61	Feasible **
R138 – Wharf Road, Soquel	56	61	No	N/A	N/A	N/A	N/A	N/A	N/A
R139 – Wharf Road, Soquel	57	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R140 – Wharf Road, Soquel	55	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R141 – Suncatcher Court, Soquel	58	66	Yes	62	62	61	59	59	Feasible
R142 – Suncatcher Court, Soquel	58	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R143 – Topsail Court, Soquel	70	72	Yes	64	62	61	60	59	Feasible
R144 – Rodeo Gulch Road, Santa Cruz	59	61	No	N/A	N/A	N/A	N/A	N/A	N/A
R145 – Femm Way, Santa Cruz	58	60	No	N/A	N/A	N/A	N/A	N/A	N/A
R146A – Cory Street, Santa Cruz	57	60	No	N/A	N/A	N/A	N/A	N/A	N/A
R146 – Mattison Lane, Santa Cruz	66	69	Yes	65	64	63	61	61	Feasible
R147 – Mattison Lane, Santa Cruz	74	78	Yes	66	64	63	62	61	Feasible

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
				8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R148 – Mattison Lane, Santa Cruz	64	67	Yes	64	63	62	61	61	Feasible
R149 – Soquel Avenue, Santa Cruz	73	75	Yes	68	66	66	65	64	Feasible
R150 – Paul Minnie Avenue, Santa Cruz	70	71	Yes	67	65	64	63	63	Feasible **
R151 – Soquel Avenue, Santa Cruz	57	58	No	N/A	N/A	N/A	N/A	N/A	N/A
R153 – Soquel Avenue, Santa Cruz	61	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R154 – La Fonda, Santa Cruz	63	65	No	N/A	N/A	N/A	N/A	N/A	N/A
R155 – La Fonda, Santa Cruz	67	69	Yes	65	65	64	64	63	Feasible
R156 – La Fonda, Santa Cruz	59	61	No	61	61	61	60	60	N/A
R157 <sup>1</sup> – La Fonda, Santa Cruz	75	77	Yes	N/A	N/A	N/A	N/A	N/A	N/A
R158 – Park Way, Santa Cruz	69	73	Yes	68	67	66	66	65	Feasible
R159 – Park Way, Santa Cruz	74	70	Yes	N/A	N/A	N/A	66	66	Not Feasible
R160 – Roxas Street, Santa Cruz	73	69	Yes	N/A	N/A	N/A	66	65	Not Feasible
R161 – Marnell Avenue, Santa Cruz	70	65	No	N/A	N/A	N/A	N/A	N/A	N/A
R162 – San Juan Avenue, Santa Cruz	68	65	No	N/A	N/A	N/A	N/A	N/A	N/A
R163 – San Juan Avenue, Santa Cruz	67	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R164A – Pacheco Avenue, Santa Cruz	64	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R164 – Pacheco Avenue, Santa Cruz	64	61	No	N/A	N/A	N/A	N/A	N/A	N/A

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
				8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R165A – Salisbury Drive, Santa Cruz	58	67	Yes	64	64	63	62	62	Feasible
R165 – Salisbury Drive, Santa Cruz	59	69	Yes	64	64	63	63	63	Feasible
R166 – Oak Way, Santa Cruz	63	73	Yes	N/A	N/A	N/A	N/A	N/A	Not Feasible
R167 – Oak Way, Santa Cruz	65	76	Yes	67	66	64	64	63	N/A
R168 – Oak Way, Santa Cruz	69	78	Yes	71	71	69	68	66	N/A
R169 – La Fonda Avenue, Santa Cruz	67	76	Yes	69	69	69	68	67	N/A
R170 – Holway Drive, Santa Cruz	65	71	Yes	68	67	64	63	62	N/A
R171 – Morrissey Boulevard, Santa Cruz	75	68	Yes	N/A	N/A	65	64	63	N/A
R172 – Morrissey Boulevard, Santa Cruz	76	69	Yes	N/A	N/A	68	67	66	Not Feasible
R173 – Morrissey Boulevard, Santa Cruz	70	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R174 – Trevehan Avenue, Santa Cruz	72	66	Yes	N/A	N/A	N/A	N/A	65	Not Feasible
R175 – Morrissey Boulevard, Santa Cruz	69	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R176 – San Juan Avenue, Santa Cruz	69	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R176A – Pacheco Avenue, Santa Cruz	71	65	No	N/A	N/A	N/A	N/A	N/A	N/A
R178 – Fairmount Avenue, Santa Cruz	73	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R179 – Fairmount Avenue, Santa Cruz	71	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R180 – Fairmount Avenue, Santa Cruz	71	65	No	N/A	N/A	N/A	N/A	N/A	N/A

Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Feasibility*
				8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R181 – Fairmount Avenue, Santa Cruz	72	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R182 – Dellview Avenue, Santa Cruz	73	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R183 – Elk Street, Santa Cruz	73	63	No	N/A	N/A	N/A	N/A	N/A	N/A
R184 – Elk Street, Santa Cruz	75	67	Yes	N/A	N/A	N/A	67	67	Not Feasible
R185 – Rooney Street, Santa Cruz	72	64	No	N/A	N/A	N/A	N/A	N/A	N/A
R186 – Rooney Street, Santa Cruz	69	61	No	N/A	N/A	N/A	N/A	N/A	N/A
R187 – Rooney Street, Santa Cruz	70	62	No	N/A	N/A	N/A	N/A	N/A	N/A

\* Reasonableness and feasibility of soundwalls would be identified in each future Tier II environmental document that is prepared for future phases of the TSM Alternative.

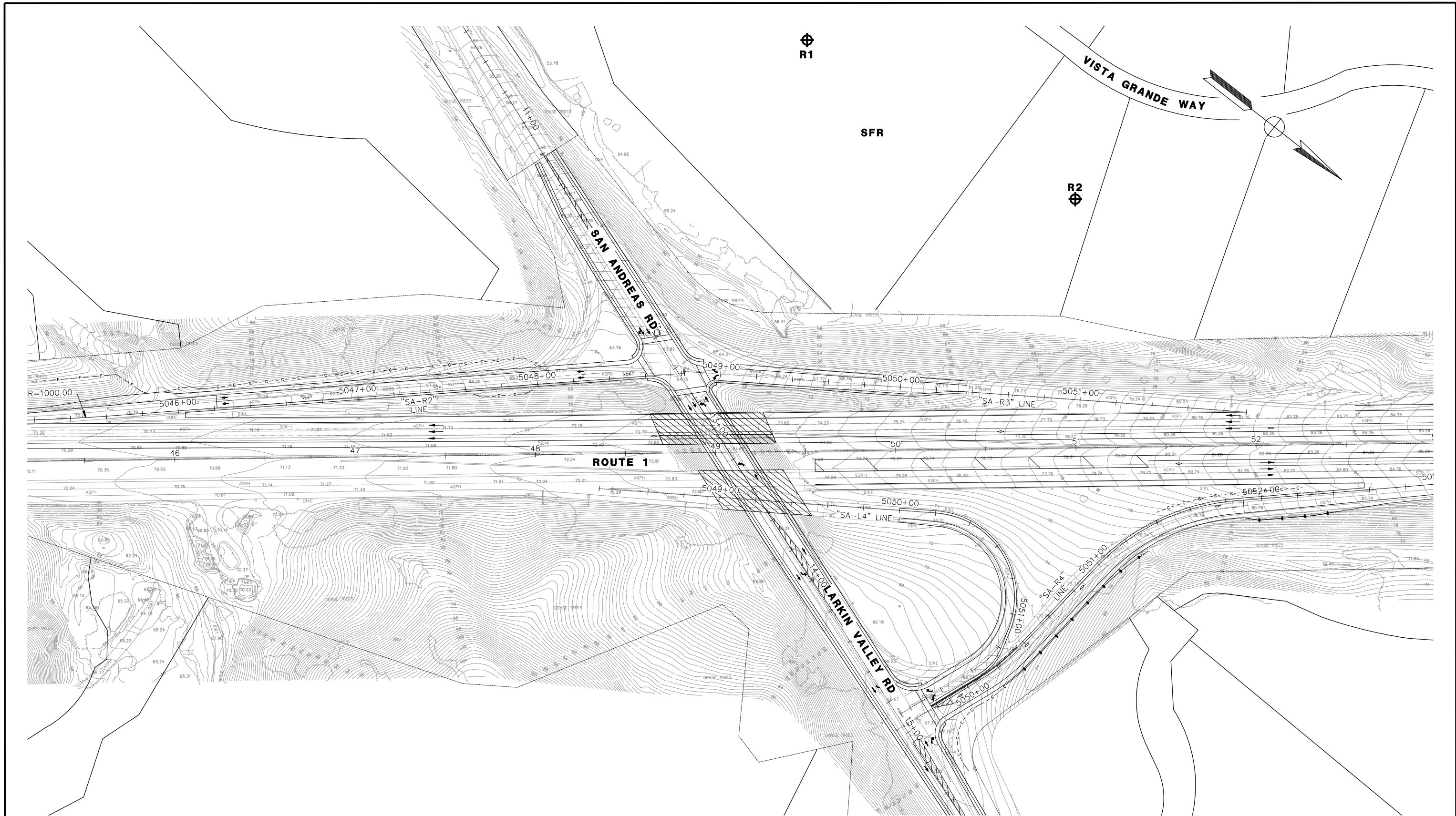
\*\* Measurement or modeling purposes only; no outdoor use area.

<sup>1</sup>This receiver was identified as “severely impacted” receiver as part of Highway 1 Soquel to Morrissey Auxiliary Lane Project, and noise mitigation were provided. No further action is required.



**Table 3: Results of Noise Modeling for the Tier II Auxiliary Lane Alternative**

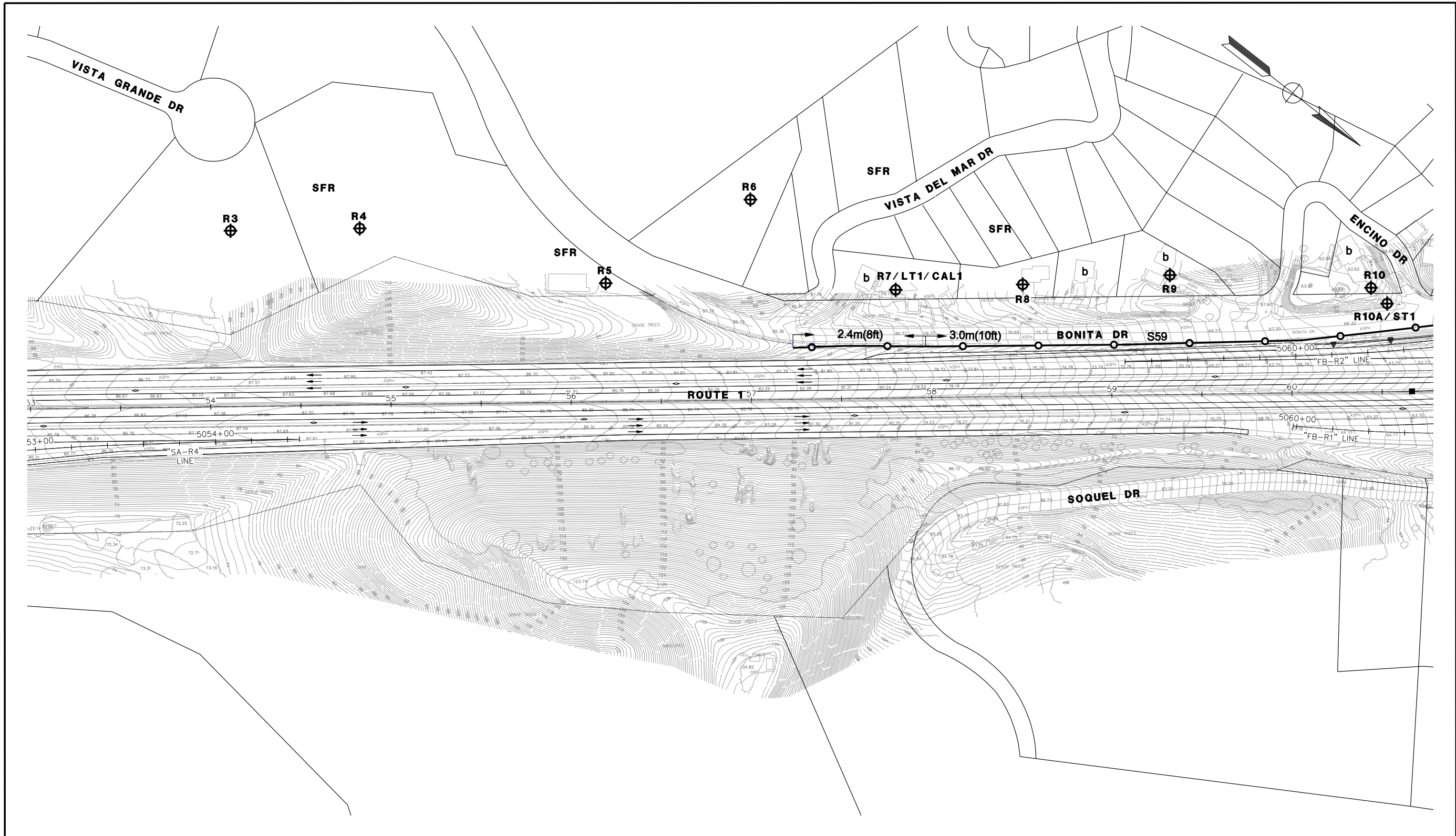
Receptor # and Location	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)					Reasonable and Feasible
					8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R144 – Rodeo Gulch Road, Santa Cruz	61	61	61	No	60	60	60	60	60	N/A
R145 – Femm Way, Santa Cruz	60	60	61	No	61	61	61	61	61	N/A
R146A – Cory Street, Santa Cruz	59	60	60	No	60	60	60	60	60	N/A
R146 – Mattison Lane, Santa Cruz	63	67	67	Yes	63	63	62	61	60	Feasible, Not Reasonable
R147A – Mattison Lane, Santa Cruz	62	66	66	Yes	63	62	62	61	60	Feasible, Not Reasonable
R147B – Mattison Lane, Santa Cruz	69	72	73	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R147 – Mattison Lane, Santa Cruz	67	75	75	Yes	66	65	63	62	61	Feasible, Not Reasonable
R148 – Mattison Lane, Santa Cruz	64	65	65	No	62	62	61	60	60	N/A
R149 – Soquel Avenue, Santa Cruz	70	70	71	Yes	67	66	66	65	65	Feasible, Not Reasonable
R150 – Paul Minnie Avenue, Santa Cruz	70	70	70	Yes	65	65	64	64	64	Feasible, Not Reasonable
R150A – Paul Minnie Avenue, Santa Cruz	71	71	71	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R151 – Soquel Avenue, Santa Cruz	57	57	57	No	55	55	55	54	54	N/A



<b>LEGEND</b>		<b>SFR</b> - SINGLE FAMILY RESIDENCE <b>MFR</b> - MULTI-FAMILY RESIDENCE <b>COMM</b> - COMMERCIAL b - BENEFITED RESIDENCE ① - SEVERELY IMPACTED RECEIVER	<div>1 : 2000 METERS</div> <div>0 m 50 m 100 m</div>	<b>ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b> FEBRUARY 26, 2013 SHEET NO. 1 OF 20	
⊕ <b>RXX</b> - SENSITIVE RECEIVER SITE ⊕ <b>LT</b> - LONG TERM MEASUREMENT ⊕ <b>ST</b> - SHORT TERM MEASUREMENT ⊕ <b>CAL</b> - CALIBRATION SITE	—○—○— - SOUNDWALL - - - - - EXISTING WALL ◆◆◆◆◆ RETAINING WALL ■ ■ ■ ■ ■ CONCRETE BARRIER				



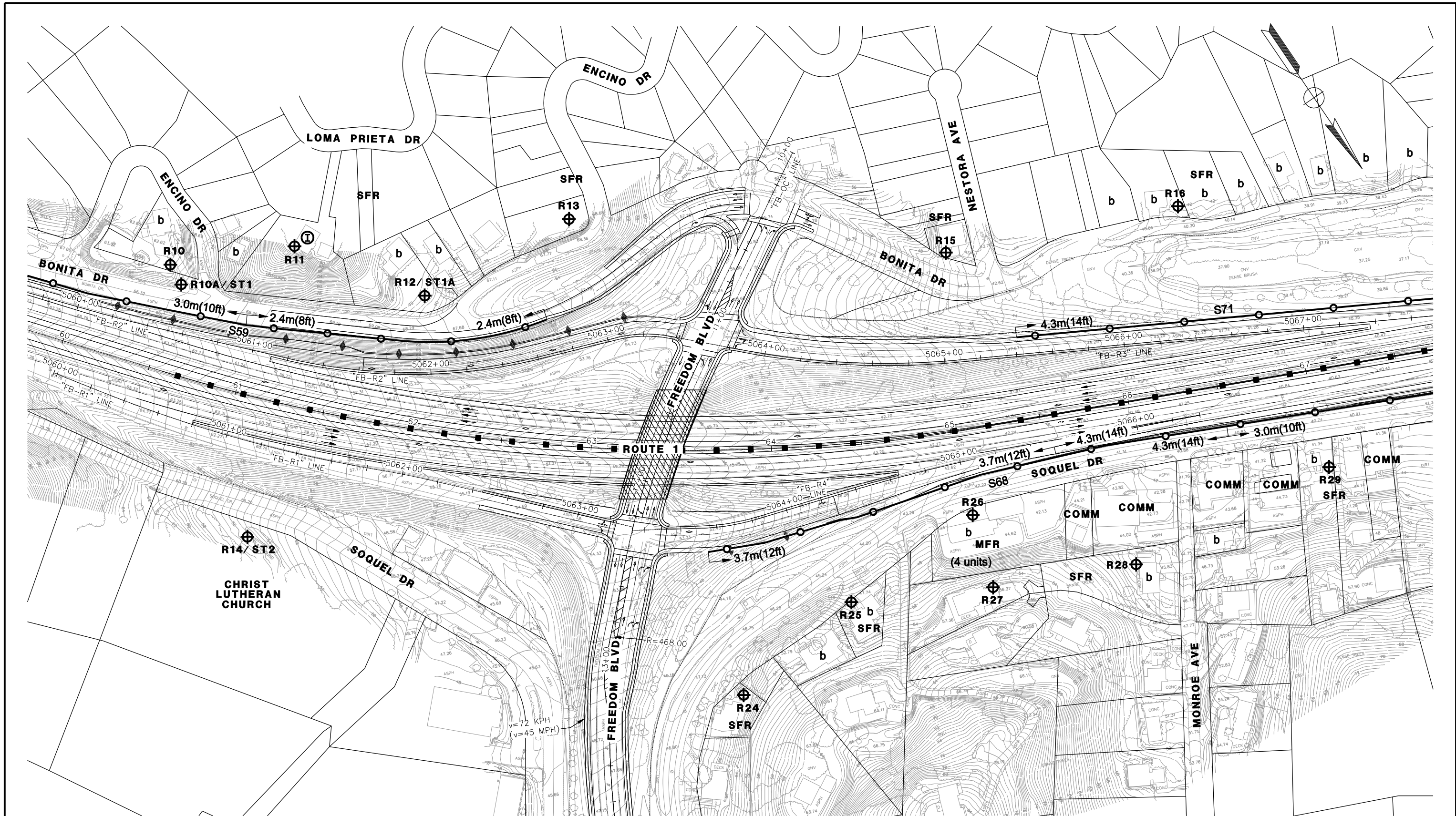




<b>LEGEND</b> ⊕RXX - SENSITIVE RECEIVER SITE ⊕LT - LONG TERM MEASUREMENT ⊕ST - SHORT TERM MEASUREMENT ⊕CAL - CALIBRATION SITE	- SOUNDWALL - EXISTING WALL - RETAINING WALL - CONCRETE BARRIER	<b>SFR</b> - SINGLE FAMILY RESIDENCE <b>MFR</b> - MULTI-FAMILY RESIDENCE <b>COMM</b> - COMMERCIAL b - BENEFITED RESIDENCE Ⓢ - SEVERELY IMPACTED RECEIVER	<div>1 : 2000 METERS</div> <div></div> <div><b>ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b></div> <div>FEBRUARY 26, 2013</div> <div>SHEET NO. 2 OF 20</div>
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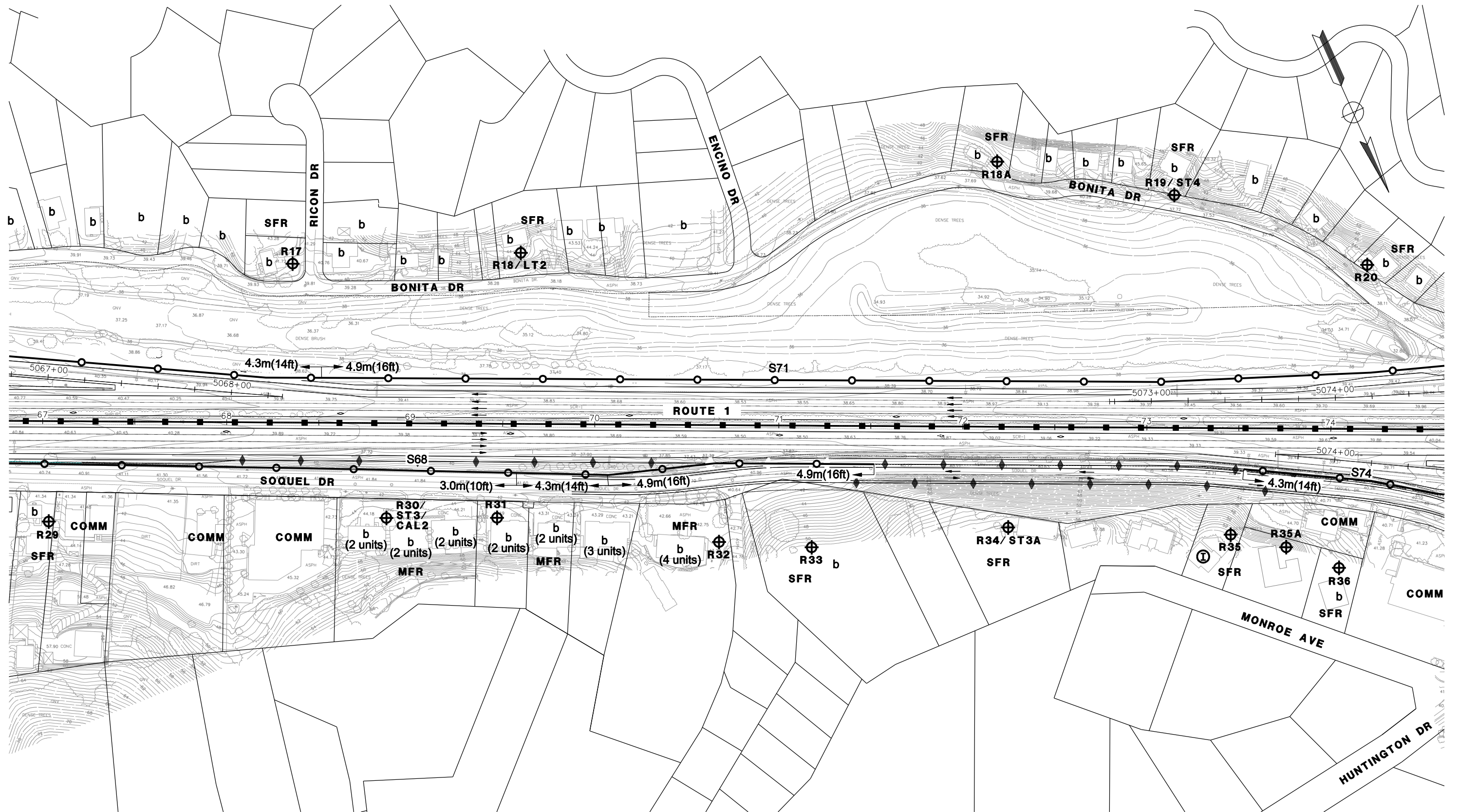




<b>LEGEND</b> ⊕RXX - SENSITIVE RECEIVER SITE ⊕LT - LONG TERM MEASUREMENT ⊕ST - SHORT TERM MEASUREMENT ⊕CAL - CALIBRATION SITE	—○—○— - SOUNDWALL - - - - - EXISTING WALL ◆◆◆◆◆ RETAINING WALL ■ ■ ■ ■ ■ CONCRETE BARRIER	<b>SFR</b> - SINGLE FAMILY RESIDENCE <b>MFR</b> - MULTI - FAMILY RESIDENCE <b>COMM</b> - COMMERCIAL b - BENEFITED RESIDENCE Ⓢ - SEVERELY IMPACTED RECEIVER	1 : 2000 METERS 0 m 50 m 100 m	<b>ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b> FEBRUARY 26, 2013 SHEET NO. 3 OF 20
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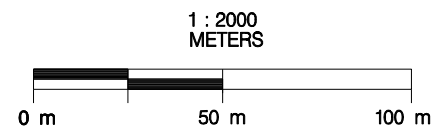


#### LEGEND

- ⊕RXX - SENSITIVE RECEIVER SITE
- ⊕LT - LONG TERM MEASUREMENT
- ⊕ST - SHORT TERM MEASUREMENT
- ⊕CAL - CALIBRATION SITE

- - SOUNDWALL
- — — - EXISTING WALL
- ◆—◆— - RETAINING WALL
- - CONCRETE BARRIER

- SFR - SINGLE FAMILY RESIDENCE
- MFR - MULTI-FAMILY RESIDENCE
- COMM - COMMERCIAL
- b - BENEFITED RESIDENCE
- Ⓢ - SEVERELY IMPACTED RECEIVER

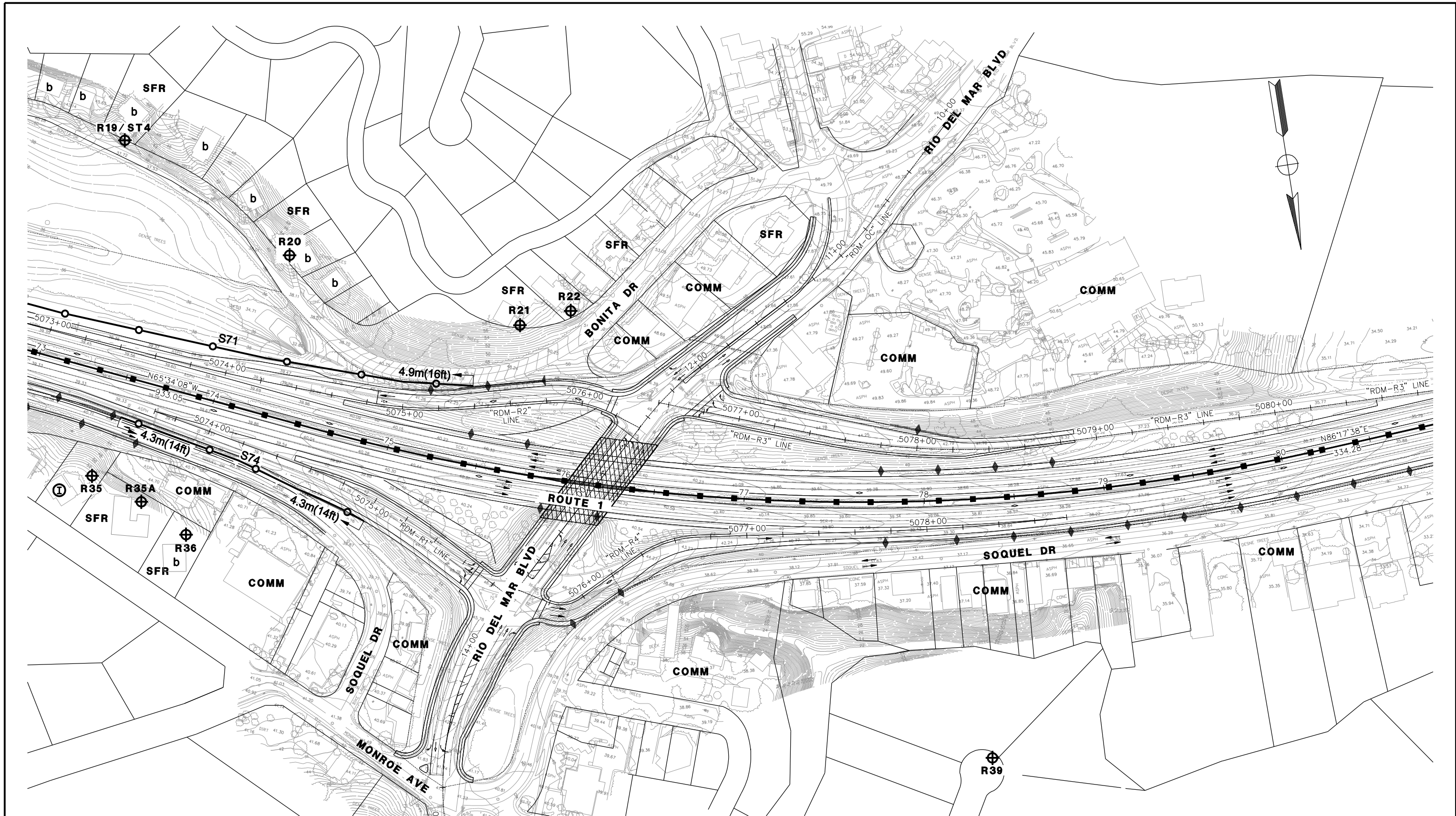


#### ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER & BARRIER LOCATIONS

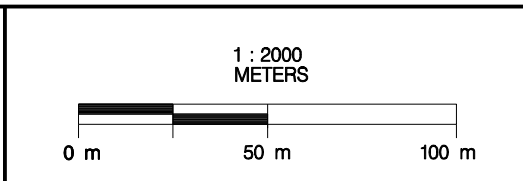
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SHEET NO. 4 OF 20



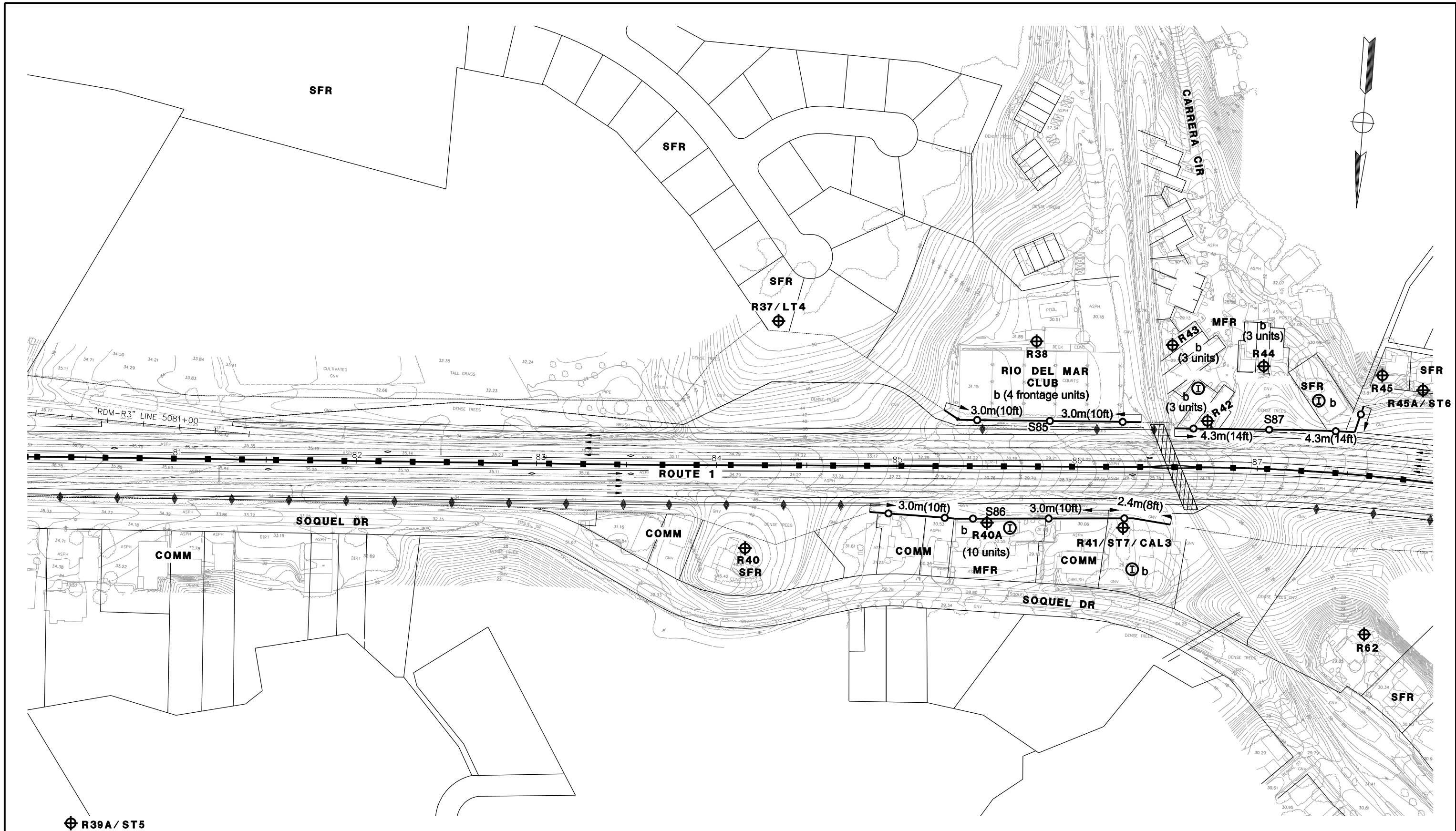


LEGEND			
⊕RXX	- SENSITIVE RECEIVER SITE	—○—○—	- SOUNDWALL
⊕LT	- LONG TERM MEASUREMENT	— — — —	- EXISTING WALL
⊕ST	- SHORT TERM MEASUREMENT	—◆—◆—	- RETAINING WALL
⊕CAL	- CALIBRATION SITE	—■—■—	- CONCRETE BARRIER
		SFR	- SINGLE FAMILY RESIDENCE
		MFR	- MULTI-FAMILY RESIDENCE
		COMM	- COMMERCIAL
		b	- BENEFITED RESIDENCE
		Ⓢ	- SEVERELY IMPACTED RECEIVER









<b>LEGEND</b>			
⊕RXX	- SENSITIVE RECEIVER SITE	—○—○—	- SOUNDWALL
⊕LT	- LONG TERM MEASUREMENT	— — — —	- EXISTING WALL
⊕ST	- SHORT TERM MEASUREMENT	—◆—◆—	- RETAINING WALL
⊕CAL	- CALIBRATION SITE	—■—■—	- CONCRETE BARRIER
		<b>SFR</b>	- SINGLE FAMILY RESIDENCE
		<b>MFR</b>	- MULTI-FAMILY RESIDENCE
		<b>COMM</b>	- COMMERCIAL
		b	- BENEFITED RESIDENCE
		Ⓢ	- SEVERELY IMPACTED RECEIVER

1 : 2000  
METERS

0 m

50 m

100 m

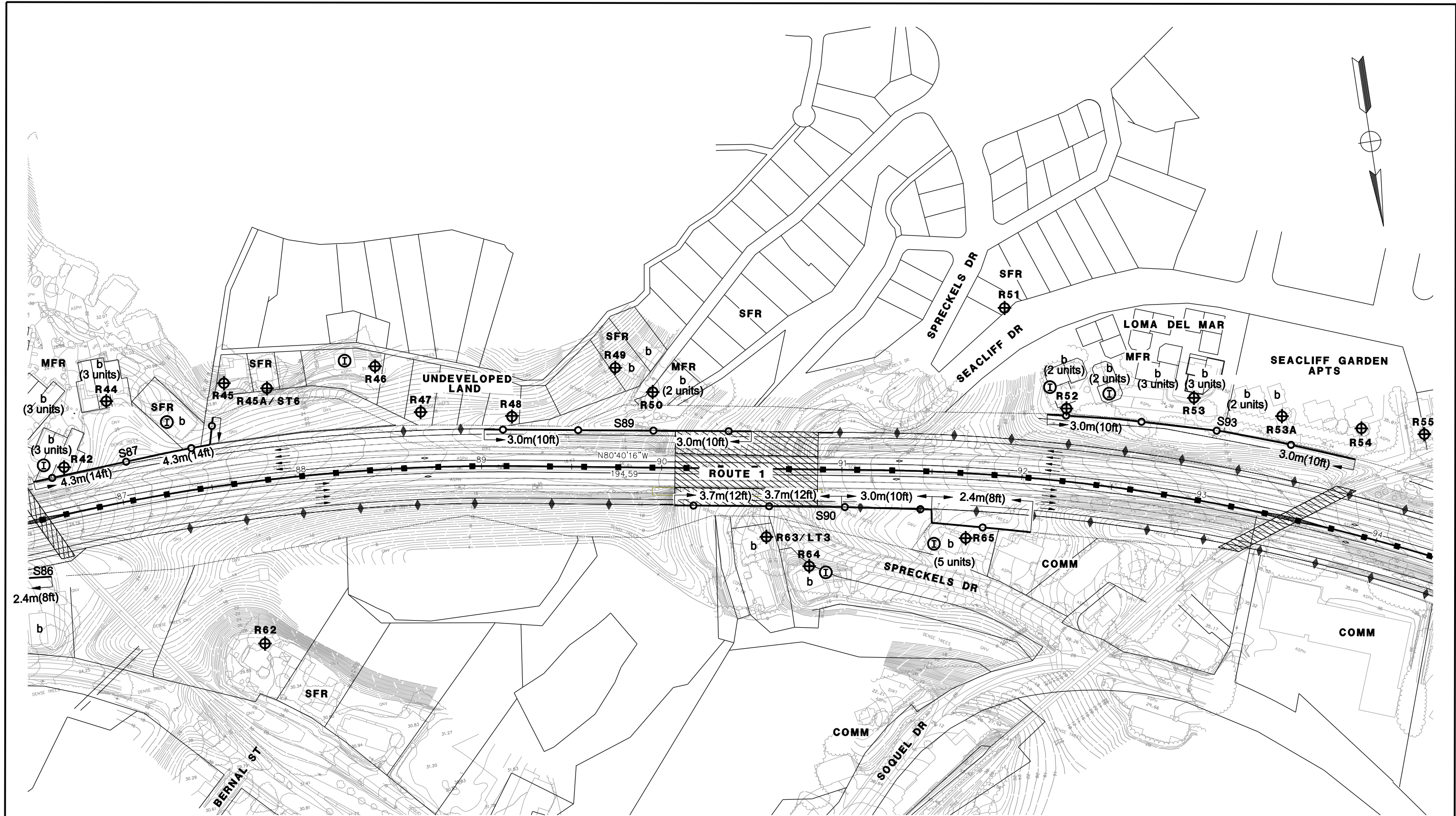
**ROUTE 1 SANTA CRUZ HOV ALTERNATIVE  
NOISE RECEIVER & BARRIER LOCATIONS**

FEBRUARY 26, 2013

SHEET NO. 6 OF 20



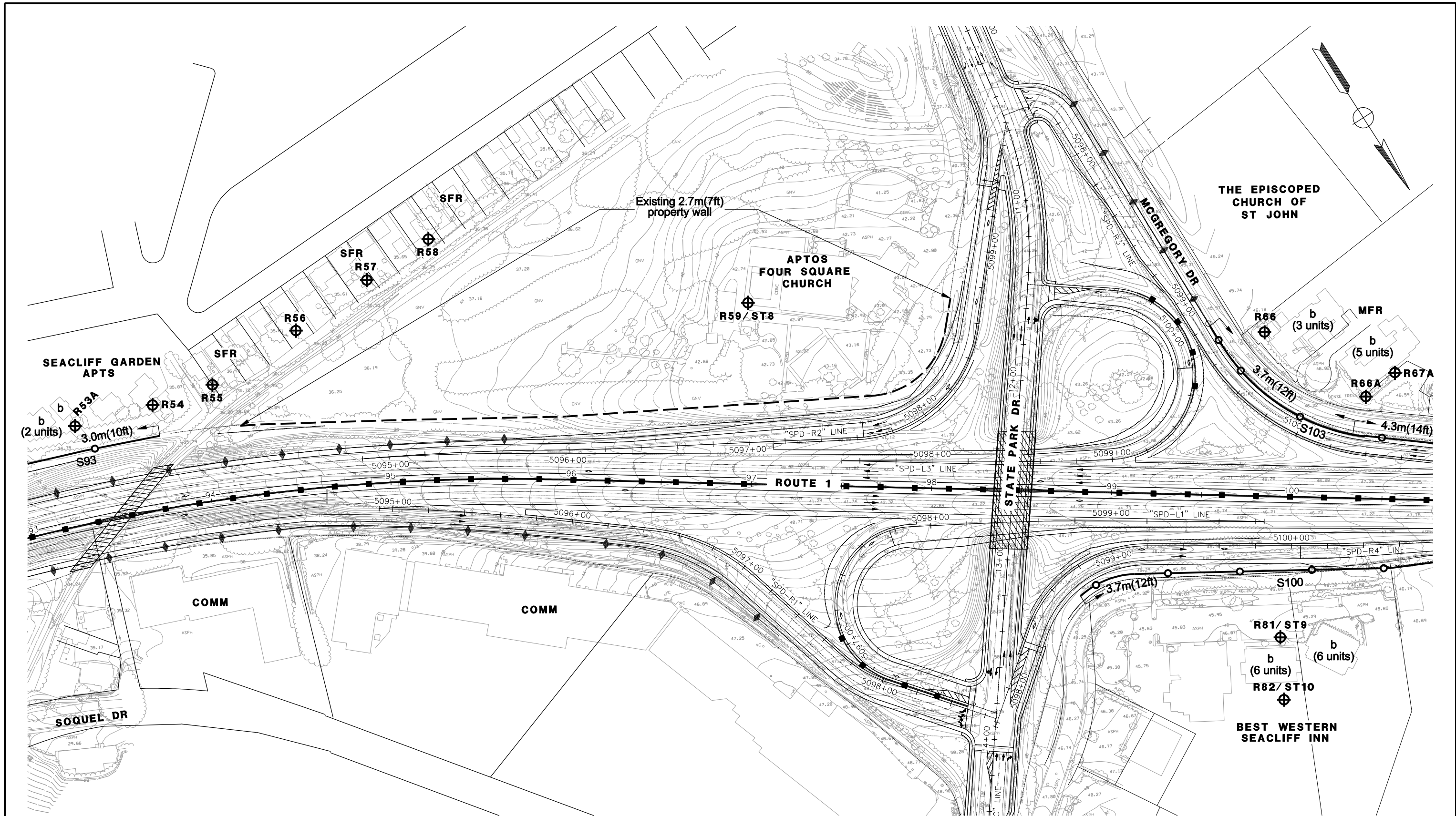




<b>LEGEND</b> ⊕ RXX - SENSITIVE RECEIVER SITE ⊕ LT - LONG TERM MEASUREMENT ⊕ ST - SHORT TERM MEASUREMENT ⊕ CAL - CALIBRATION SITE	○—○ - SOUNDWALL — — — - EXISTING WALL ◆—◆ - RETAINING WALL ■—■ - CONCRETE BARRIER	<b>SFR</b> - SINGLE FAMILY RESIDENCE <b>MFR</b> - MULTI-FAMILY RESIDENCE <b>COMM</b> - COMMERCIAL b - BENEFITED RESIDENCE Ⓢ - SEVERELY IMPACTED RECEIVER	1 : 2000 METERS 0 m 50 m 100 m	<b>ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b> FEBRUARY 26, 2013 SHEET NO. 7 OF 20
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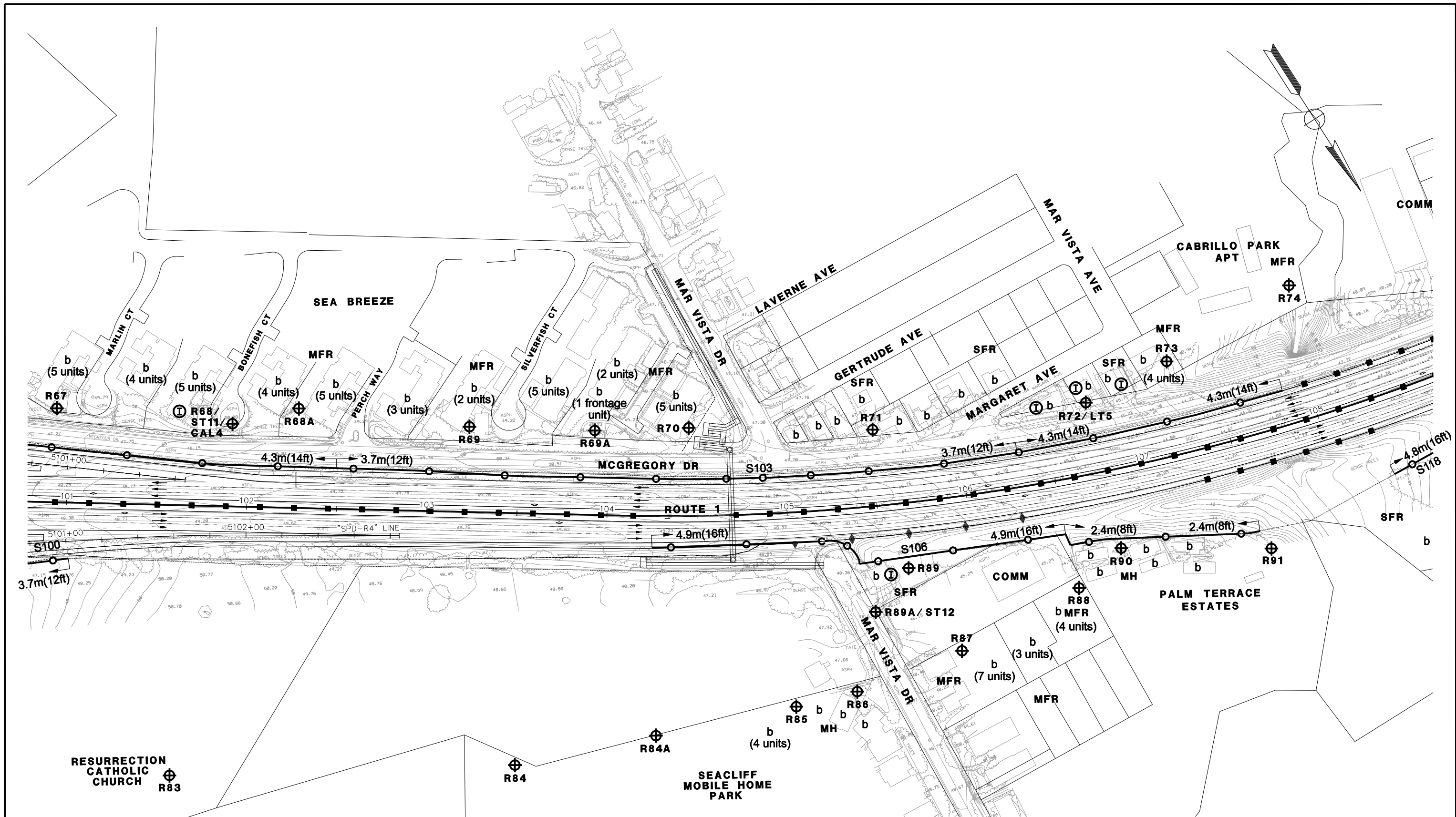






<b>LEGEND</b> ⊕RXX - SENSITIVE RECEIVER SITE ⊕LT - LONG TERM MEASUREMENT ⊕ST - SHORT TERM MEASUREMENT ⊕CAL - CALIBRATION SITE	—○—○— - SOUNDWALL - - - - - EXISTING WALL ◆◆◆◆◆ RETAINING WALL ■ ■ ■ ■ ■ CONCRETE BARRIER	<b>SFR</b> - SINGLE FAMILY RESIDENCE <b>MFR</b> - MULTI-FAMILY RESIDENCE <b>COMM</b> - COMMERCIAL b - BENEFITED RESIDENCE ① - SEVERELY IMPACTED RECEIVER	1:2000 METERS 0 m 50 m 100 m	<b>ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b> FEBRUARY 26, 2013 SHEET NO. 8 OF 20
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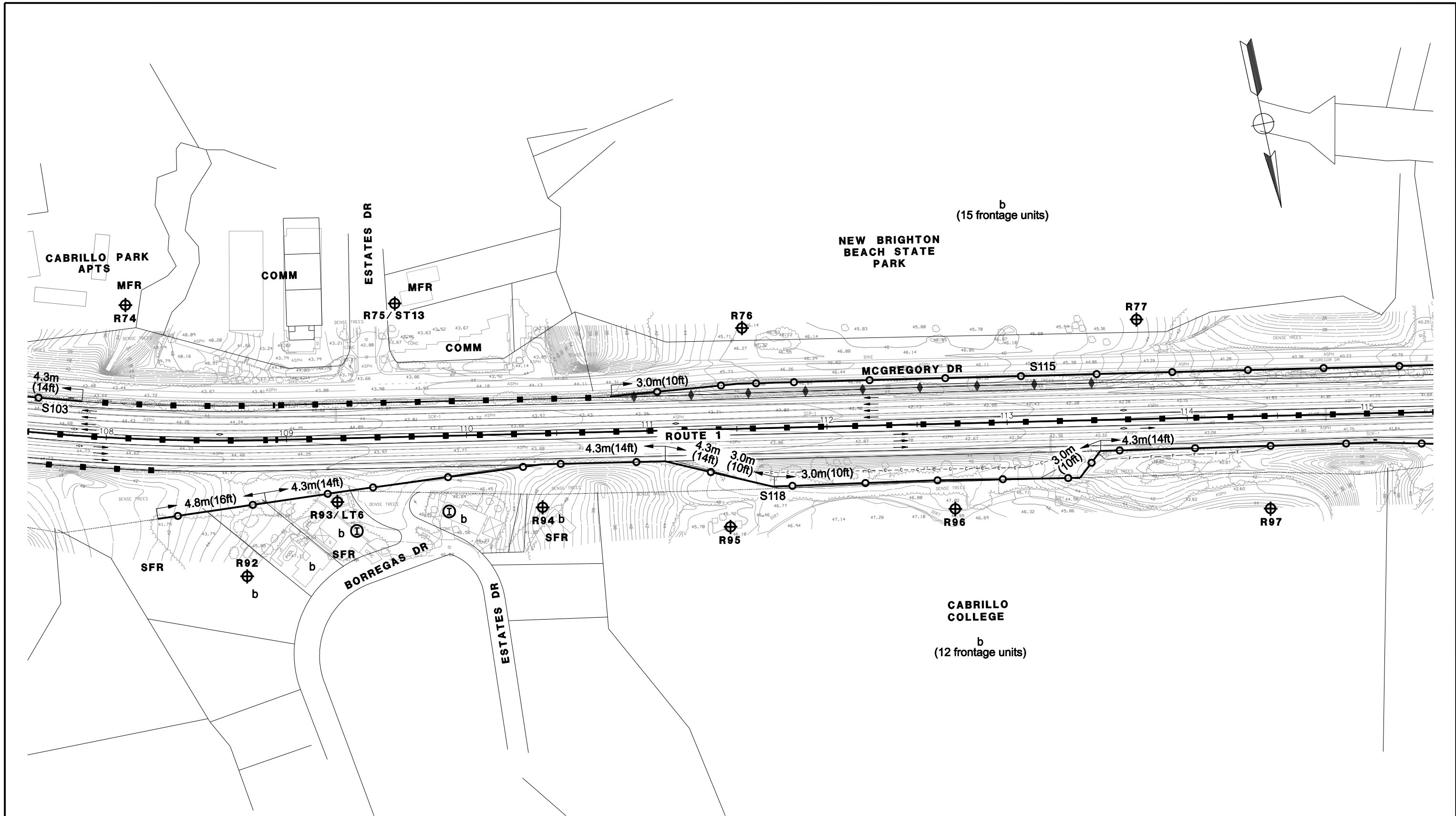




<b>LEGEND</b> ⊕ RXX - SENSITIVE RECEIVER SITE ⊕ LT - LONG TERM MEASUREMENT ⊕ ST - SHORT TERM MEASUREMENT ⊕ CAL - CALIBRATION SITE		○—○ - SOUNDWALL — — — - EXISTING WALL ◆—◆ - RETAINING WALL ■—■ - CONCRETE BARRIER		<b>SFR</b> - SINGLE FAMILY RESIDENCE <b>MFR</b> - MULTI-FAMILY RESIDENCE <b>COMM</b> - COMMERCIAL b - BENEFITED RESIDENCE ① - SEVERELY IMPACTED RECEIVER		1 : 2000 METERS 		<b>ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b> FEBRUARY 26, 2013      SHEET NO. 9 OF 20	
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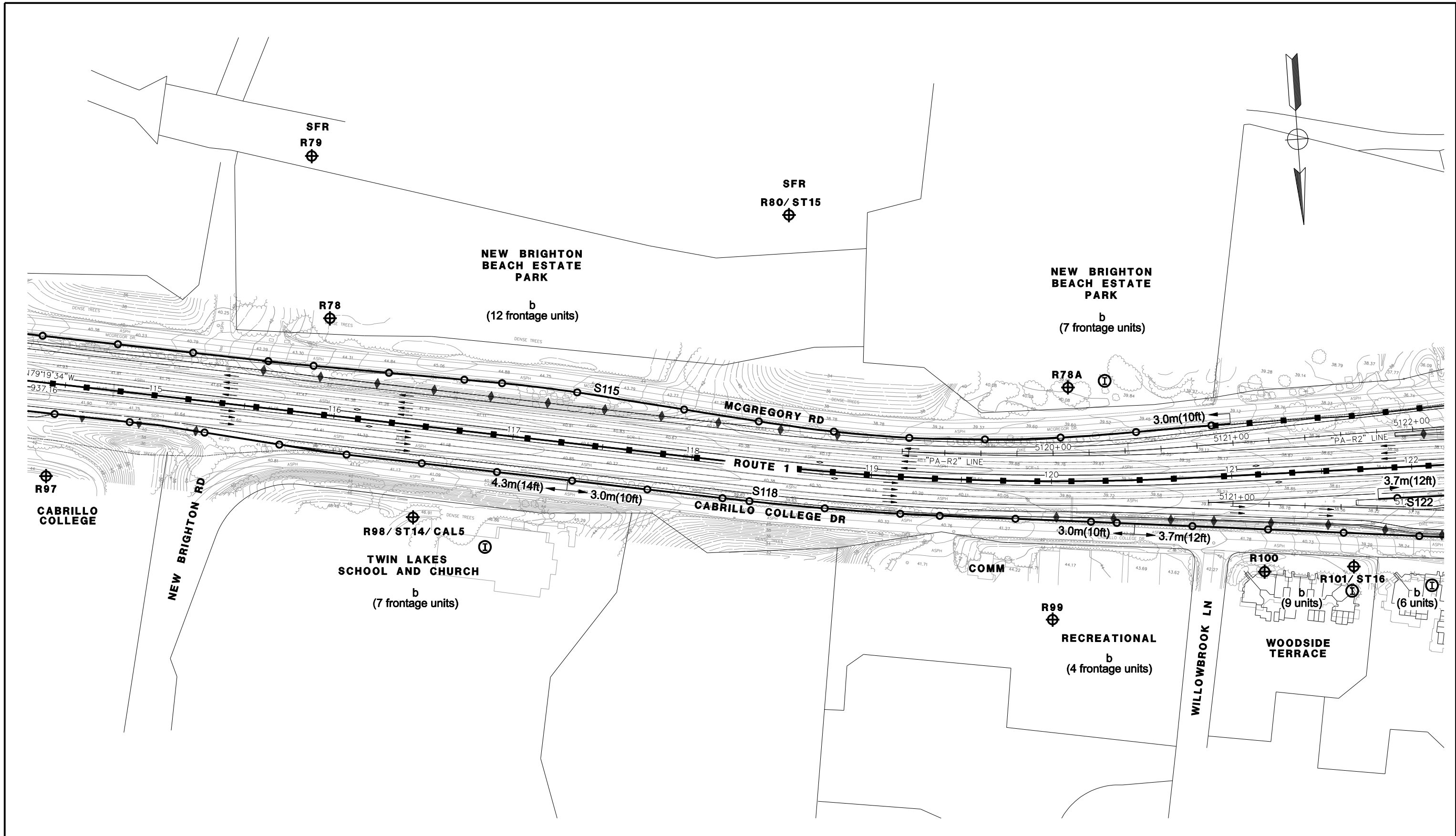






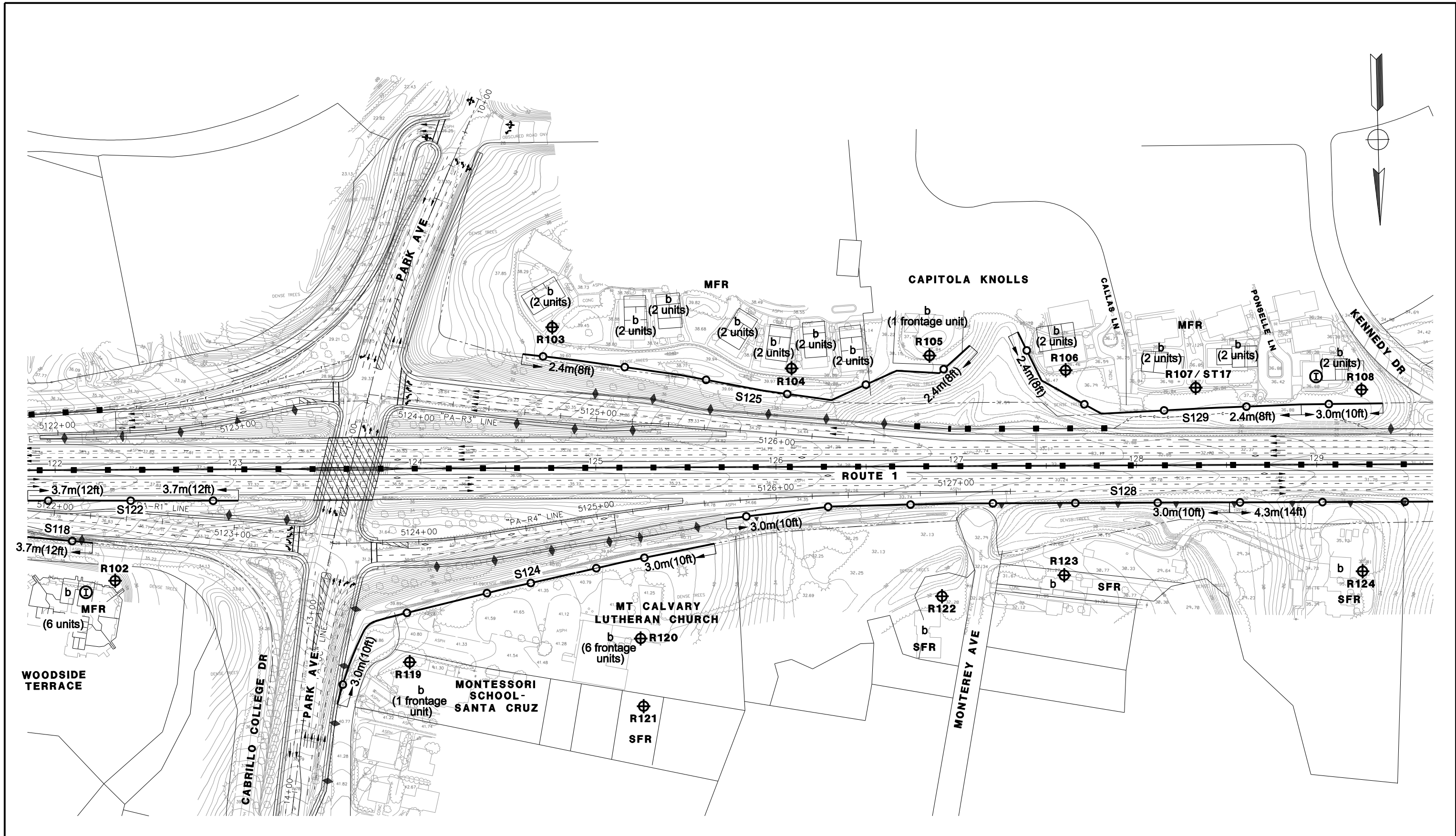
<b>LEGEND</b> ⊕ RXX - SENSITIVE RECEIVER SITE ⊕ LT - LONG TERM MEASUREMENT ⊕ ST - SHORT TERM MEASUREMENT ⊕ CAL - CALIBRATION SITE	 — — — — — EXISTING WALL ◆ — ◆ — ◆ — RETAINING WALL ■ — ■ — ■ — CONCRETE BARRIER	<b>SFR</b> - SINGLE FAMILY RESIDENCE <b>MFR</b> - MULTI-FAMILY RESIDENCE <b>COMM</b> - COMMERCIAL <b>b</b> - BENEFITED RESIDENCE Ⓢ - SEVERELY IMPACTED RECEIVER	<div>1 : 2000 METERS</div> <div> 0 m      50 m      100 m</div>	<b>ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b> <div>FEBRUARY 26, 2013      SHEET NO. 10 OF 20</div>
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<b>LEGEND</b>				<div>1 : 2000 METERS</div> <div>0 m50 m100 m</div>	<b>ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b>	
	- SENSITIVE RECEIVER SITE		- SOUNDWALL		<b>FEBRUARY 26, 2013</b>	<b>SHEET NO. 11 OF 20</b>
	- LONG TERM MEASUREMENT		- EXISTING WALL			
	- SHORT TERM MEASUREMENT		- RETAINING WALL			
	- CALIBRATION SITE		- CONCRETE BARRIER			
		<b>SFR</b>	- SINGLE FAMILY RESIDENCE			
		<b>MFR</b>	- MULTI- FAMILY RESIDENCE			
		<b>COMM</b>	- COMMERCIAL			
		<b>b</b>	- BENEFITED RESIDENCE			
		<b>I</b>	- SEVERELY IMPACTED RECEIVER			

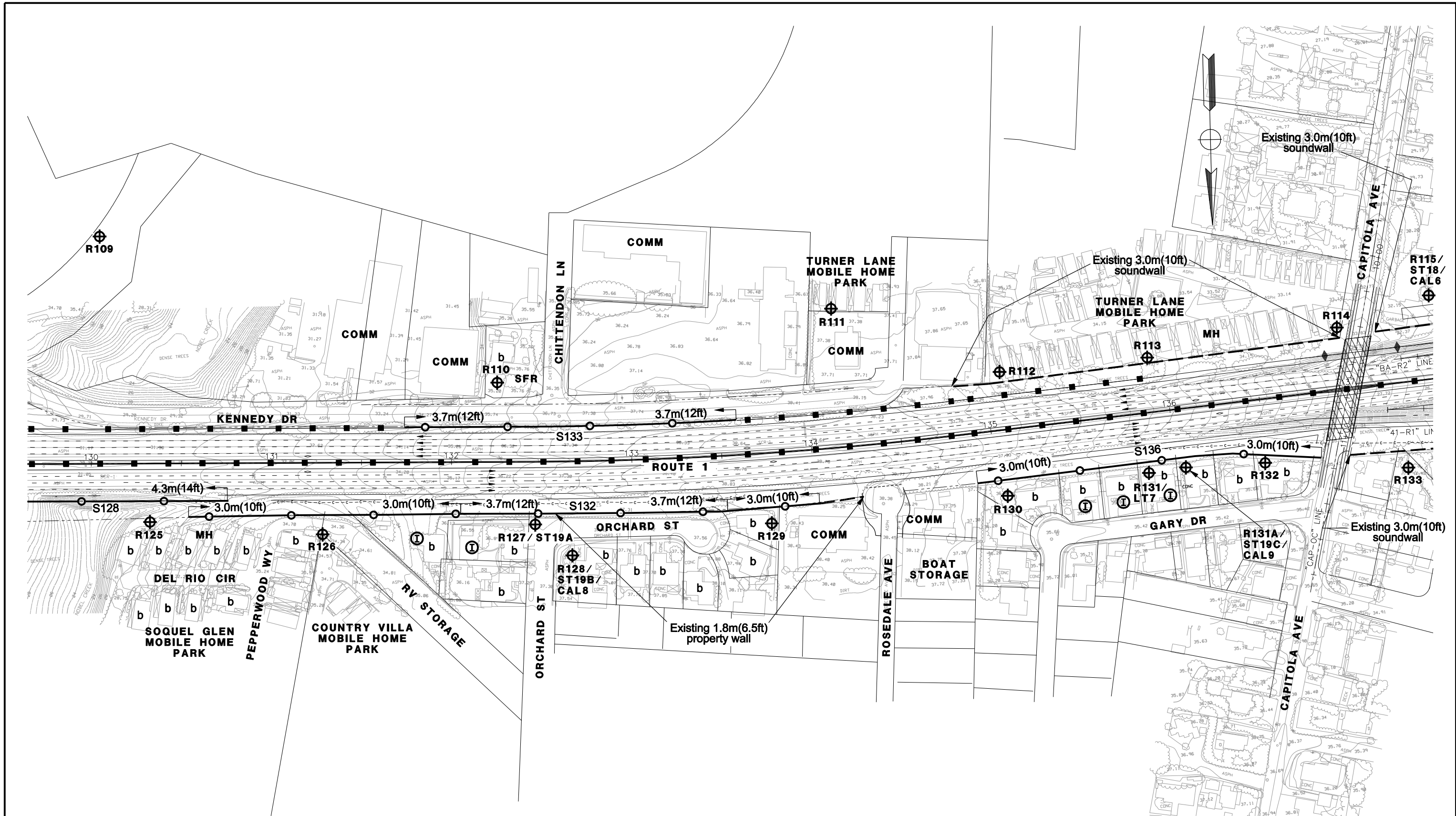




<b>LEGEND</b> ⊕ RXX - SENSITIVE RECEIVER SITE ⊕ LT - LONG TERM MEASUREMENT ⊕ ST - SHORT TERM MEASUREMENT ⊕ CAL - CALIBRATION SITE	—○—○— - SOUNDWALL - - - - - EXISTING WALL ◆◆◆◆◆ RETAINING WALL ■ ■ ■ ■ ■ CONCRETE BARRIER	<b>SFR</b> - SINGLE FAMILY RESIDENCE <b>MFR</b> - MULTI-FAMILY RESIDENCE <b>COMM</b> - COMMERCIAL <b>b</b> - BENEFITED RESIDENCE Ⓢ - SEVERELY IMPACTED RECEIVER	1 : 2000 METERS 0 m 50 m 100 m	<b>ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b> FEBRUARY 26, 2013 SHEET NO. 12 OF 20
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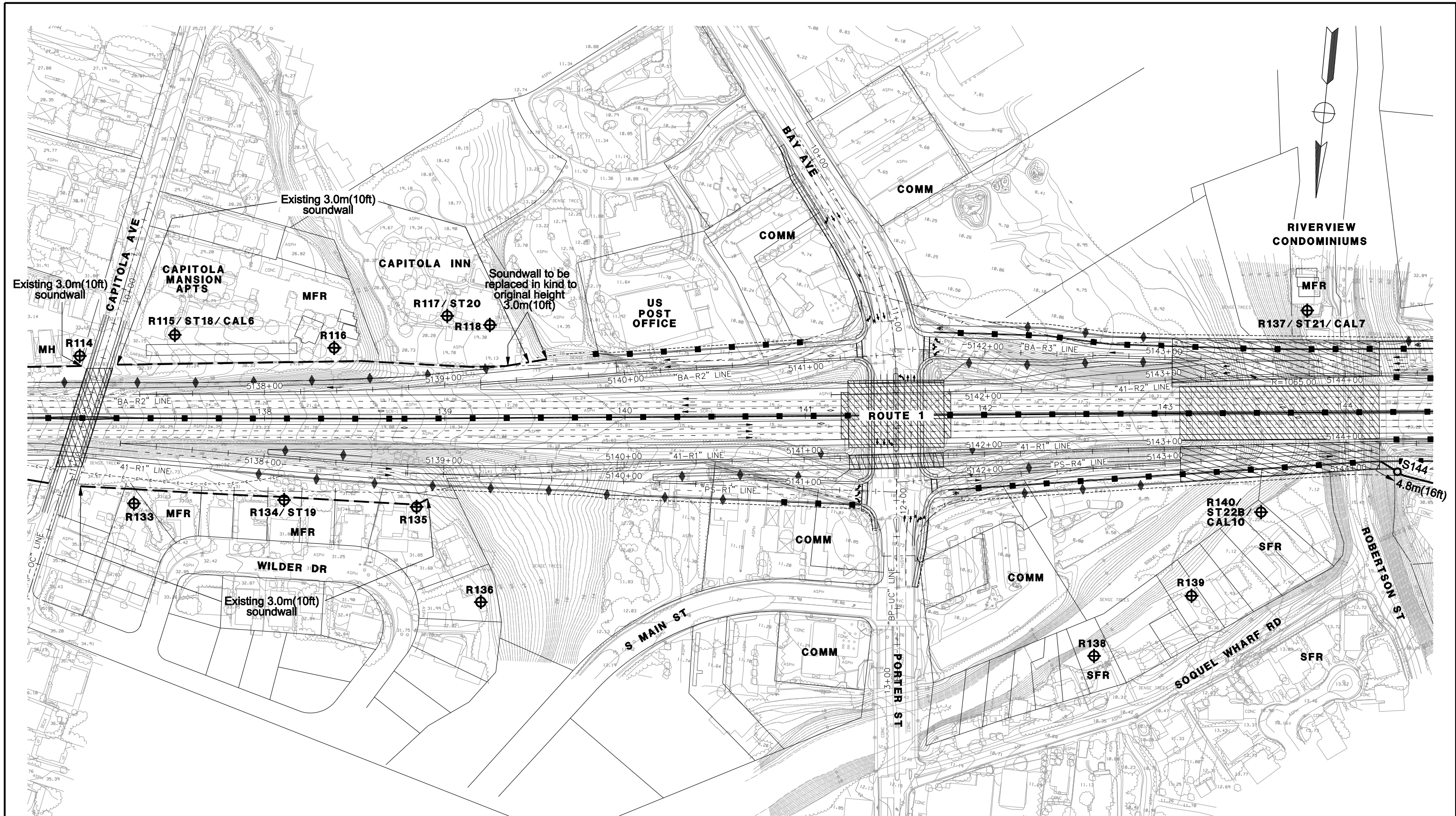




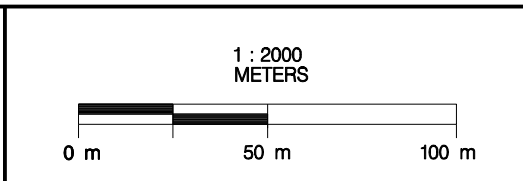


<b>LEGEND</b>		<b>SFR</b> - SINGLE FAMILY RESIDENCE <b>MFR</b> - MULTI-FAMILY RESIDENCE <b>COMM</b> - COMMERCIAL <b>b</b> - BENEFITED RESIDENCE <b>I</b> - SEVERELY IMPACTED RECEIVER	<div style="text-align: center;">1 : 2000 METERS</div> <div style="text-align: center;">0 m      50 m      100 m</div>	<b>ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b>	
<b>⊕RXX</b> - SENSITIVE RECEIVER SITE <b>⊕LT</b> - LONG TERM MEASUREMENT <b>⊕ST</b> - SHORT TERM MEASUREMENT <b>⊕CAL</b> - CALIBRATION SITE	<b>—○—</b> - SOUNDWALL <b>---</b> - EXISTING WALL <b>◆◆</b> - RETAINING WALL <b>■</b> - CONCRETE BARRIER				



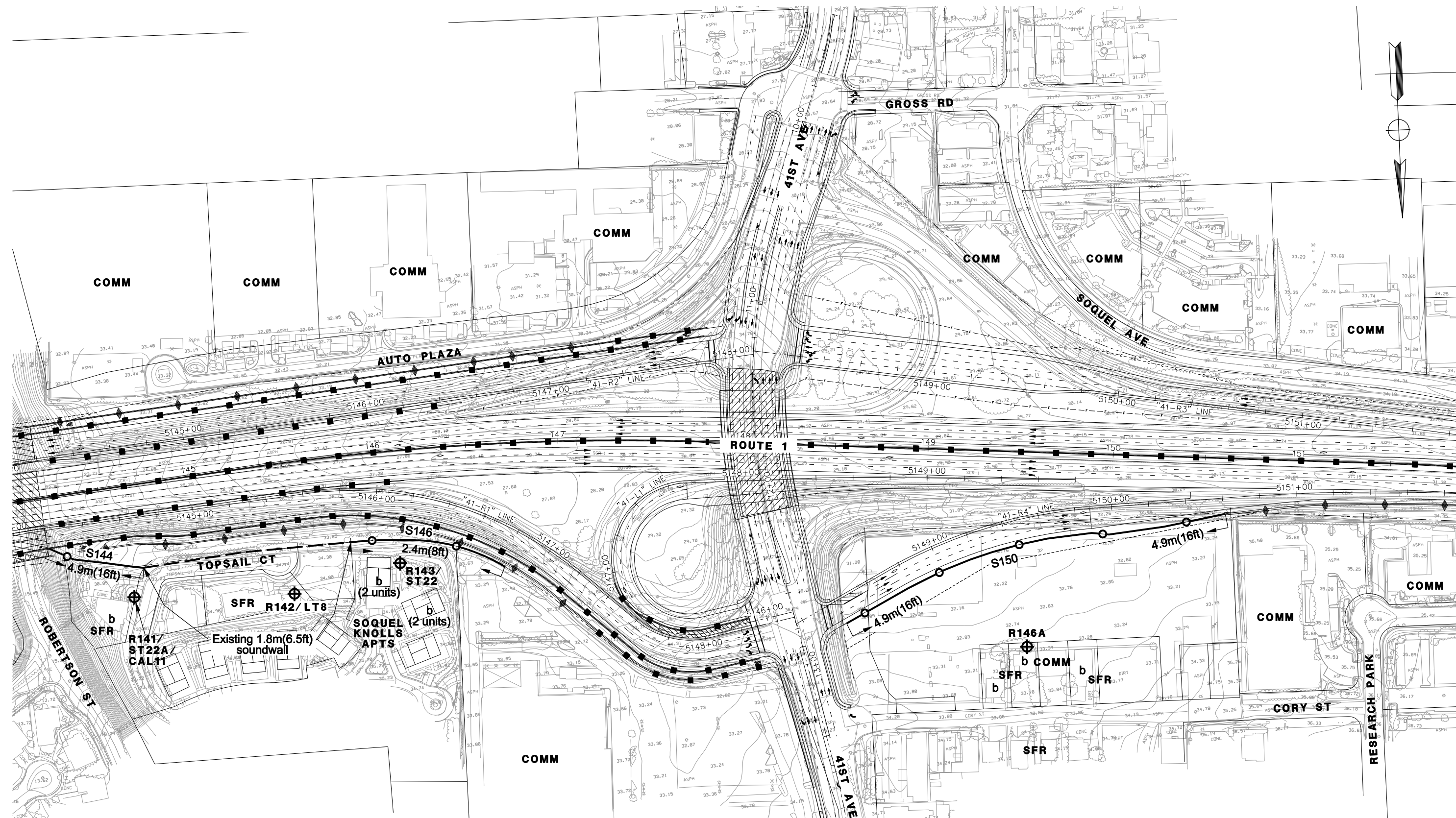


LEGEND					
⊕RXX	- SENSITIVE RECEIVER SITE	○ — ○	- SOUNDWALL	SFR	- SINGLE FAMILY RESIDENCE
⊕LT	- LONG TERM MEASUREMENT	— — —	- EXISTING WALL	MFR	- MULTI – FAMILY RESIDENCE
⊕ST	- SHORT TERM MEASUREMENT	◆ — ◆	- RETAINING WALL	COMM	- COMMERCIAL
⊕CAL	- CALIBRATION SITE	■ — ■	- CONCRETE BARRIER	b	- BENEFITED RESIDENCE
				Ⓢ	- SEVERELY IMPACTED RECEIVER



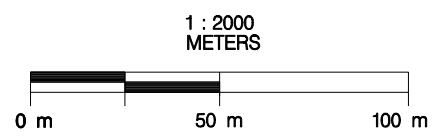






**LEGEND**

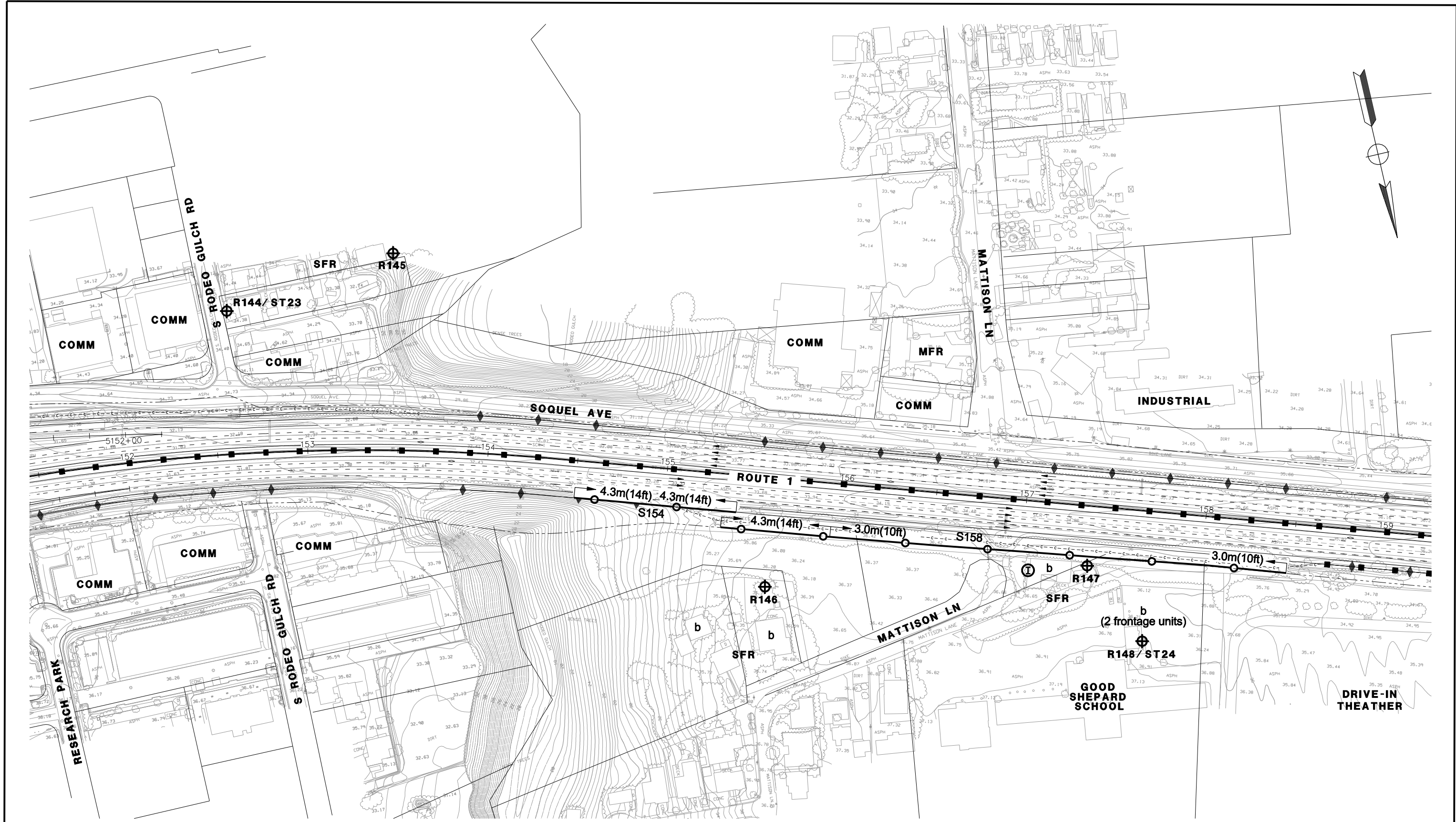
- |      |                           |       |                    |      |                              |
|------|---------------------------|-------|--------------------|------|------------------------------|
| ⊕RX  | - SENSITIVE RECEIVER SITE | —○—○— | - SOUNDWALL        | SFR  | - SINGLE FAMILY RESIDENCE    |
| ⊕LT  | - LONG TERM MEASUREMENT   | ---   | - EXISTING WALL    | MFR  | - MULTI-FAMILY RESIDENCE     |
| ⊕ST  | - SHORT TERM MEASUREMENT  | ◆◆    | - RETAINING WALL   | COMM | - COMMERCIAL                 |
| ⊕CAL | - CALIBRATION SITE        | ■     | - CONCRETE BARRIER | b    | - BENEFITED RESIDENCE        |
|      |                           |       |                    | Ⓢ    | - SEVERELY IMPACTED RECEIVER |



**ROUTE 1 SANTA CRUZ HOV ALTERNATIVE  
NOISE RECEIVER & BARRIER LOCATIONS**



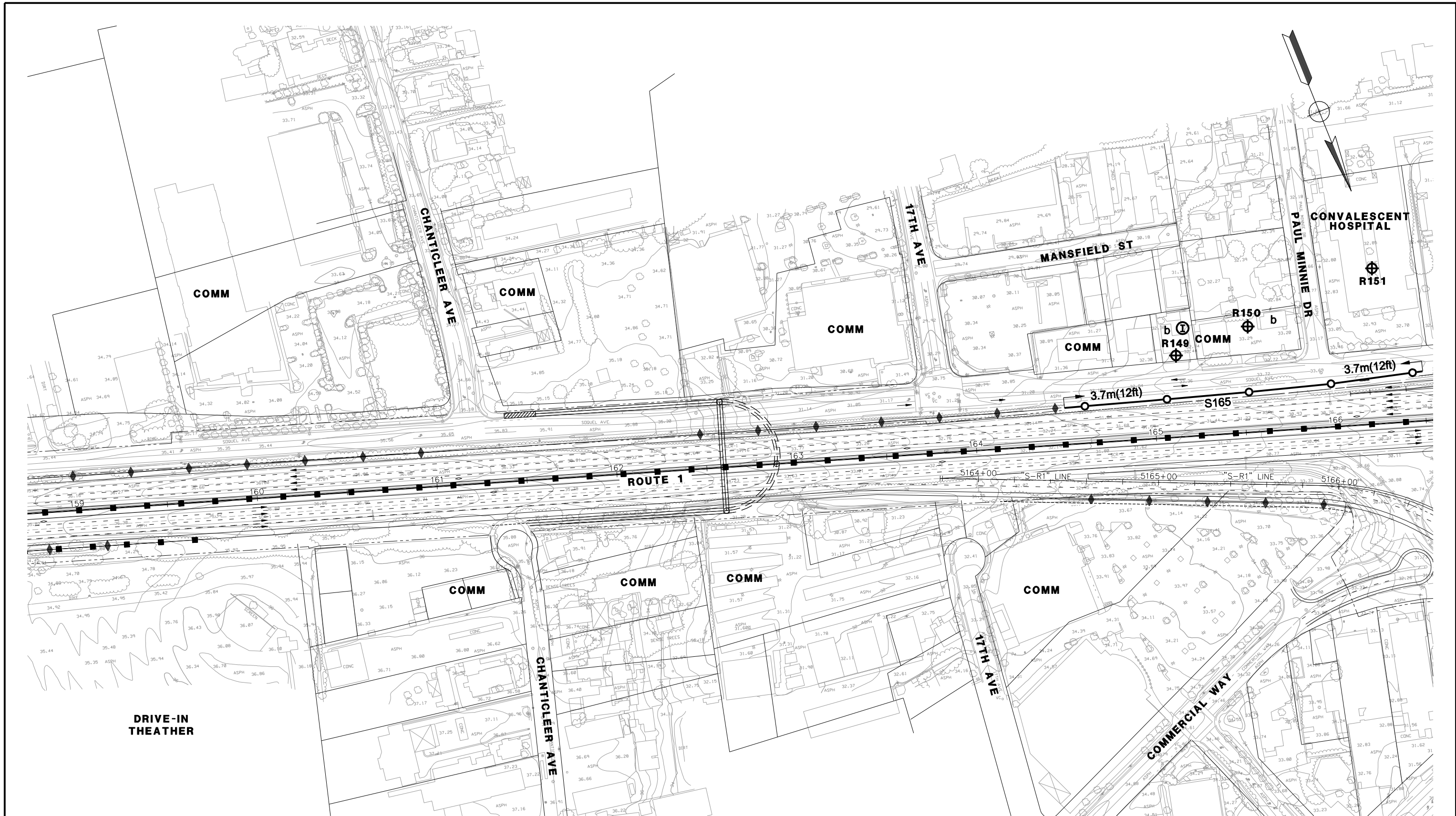




<b>LEGEND</b>			
⊕RXX - SENSITIVE RECEIVER SITE	○—○ - SOUNDWALL	SFR - SINGLE FAMILY RESIDENCE	<div>1 : 2000 METERS</div> <div>0 m 50 m 100 m</div>
⊕LT - LONG TERM MEASUREMENT	— — — - EXISTING WALL	MFR - MULTI-FAMILY RESIDENCE	
⊕ST - SHORT TERM MEASUREMENT	◆◆ - RETAINING WALL	COMM - COMMERCIAL	
⊕CAL - CALIBRATION SITE	■—■ - CONCRETE BARRIER	b - BENEFITED RESIDENCE	
		Ⓢ - SEVERELY IMPACTED RECEIVER	
<b>ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b>			
FEBRUARY 26, 2013			SHEET NO. 16 OF 20



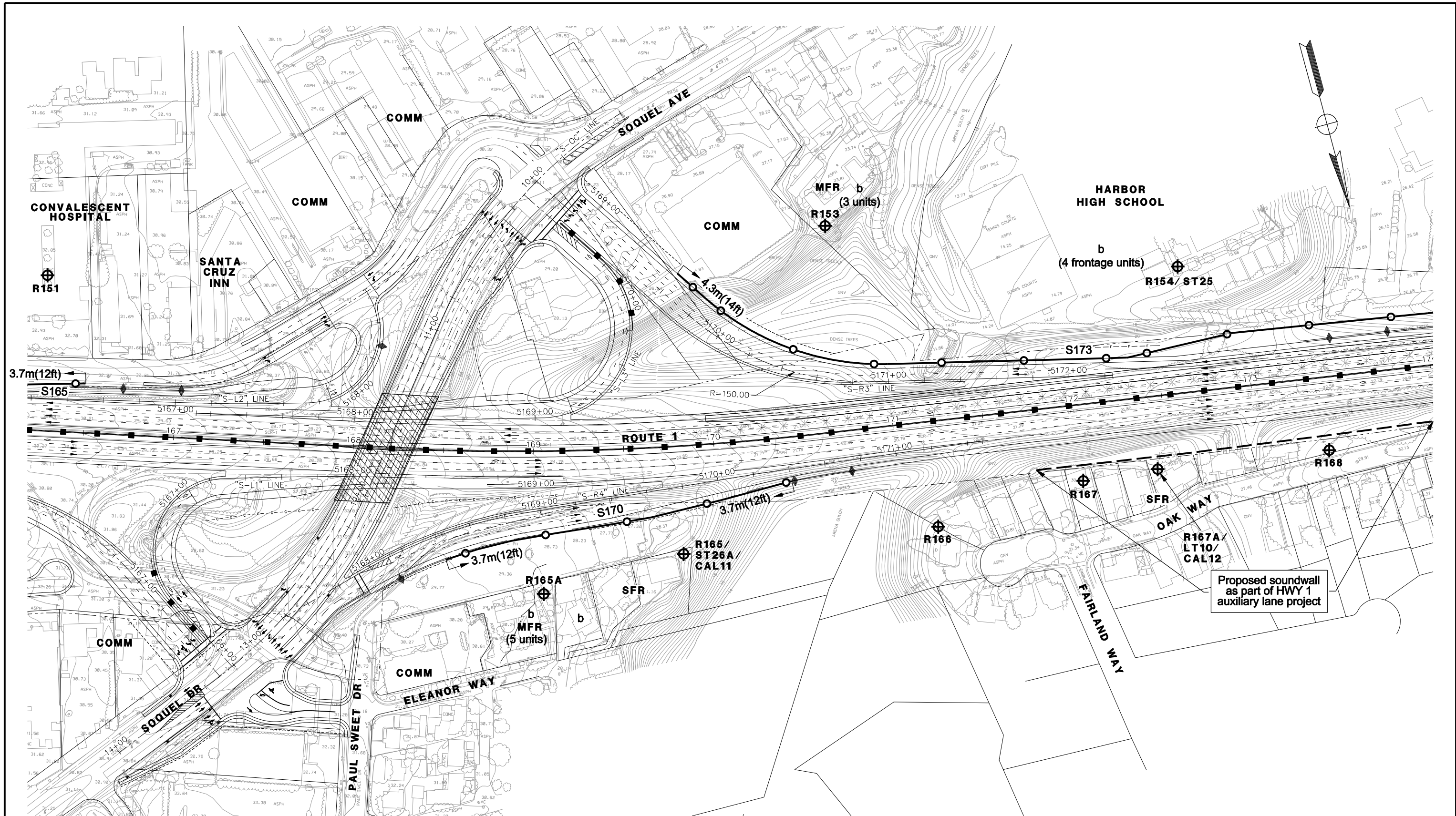




<b>LEGEND</b>			
⊕RXX - SENSITIVE RECEIVER SITE	—○—○— SOUNDWALL	SFR - SINGLE FAMILY RESIDENCE	<div>1 : 2000 METERS</div> <div>0 m 50 m 100 m</div>
⊕LT - LONG TERM MEASUREMENT	--- EXISTING WALL	MFR - MULTI-FAMILY RESIDENCE	
⊕ST - SHORT TERM MEASUREMENT	◆◆◆ RETAINING WALL	COMM - COMMERCIAL	
⊕CAL - CALIBRATION SITE	■ ■ ■ CONCRETE BARRIER	b - BENEFITED RESIDENCE	
		Ⓢ - SEVERELY IMPACTED RECEIVER	
<b>ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b>			
FEBRUARY 26, 2013			SHEET NO. 17 OF 20



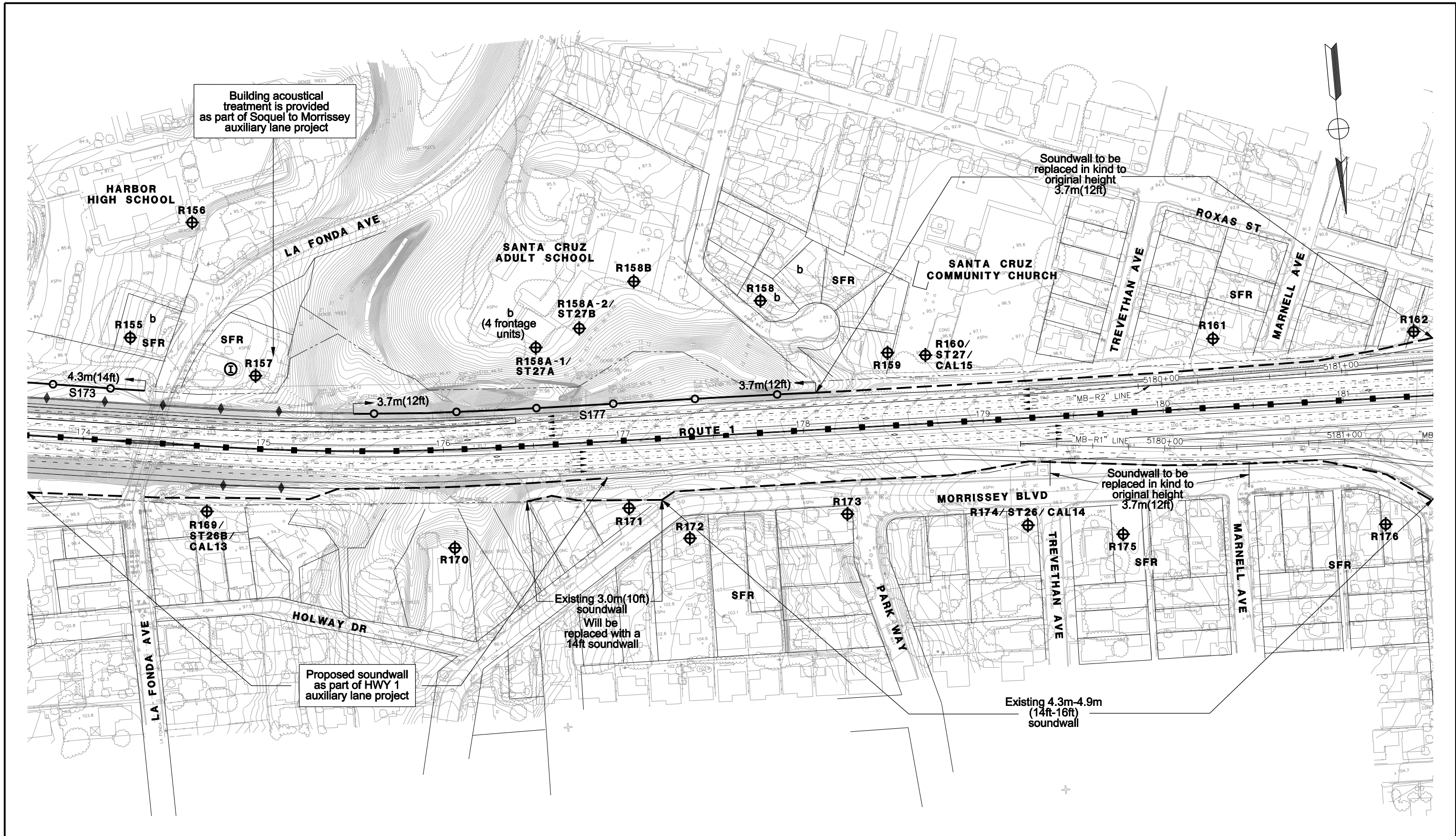




LEGEND		SFR - SINGLE FAMILY RESIDENCE		1 : 2000 METERS		ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER & BARRIER LOCATIONS	
⊕RXX	- SENSITIVE RECEIVER SITE	—○—○—	- SOUNDWALL			FEBRUARY 26, 2013   SHEET NO. 18 OF 20	
⊕LT	- LONG TERM MEASUREMENT	— — — —	- EXISTING WALL				
⊕ST	- SHORT TERM MEASUREMENT	◆◆◆◆	- RETAINING WALL				
⊕CAL	- CALIBRATION SITE	■ ■ ■ ■	- CONCRETE BARRIER				
		Ⓢ	- SEVERELY IMPACTED RECEIVER				
		SFR	- SINGLE FAMILY RESIDENCE				
		MFR	- MULTI - FAMILY RESIDENCE				
		COMM	- COMMERCIAL				
		b	- BENEFITED RESIDENCE				
		Ⓢ	- SEVERELY IMPACTED RECEIVER				



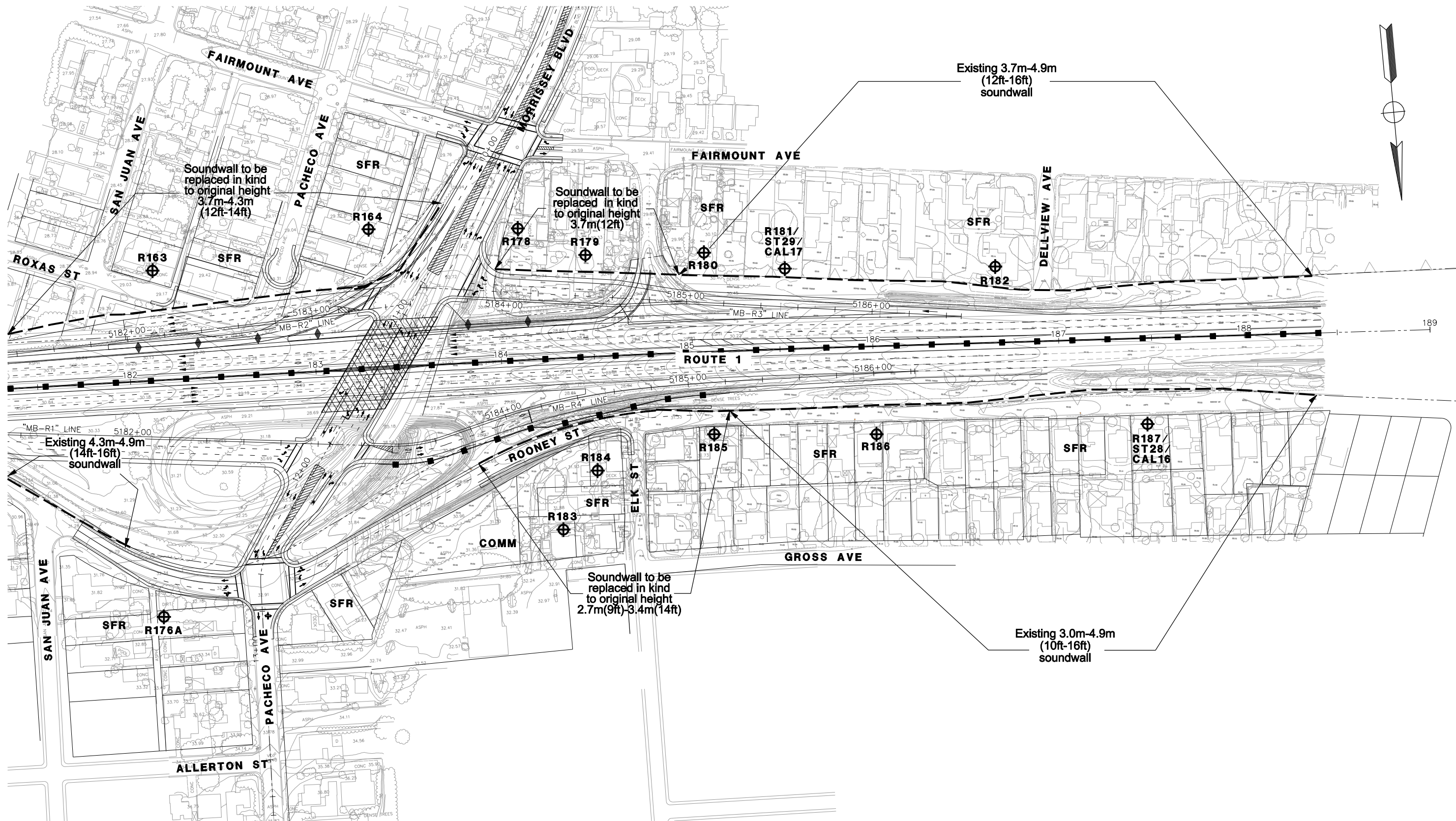




<b>LEGEND</b>		<b>SFR</b> - SINGLE FAMILY RESIDENCE	<div>1 : 2000 METERS</div> <div>0 m 50 m 100 m</div>	<b>ROUTE 1 SANTA CRUZ HOV ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b>	
⊕RXX	- SENSITIVE RECEIVER SITE	<b>MFR</b> - MULTI - FAMILY RESIDENCE			
⊕LT	- LONG TERM MEASUREMENT	<b>COMM</b> - COMMERCIAL			
⊕ST	- SHORT TERM MEASUREMENT	b - BENEFITED RESIDENCE			
⊕CAL	- CALIBRATION SITE	Ⓢ - SEVERELY IMPACTED RECEIVER			
○—○	- SOUNDWALL			<b>FEBRUARY 26, 2013</b>	<b>SHEET NO. 19 OF 20</b>
— — —	- EXISTING WALL				
◆—◆	- RETAINING WALL				
■—■	- CONCRETE BARRIER				





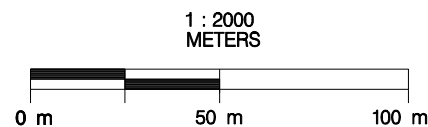


**LEGEND**

- ⊕ RXX - SENSITIVE RECEIVER SITE
- ⊕ LT - LONG TERM MEASUREMENT
- ⊕ ST - SHORT TERM MEASUREMENT
- ⊕ CAL - CALIBRATION SITE

- - SOUNDWALL
- — — - EXISTING WALL
- ◆◆◆ - RETAINING WALL
- ■ ■ - CONCRETE BARRIER

- SFR - SINGLE FAMILY RESIDENCE
- MFR - MULTI-FAMILY RESIDENCE
- COMM - COMMERCIAL
- b - BENEFITED RESIDENCE
- Ⓢ - SEVERELY IMPACTED RECEIVER

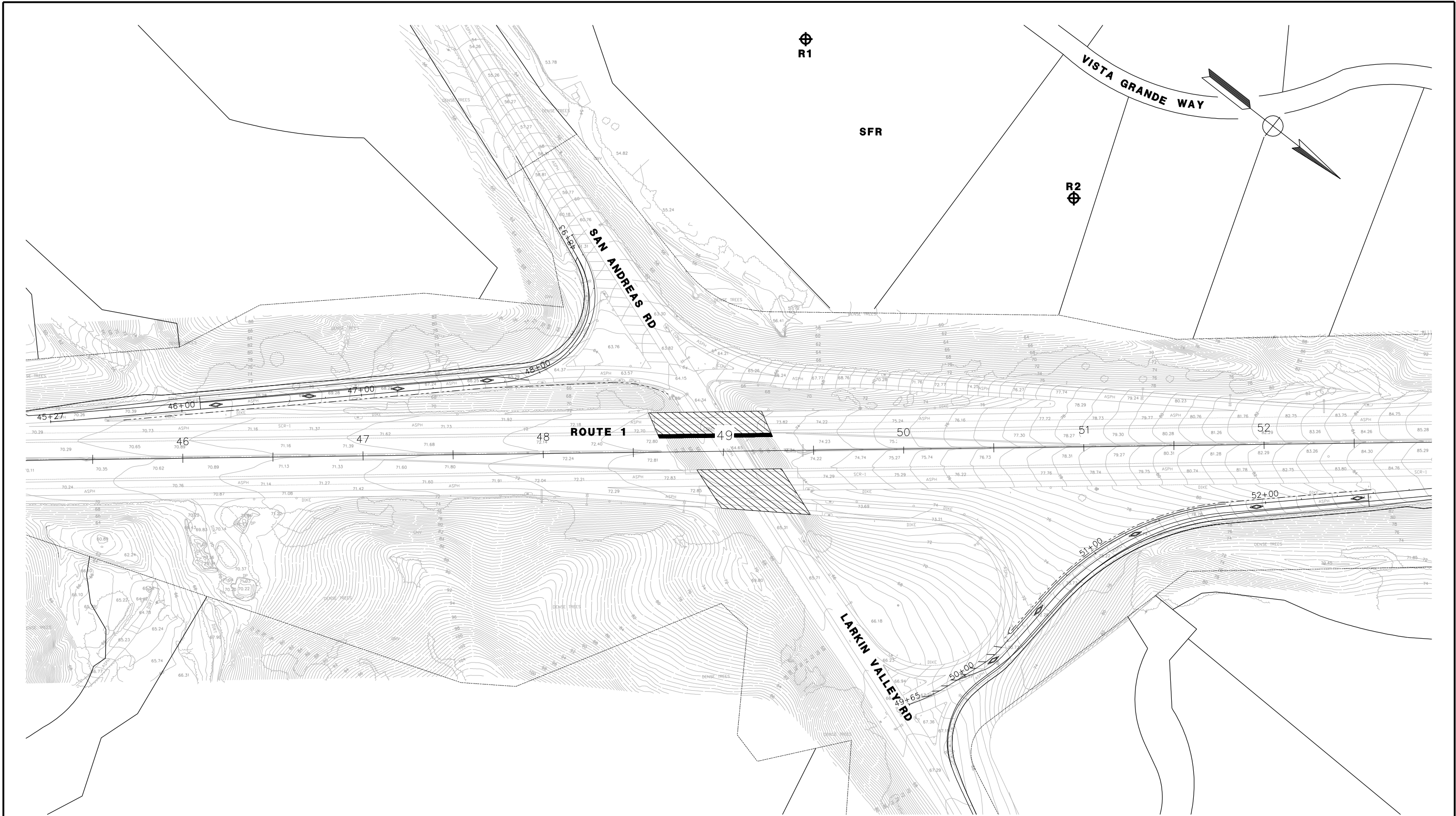


**ROUTE 1 SANTA CRUZ HOV ALTERNATIVE  
NOISE RECEIVER & BARRIER LOCATIONS**

FEBRUARY 26, 2013

SHEET NO. 20 OF 20

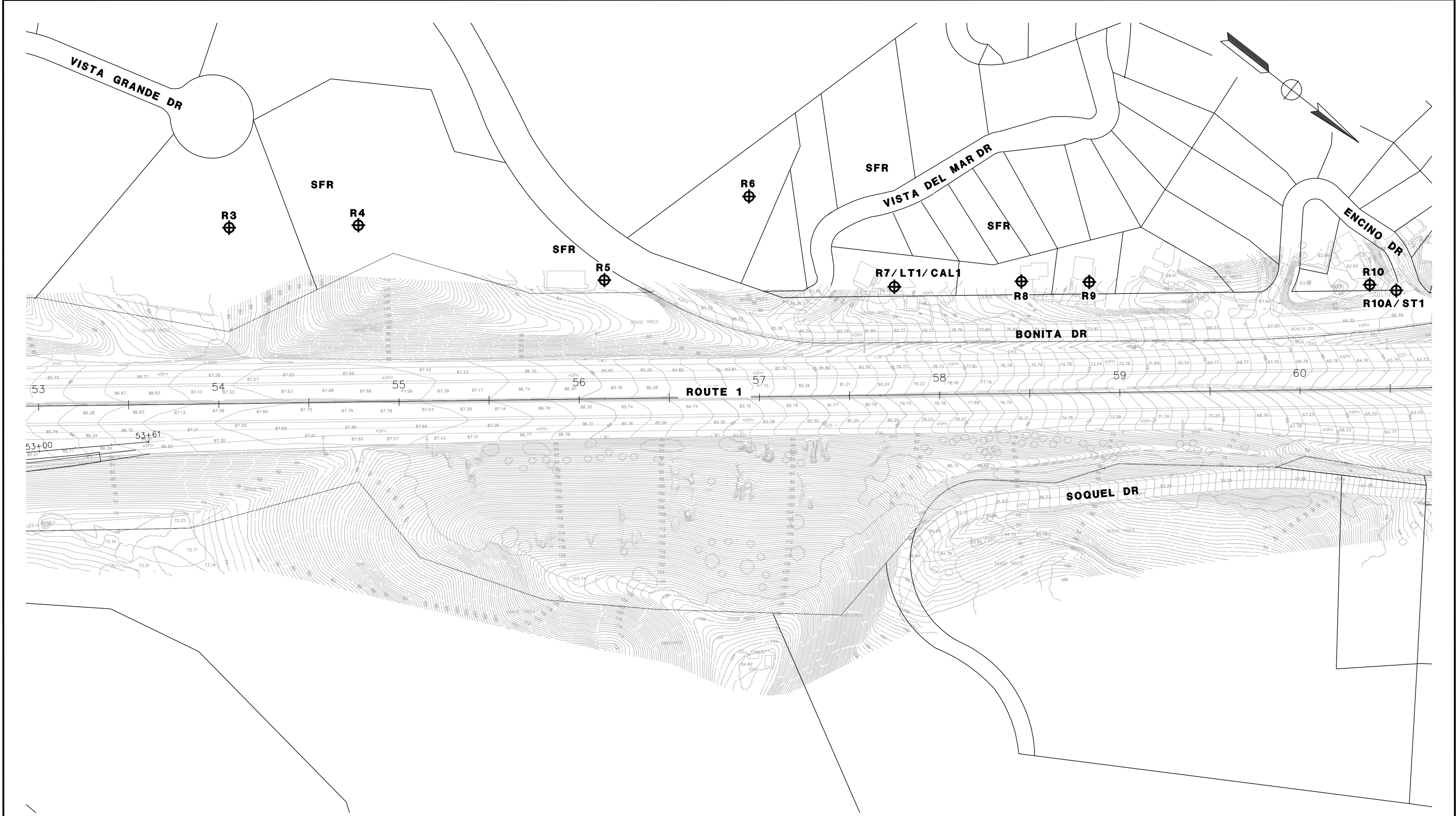




<b>LEGEND</b>		<b>SFR</b> - SINGLE FAMILY RESIDENCE	<div>1 : 2000 METERS</div> <div>0 m 50 m 100 m</div>	<b>ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b>	
<b>RXX</b> - SENSITIVE RECEIVER SITE	<b>MFR</b> - MULTI-FAMILY RESIDENCE				
<b>LT</b> - LONG TERM MEASUREMENT	<b>COMM</b> - COMMERCIAL	<b>FEBRUARY 26, 2013</b>		<b>SHEET NO. 1 OF 20</b>	
<b>ST</b> - SHORT TERM MEASUREMENT	<b>b</b> - BENEFITED RESIDENCE				

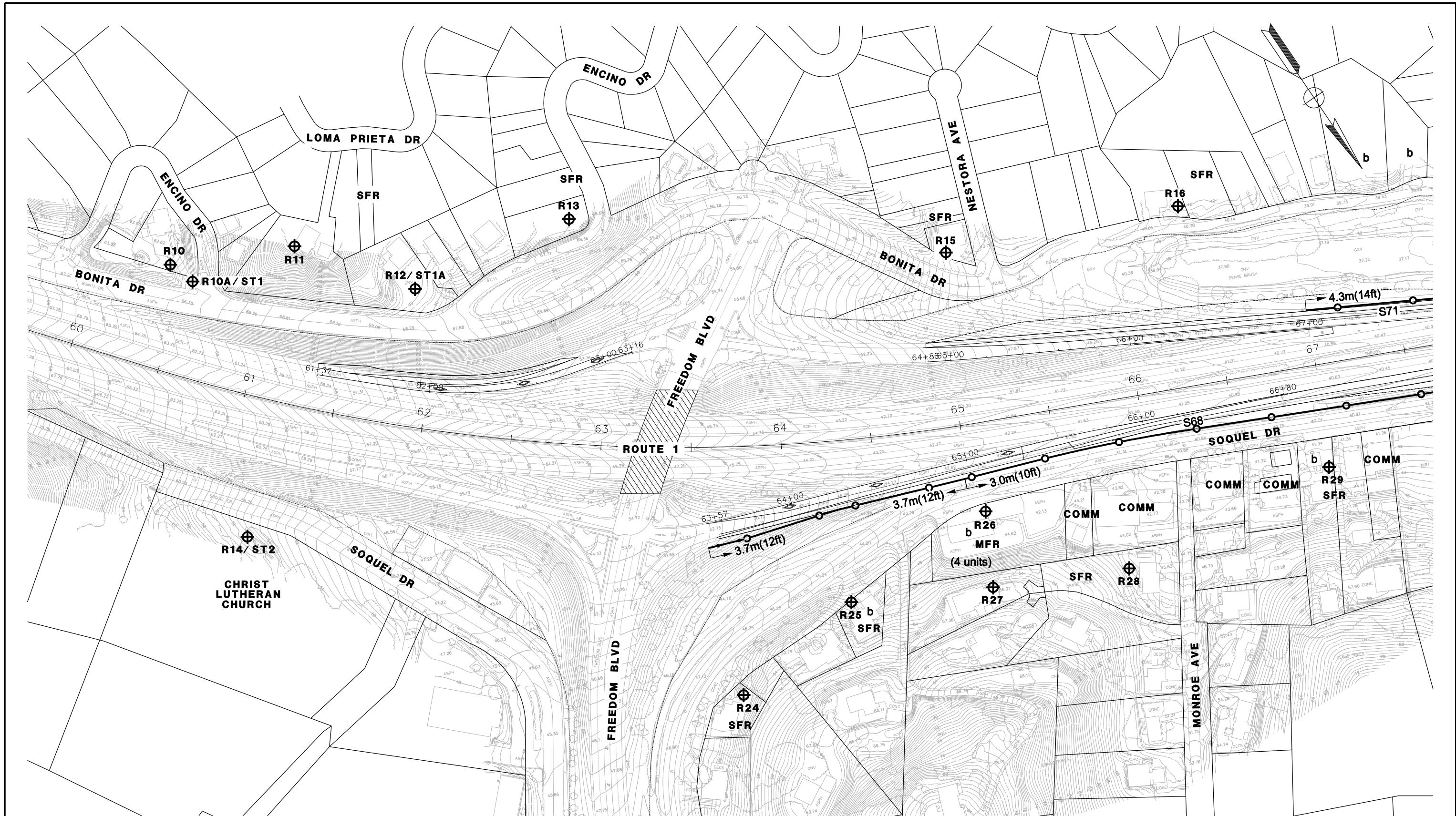






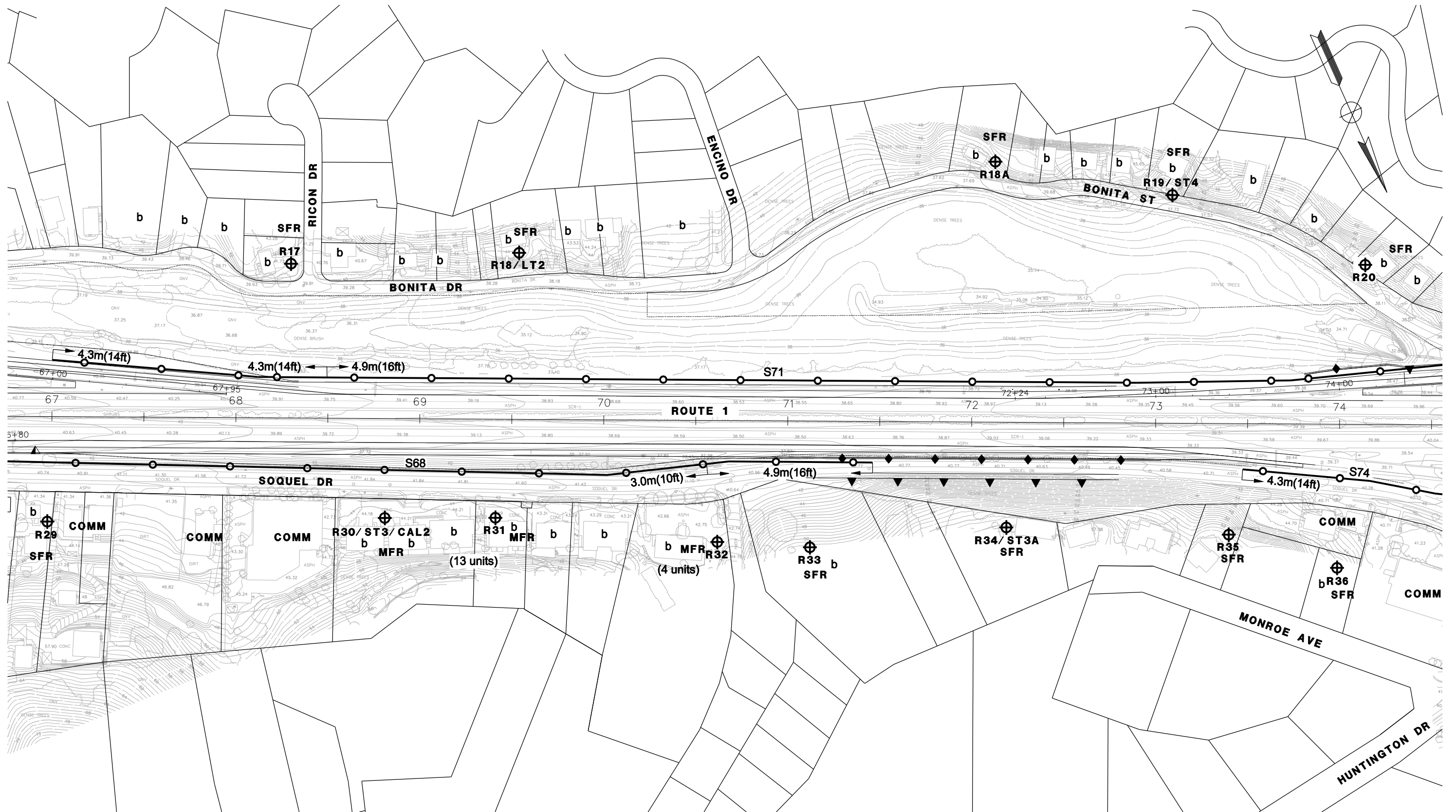
LEGEND				1 : 2000 METERS		ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER & BARRIER LOCATIONS	
⊕RXX	- SENSITIVE RECEIVER SITE	—○—○—	- SOUNDWALL			FEBRUARY 26, 2013	
⊕LT	- LONG TERM MEASUREMENT	— — — —	- EXISTING WALL				
⊕ST	- SHORT TERM MEASUREMENT	—▼—▼—	- RETAINING WALL				
⊕CAL	- CALIBRATION SITE	—◆—◆—	- CONCRETE BARRIER				
SFR	- SINGLE FAMILY RESIDENCE						
MFR	- MULTI- FAMILY RESIDENCE						
COMM	- COMMERCIAL						
b	- BENEFITED RESIDENCE					SHEET NO. 2 OF 20	





<b>LEGEND</b>			
⊕RXX - SENSITIVE RECEIVER SITE	—○—○— - SOUNDWALL	<b>SFR</b> - SINGLE FAMILY RESIDENCE	<div>1 : 2000 METERS</div> <div>0 m      50 m      100 m</div>
⊕LT - LONG TERM MEASUREMENT	— — — - EXISTING WALL	<b>MFR</b> - MULTI - FAMILY RESIDENCE	
⊕ST - SHORT TERM MEASUREMENT	▼ — ▼ - RETAINING WALL	<b>COMM</b> - COMMERCIAL	
⊕CAL - CALIBRATION SITE	◆ — ◆ - CONCRETE BARRIER	b - BENEFITED RESIDENCE	
<b>ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b>			
FEBRUARY 26, 2013			SHEET NO. 3 OF 20



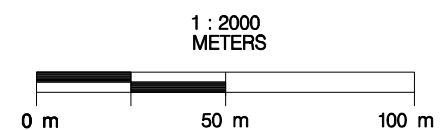


**LEGEND**

- ⊕ RXX - SENSITIVE RECEIVER SITE
- ⊕ LT - LONG TERM MEASUREMENT
- ⊕ ST - SHORT TERM MEASUREMENT
- ⊕ CAL - CALIBRATION SITE

- — ○ - SOUNDWALL
- - - - - EXISTING WALL
- ▼ — ▼ - RETAINING WALL
- ◆ — ◆ - CONCRETE BARRIER

- SFR - SINGLE FAMILY RESIDENCE
- MFR - MULTI-FAMILY RESIDENCE
- COMM - COMMERCIAL
- b - BENEFITED RESIDENCE



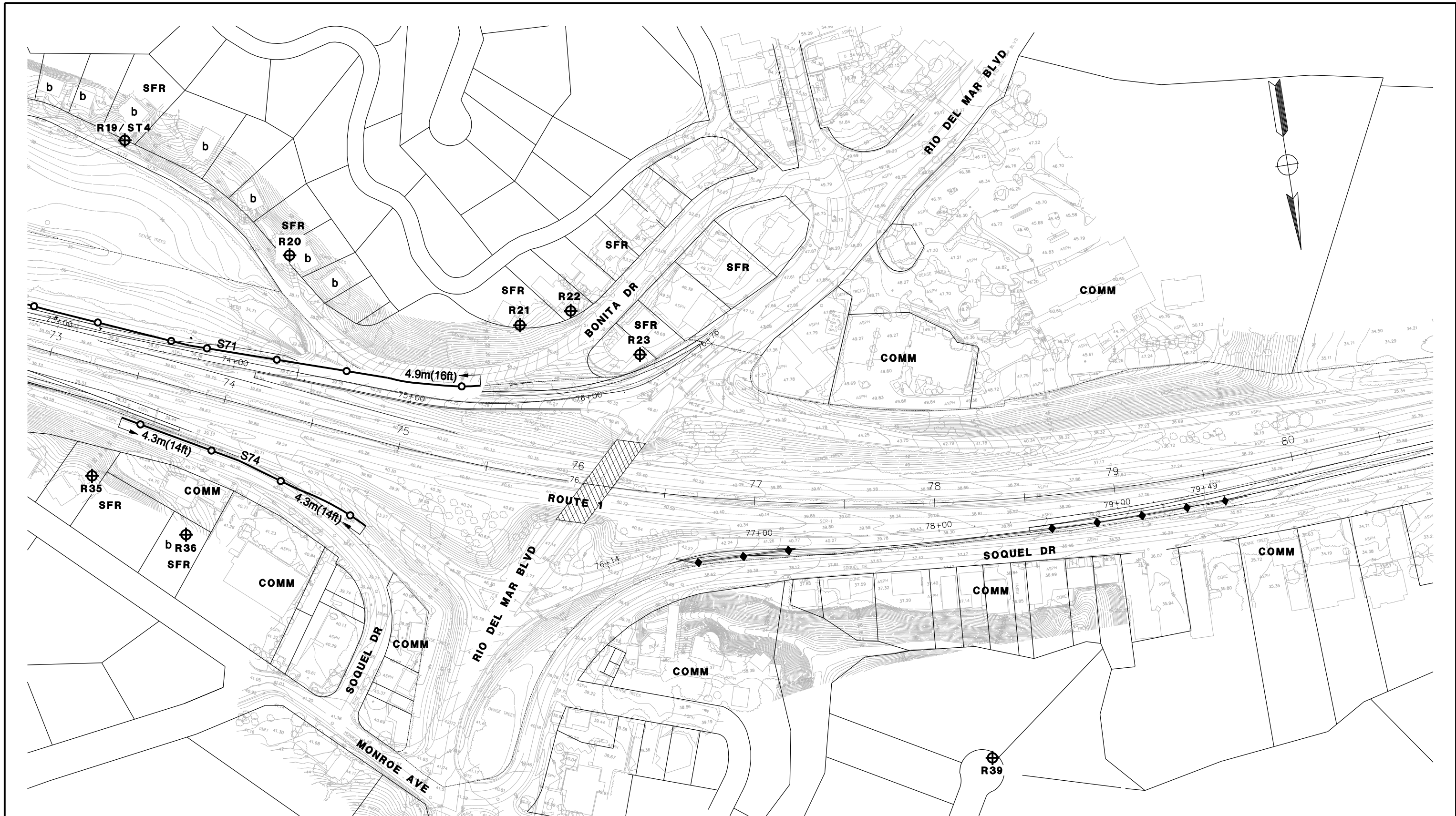
**ROUTE 1 SANTA CRUZ TSM ALTERNATIVE  
NOISE RECEIVER & BARRIER LOCATIONS**

FEBRUARY 26, 2013

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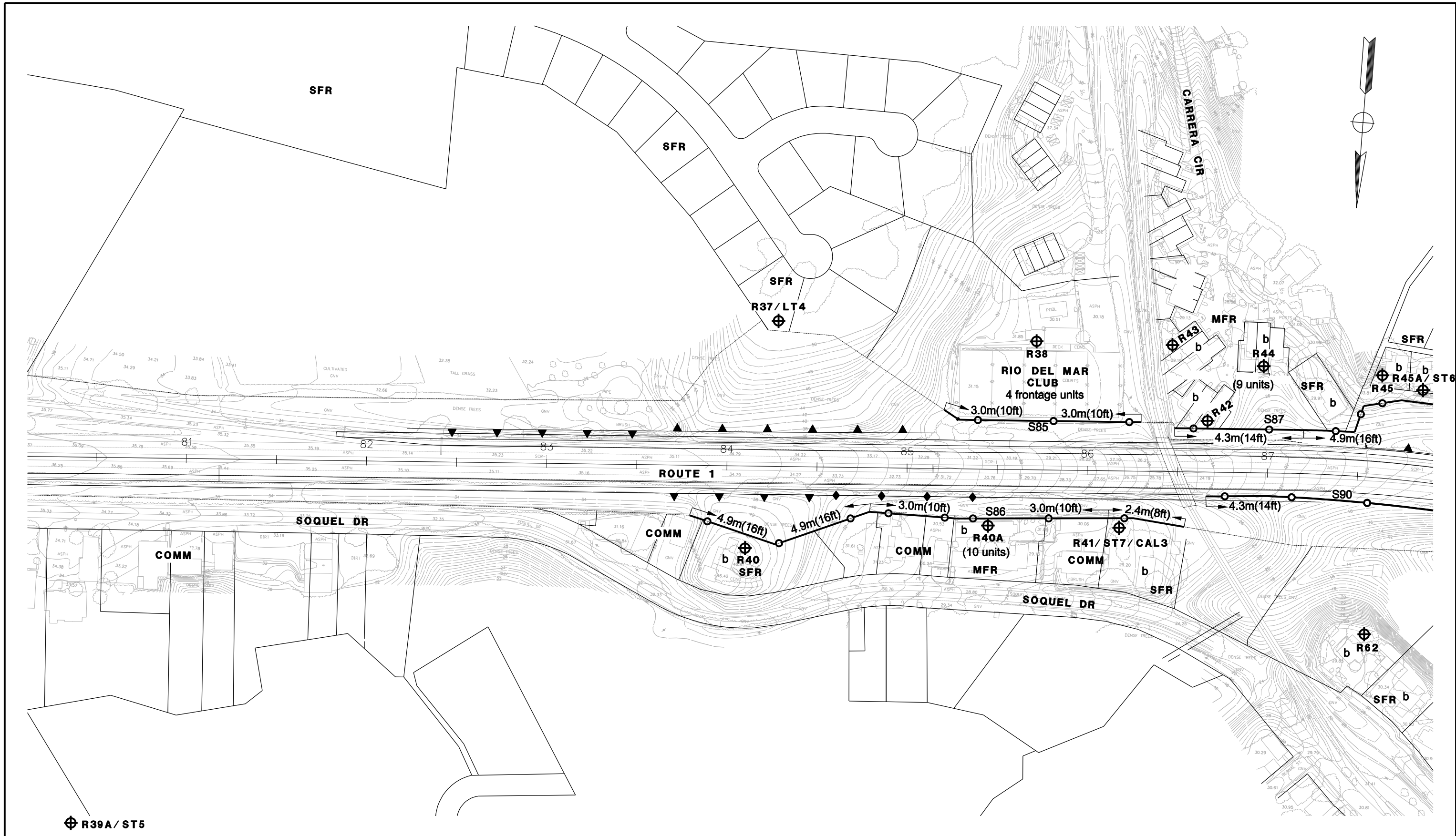






<b>LEGEND</b>			
⊕RXX - SENSITIVE RECEIVER SITE	—○—○— SOUNDWALL	SFR - SINGLE FAMILY RESIDENCE	<b>ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b>
⊕LT - LONG TERM MEASUREMENT	--- EXISTING WALL	MFR - MULTI-FAMILY RESIDENCE	
⊕ST - SHORT TERM MEASUREMENT	▼▼ RETAINING WALL	COMM - COMMERCIAL	
⊕CAL - CALIBRATION SITE	◆◆ CONCRETE BARRIER	b - BENEFITED RESIDENCE	
<div>1 : 2000 METERS</div> <div>0 m 50 m 100 m</div>			<b>FEBRUARY 26, 2013</b>
			<b>SHEET NO. 5 OF 20</b>

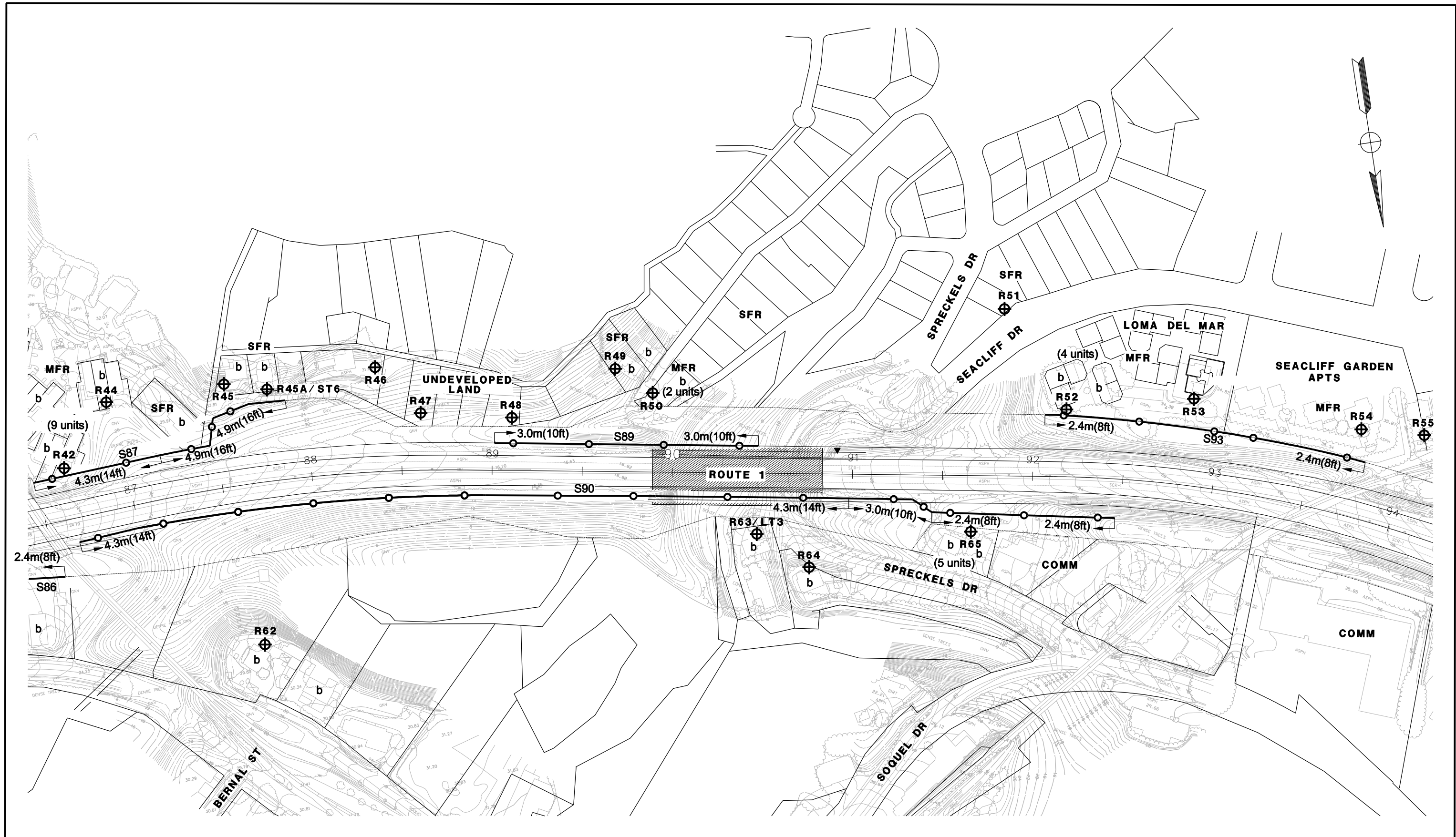




<b>LEGEND</b>		<b>SFR</b> - SINGLE FAMILY RESIDENCE	<div>1 : 2000 METERS</div> <div>0 m      50 m      100 m</div>	<b>ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b>	
⊕RXX	- SENSITIVE RECEIVER SITE	<b>MFR</b> - MULTI-FAMILY RESIDENCE			
⊕LT	- LONG TERM MEASUREMENT	<b>COMM</b> - COMMERCIAL			
⊕ST	- SHORT TERM MEASUREMENT	<b>b</b> - BENEFITED RESIDENCE			
⊕CAL	- CALIBRATION SITE			<b>FEBRUARY 26, 2013</b>	<b>SHEET NO. 6 OF 20</b>





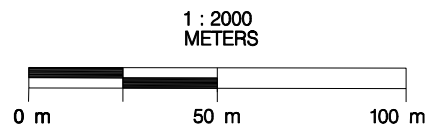


# LEGEND

- ⊕ RX - SENSITIVE RECEIVER SITE
- ⊕ LT - LONG TERM MEASUREMENT
- ⊕ ST - SHORT TERM MEASUREMENT
- ⊕ CAL - CALIBRATION SITE

- - SOUNDWALL
- — — - EXISTING WALL
- ▼—▼— - RETAINING WALL
- ◆—◆— - CONCRETE BARRIER

- SFR - SINGLE FAMILY RESIDENCE
- MFR - MULTI-FAMILY RESIDENCE
- COMM - COMMERCIAL
- b - BENEFITED RESIDENCE

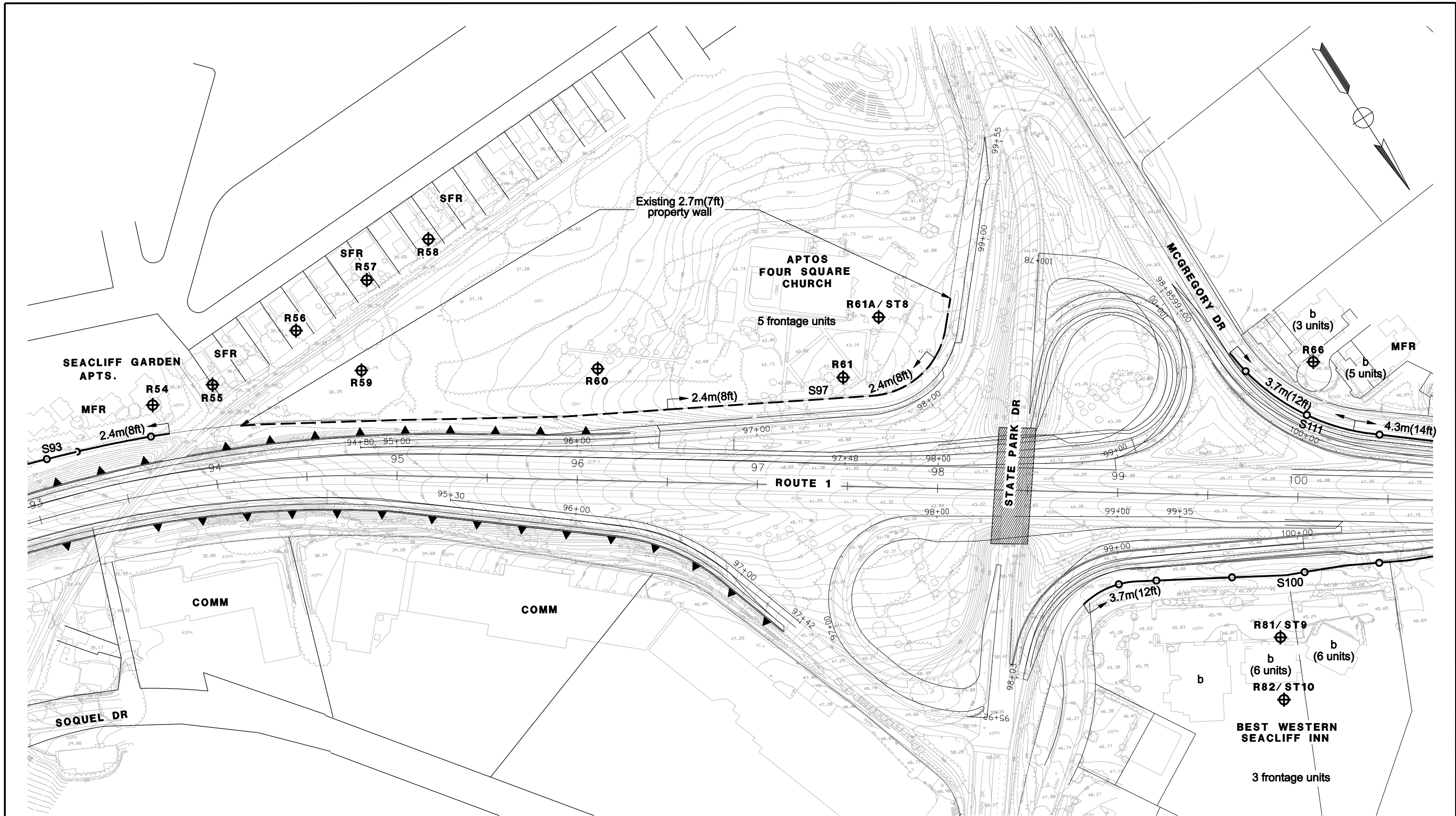


## ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER & BARRIER LOCATIONS

FEBRUARY 26, 2013

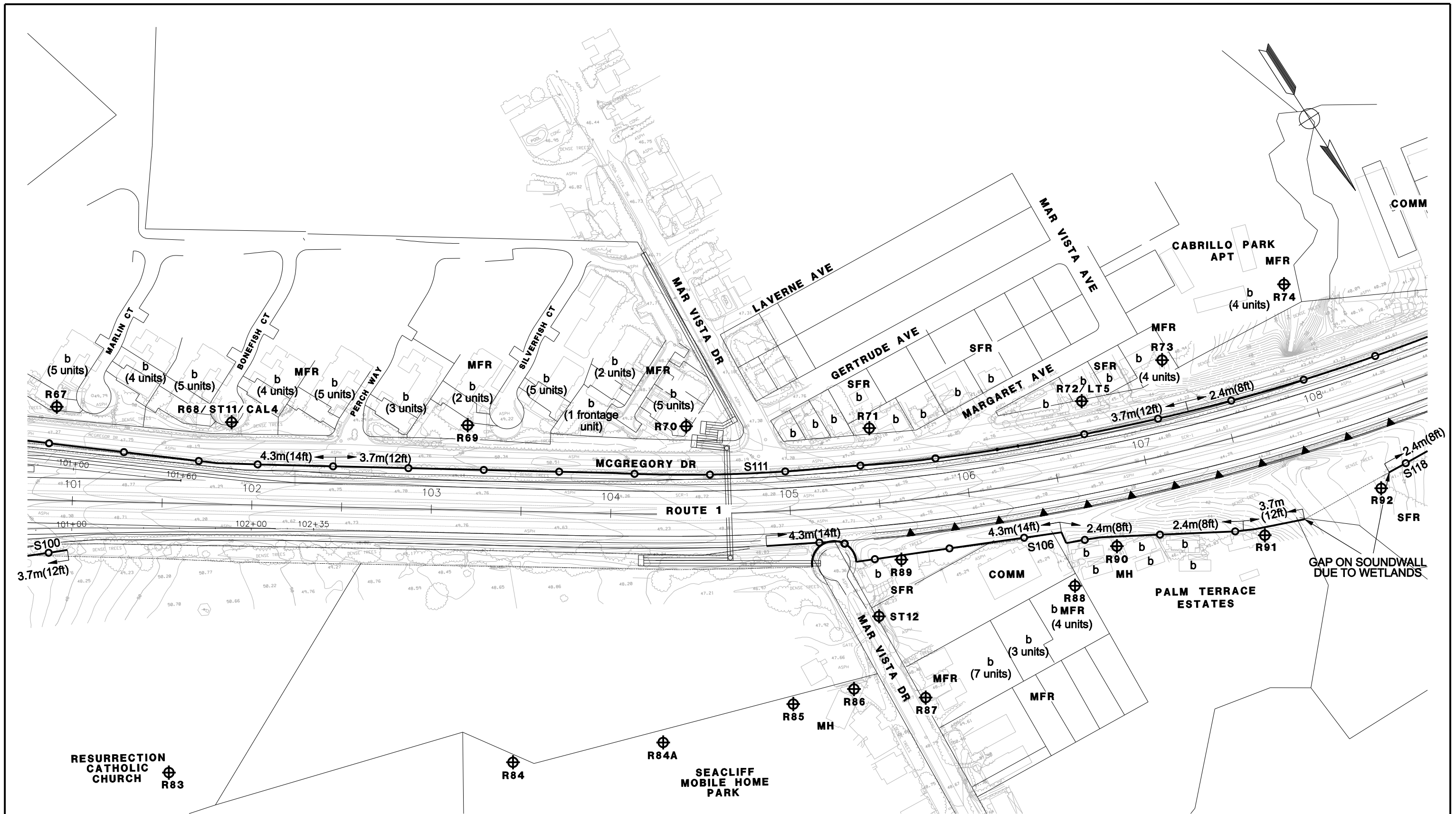
SHEET NO. 7 OF 20





<b>LEGEND</b>			
⊕RXX - SENSITIVE RECEIVER SITE	—○—○— - SOUNDWALL	SFR - SINGLE FAMILY RESIDENCE	<div>1 : 2000 METERS</div> <div>0 m 50 m 100 m</div>
⊕LT - LONG TERM MEASUREMENT	--- --- - EXISTING WALL	MFR - MULTI-FAMILY RESIDENCE	
⊕ST - SHORT TERM MEASUREMENT	▼▼▼ - RETAINING WALL	COMM - COMMERCIAL	
⊕CAL - CALIBRATION SITE	◆◆◆ - CONCRETE BARRIER	b - BENEFITED RESIDENCE	
<b>ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b>			
FEBRUARY 26, 2013			SHEET NO. 8 OF 20



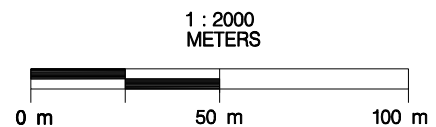


# LEGEND

- ⊕ RXX - SENSITIVE RECEIVER SITE
- ⊕ LT - LONG TERM MEASUREMENT
- ⊕ ST - SHORT TERM MEASUREMENT
- ⊕ CAL - CALIBRATION SITE

- - SOUNDWALL
- — — - EXISTING WALL
- ▼—▼— - RETAINING WALL
- ◆—◆— - CONCRETE BARRIER

- SFR - SINGLE FAMILY RESIDENCE
- MFR - MULTI-FAMILY RESIDENCE
- COMM - COMMERCIAL
- b - BENEFITED RESIDENCE



## ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER & BARRIER LOCATIONS

FEBRUARY 26, 2013

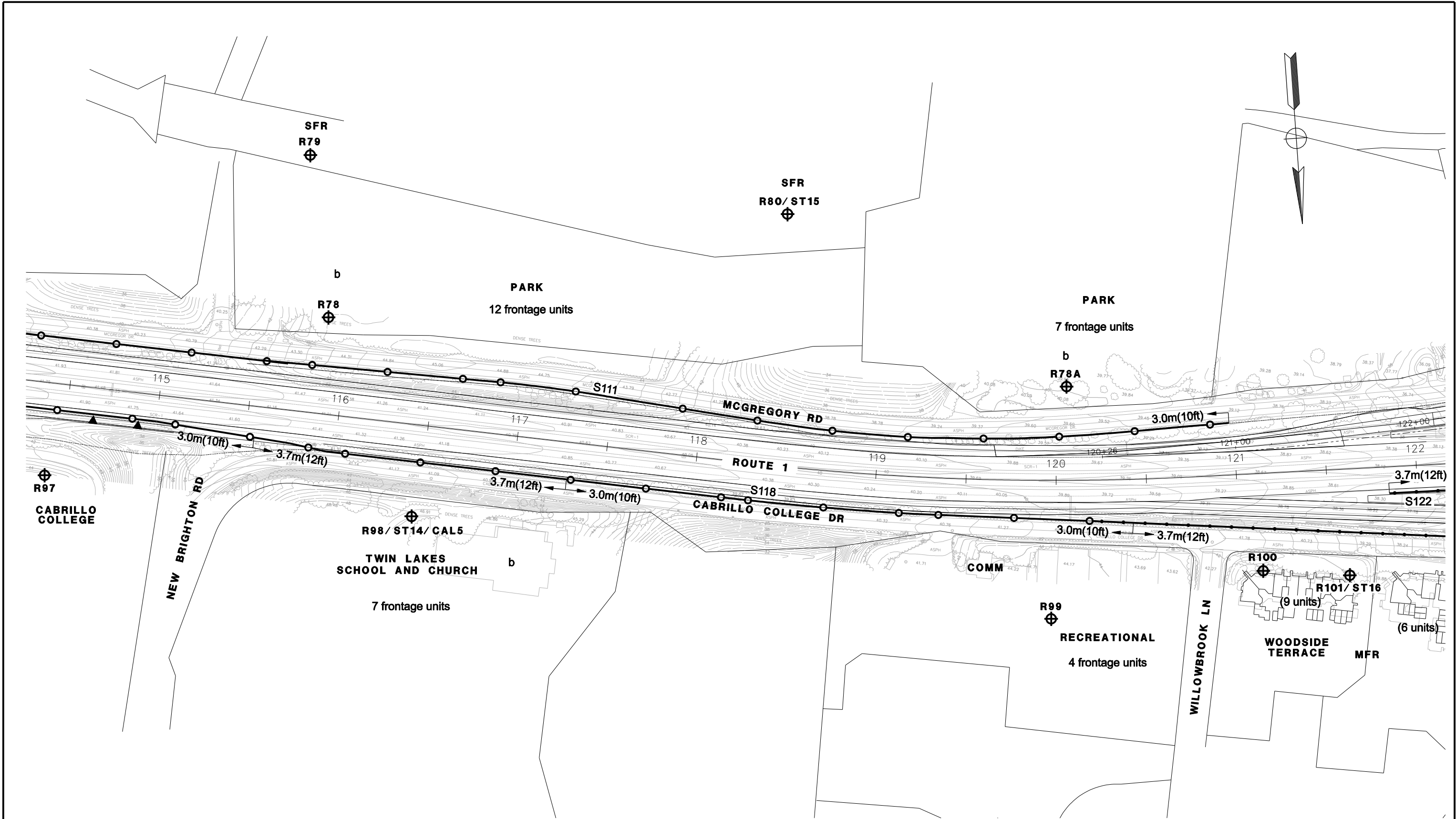
SHEET NO. 9 OF 20





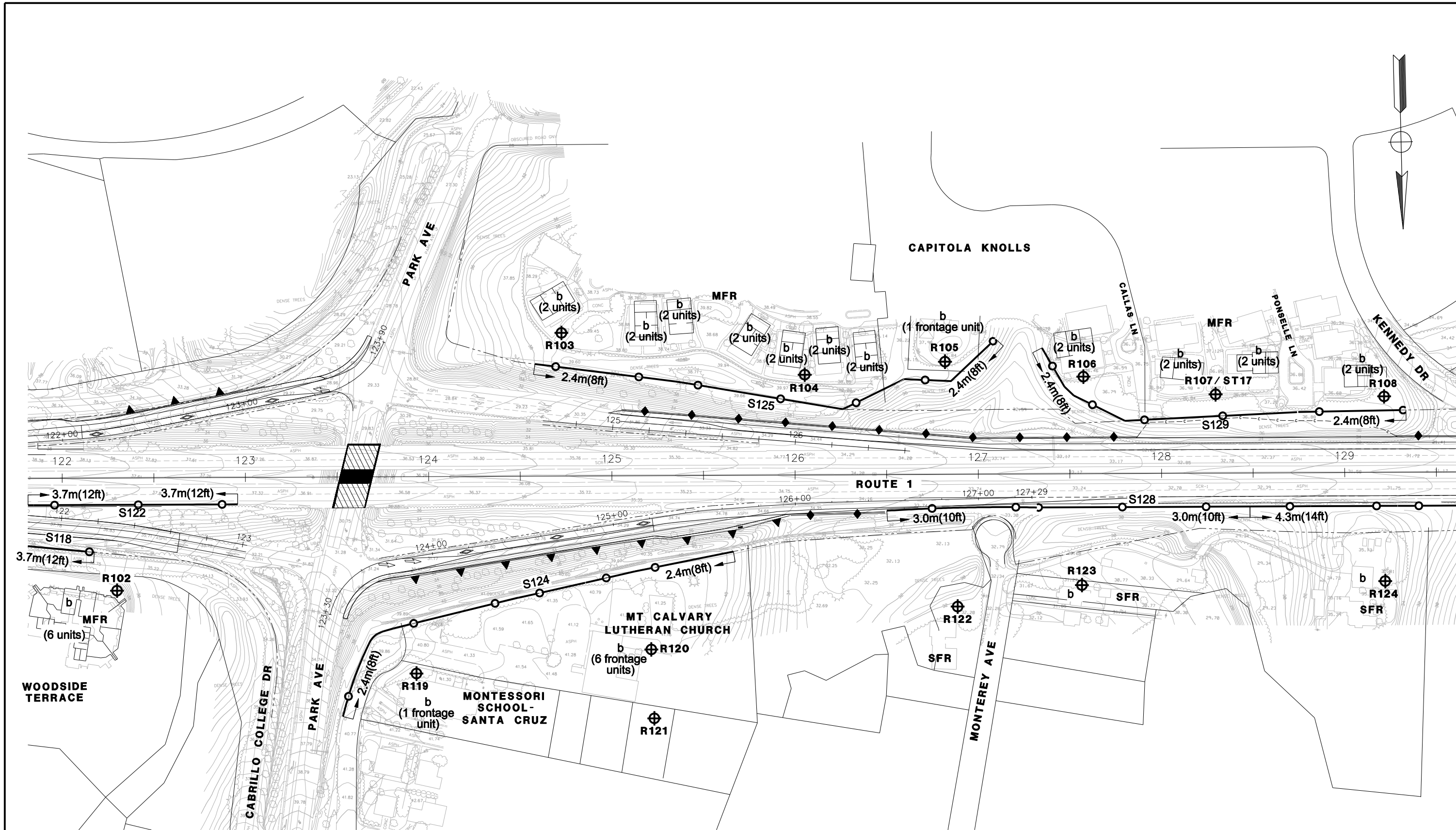






<b>LEGEND</b>		<b>SFR</b> - SINGLE FAMILY RESIDENCE	<div>1 : 2000 METERS</div> <div>0 m      50 m      100 m</div>	<b>ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b>	
<b>RXX</b> - SENSITIVE RECEIVER SITE	- SOUNDWALL	<b>MFR</b> - MULTI-FAMILY RESIDENCE			
<b>LT</b> - LONG TERM MEASUREMENT	- EXISTING WALL	<b>COMM</b> - COMMERCIAL		<b>FEBRUARY 26, 2013</b>	<b>SHEET NO. 11 OF 20</b>
<b>ST</b> - SHORT TERM MEASUREMENT	- RETAINING WALL	<b>b</b> - BENEFITED RESIDENCE			
<b>CAL</b> - CALIBRATION SITE	- CONCRETE BARRIER				

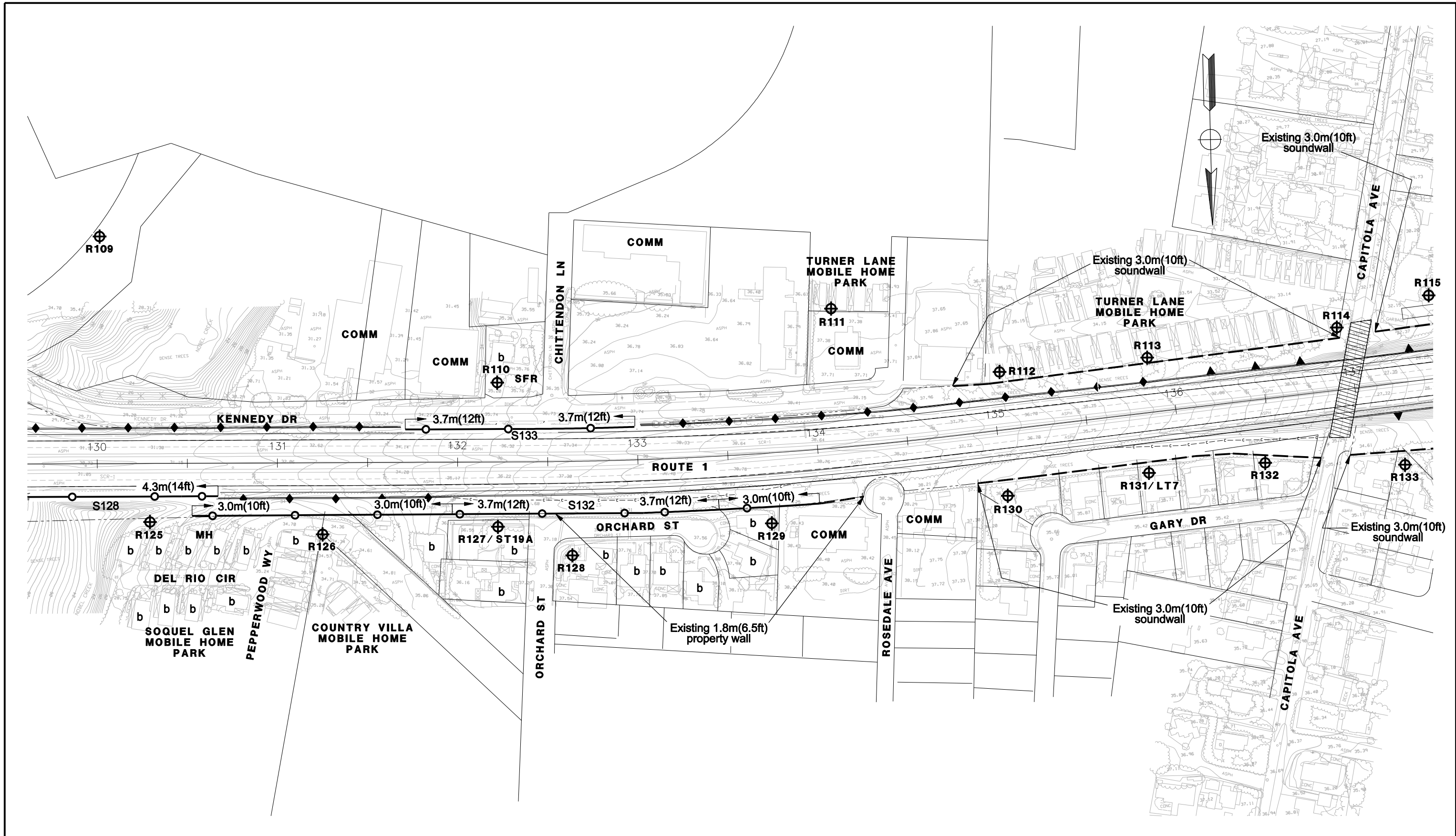




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<b>⊕RXX</b> - SENSITIVE RECEIVER SITE <b>⊕LT</b> - LONG TERM MEASUREMENT <b>⊕ST</b> - SHORT TERM MEASUREMENT <b>⊕CAL</b> - CALIBRATION SITE	<b>—○—</b> - SOUNDWALL <b>---</b> - EXISTING WALL <b>▼</b> - RETAINING WALL <b>◆</b> - CONCRETE BARRIER				

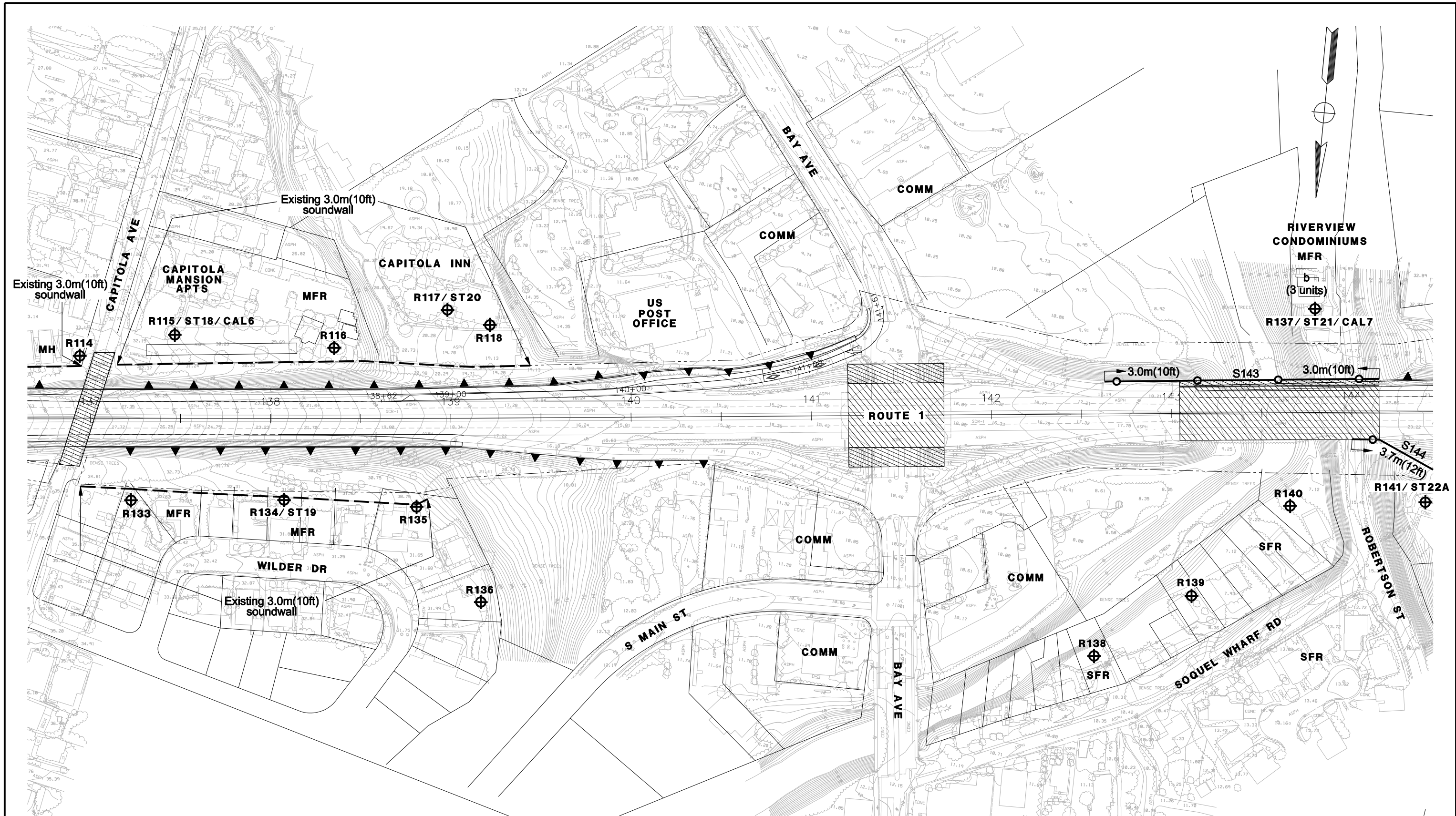






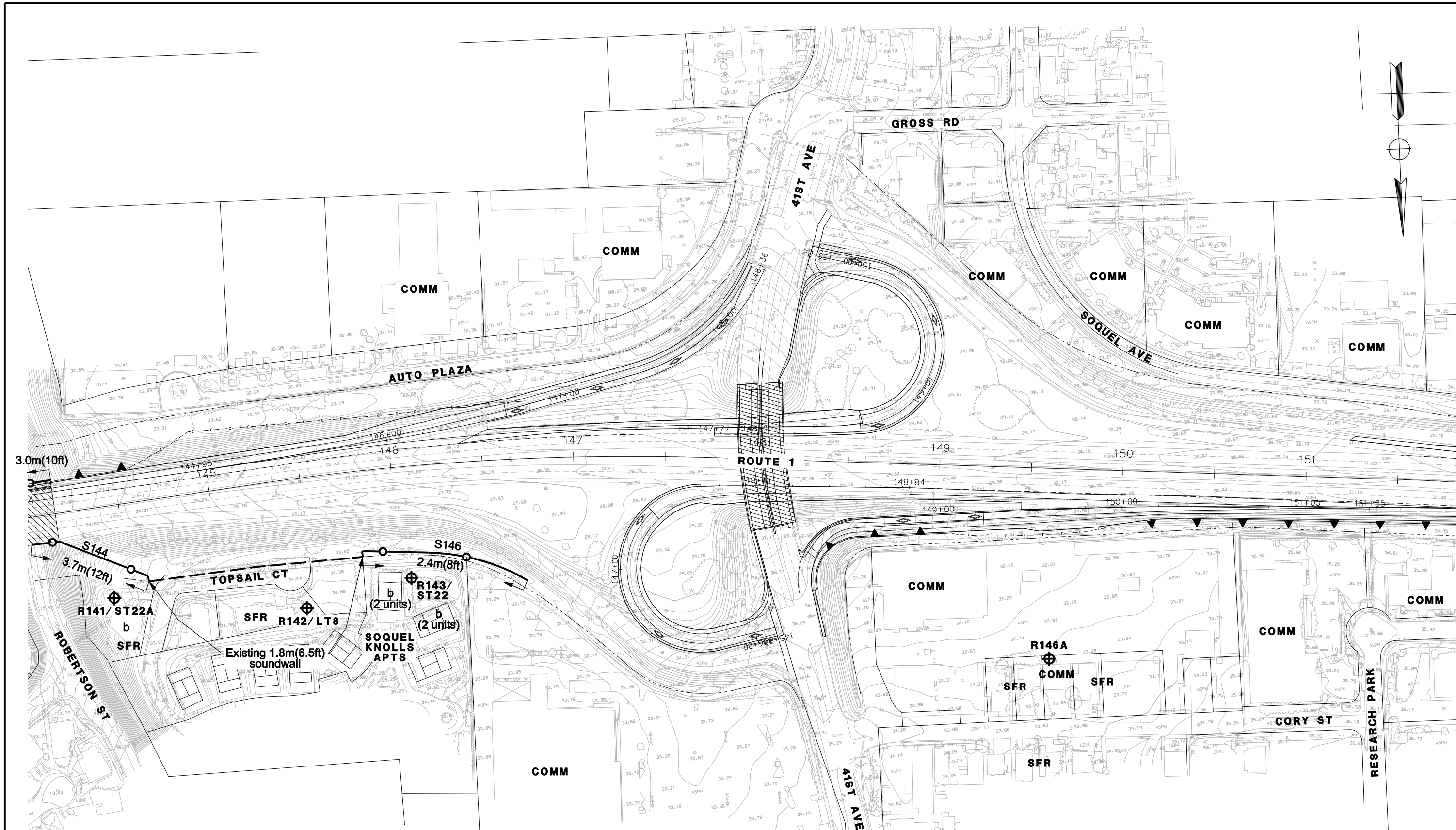
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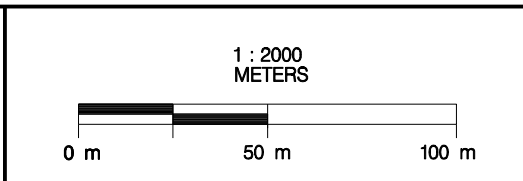


<b>LEGEND</b> ⊕RXX - SENSITIVE RECEIVER SITE ⊕LT - LONG TERM MEASUREMENT ⊕ST - SHORT TERM MEASUREMENT ⊕CAL - CALIBRATION SITE	—○— - SOUNDWALL --- - EXISTING WALL ▼ - RETAINING WALL ◆ - CONCRETE BARRIER	<b>SFR</b> - SINGLE FAMILY RESIDENCE <b>MFR</b> - MULTI-FAMILY RESIDENCE <b>COMM</b> - COMMERCIAL b - BENEFITED RESIDENCE	1:2000 METERS 0 m 50 m 100 m	<b>ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b> FEBRUARY 26, 2013 SHEET NO. 14 OF 20
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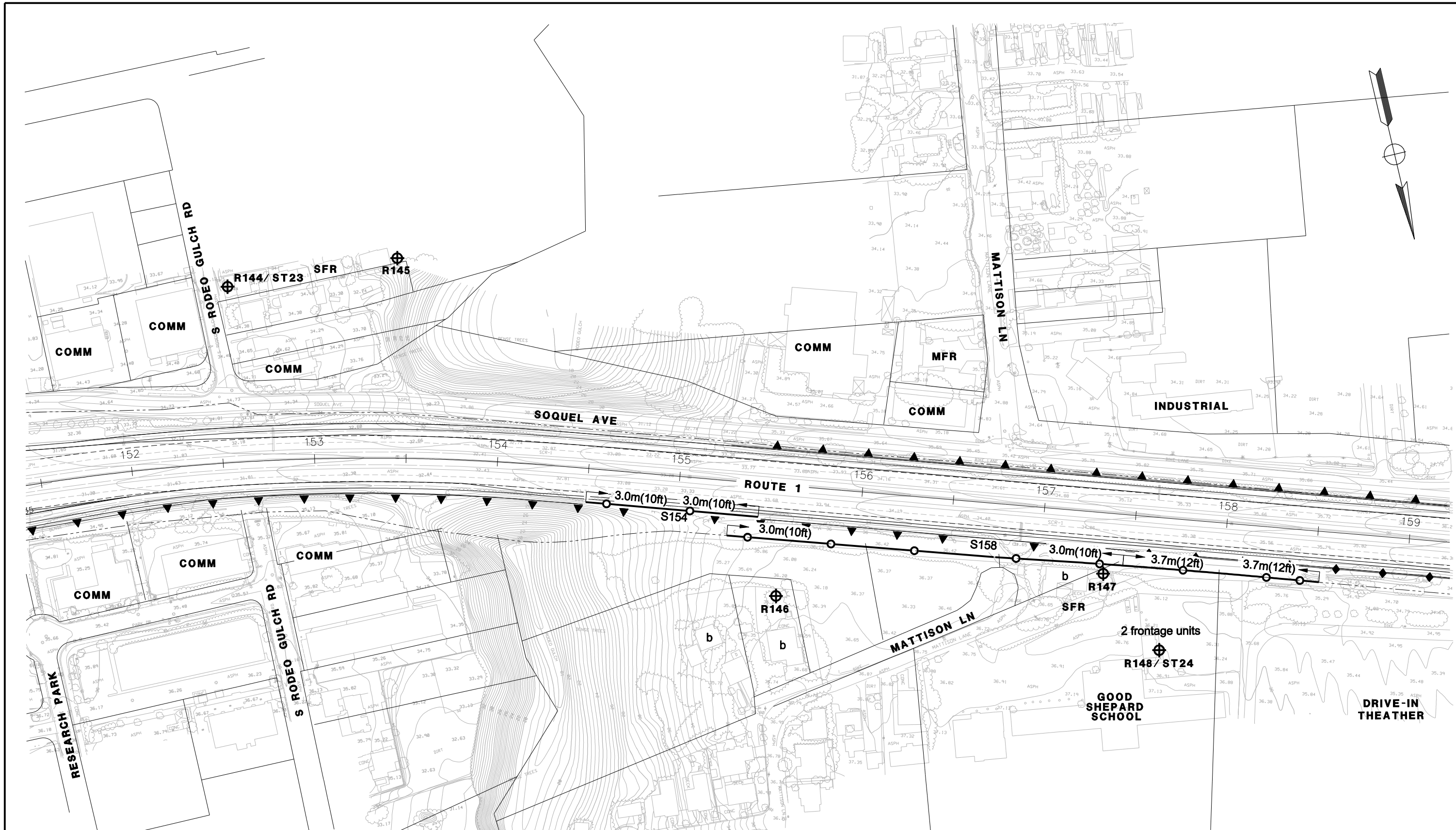


LEGEND					
⊕RXX	- SENSITIVE RECEIVER SITE	—○—○—	- SOUNDWALL	SFR	- SINGLE FAMILY RESIDENCE
⊕LT	- LONG TERM MEASUREMENT	---	- EXISTING WALL	MFR	- MULTI - FAMILY RESIDENCE
⊕ST	- SHORT TERM MEASUREMENT	▼▼	- RETAINING WALL	COMM	- COMMERCIAL
⊕CAL	- CALIBRATION SITE	◆◆	- CONCRETE BARRIER	b	- BENEFITED RESIDENCE



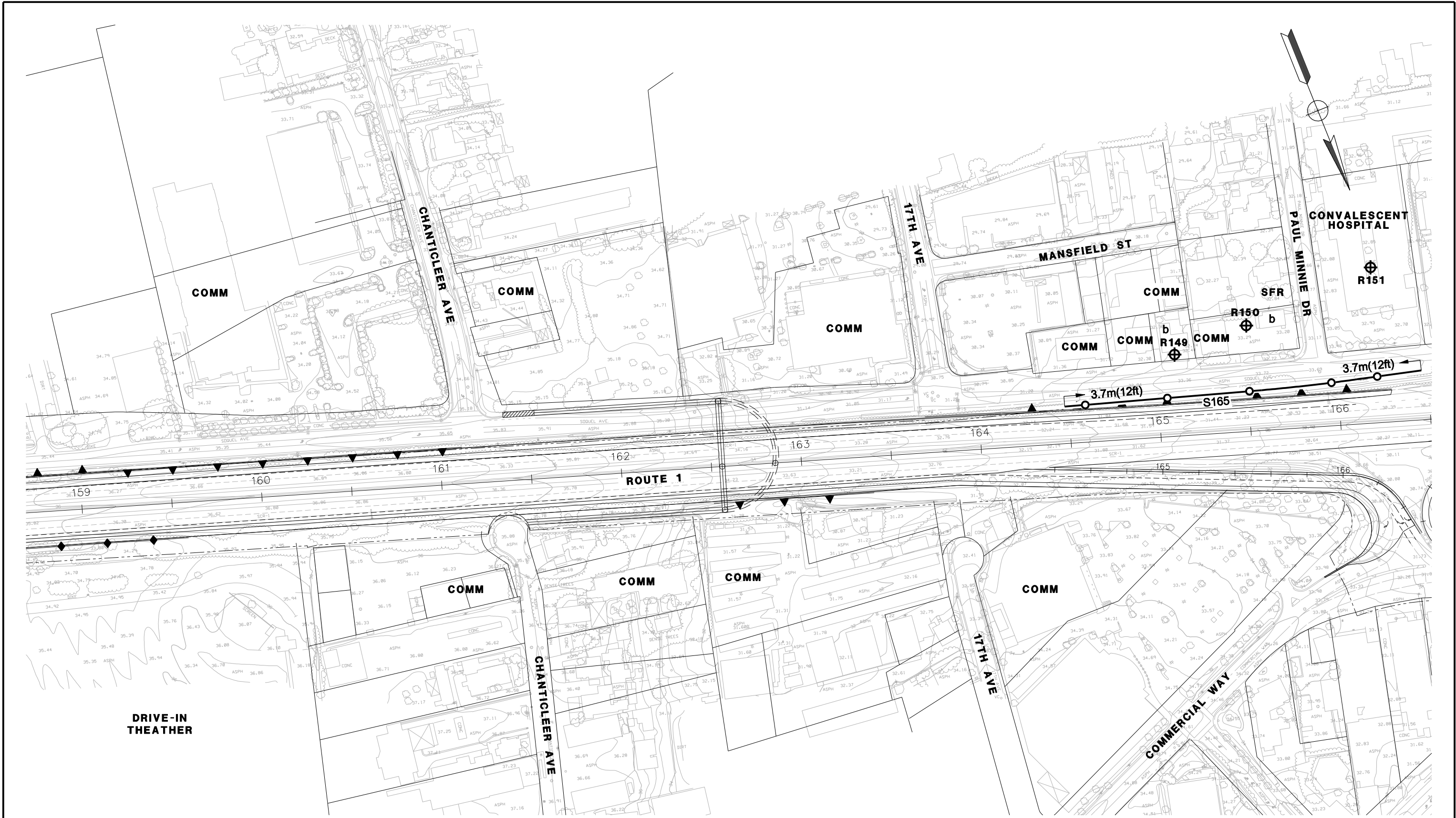






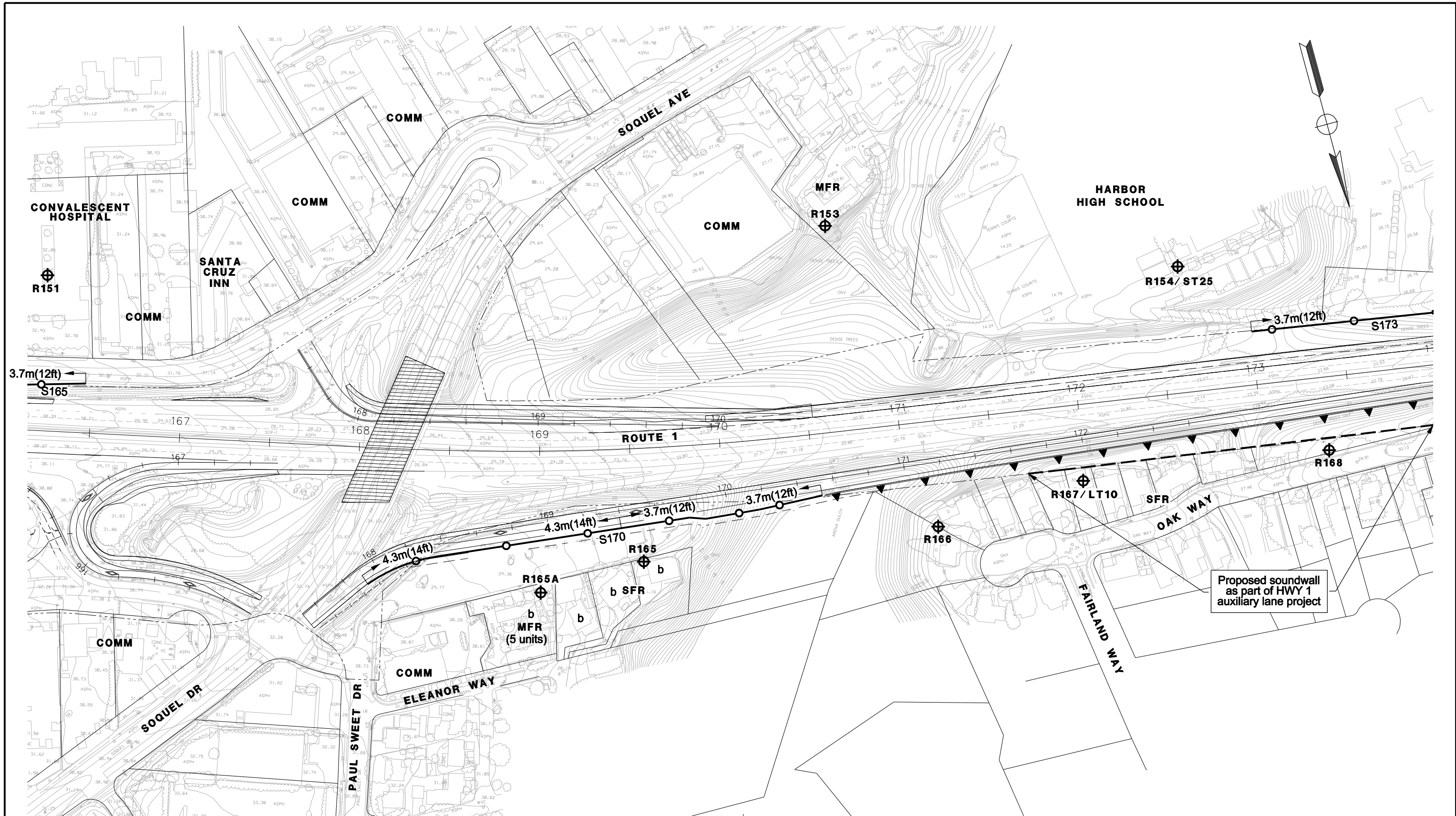
<b>LEGEND</b> ⊕RX - SENSITIVE RECEIVER SITE ⊕LT - LONG TERM MEASUREMENT ⊕ST - SHORT TERM MEASUREMENT ⊕CAL - CALIBRATION SITE	○—○ - SOUNDWALL — — — - EXISTING WALL ▼ — ▼ - RETAINING WALL ◆ — ◆ - CONCRETE BARRIER	<b>SFR</b> - SINGLE FAMILY RESIDENCE <b>MFR</b> - MULTI-FAMILY RESIDENCE <b>COMM</b> - COMMERCIAL b - BENEFITED RESIDENCE	1 : 2000 METERS 0 m 50 m 100 m	<b>ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b> FEBRUARY 26, 2013 SHEET NO. 16 OF 20
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<b>LEGEND</b>		<b>SFR</b> - SINGLE FAMILY RESIDENCE	<div>1 : 2000 METERS</div> <div>0 m      50 m      100 m</div>	<b>ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b>	
⊕RXX	- SENSITIVE RECEIVER SITE	<b>MFR</b> - MULTI - FAMILY RESIDENCE			
⊕LT	- LONG TERM MEASUREMENT	<b>COMM</b> - COMMERCIAL			
⊕ST	- SHORT TERM MEASUREMENT	b - BENEFITED RESIDENCE			
⊕CAL	- CALIBRATION SITE			<b>FEBRUARY 26, 2013</b>	<b>SHEET NO. 17 OF 20</b>

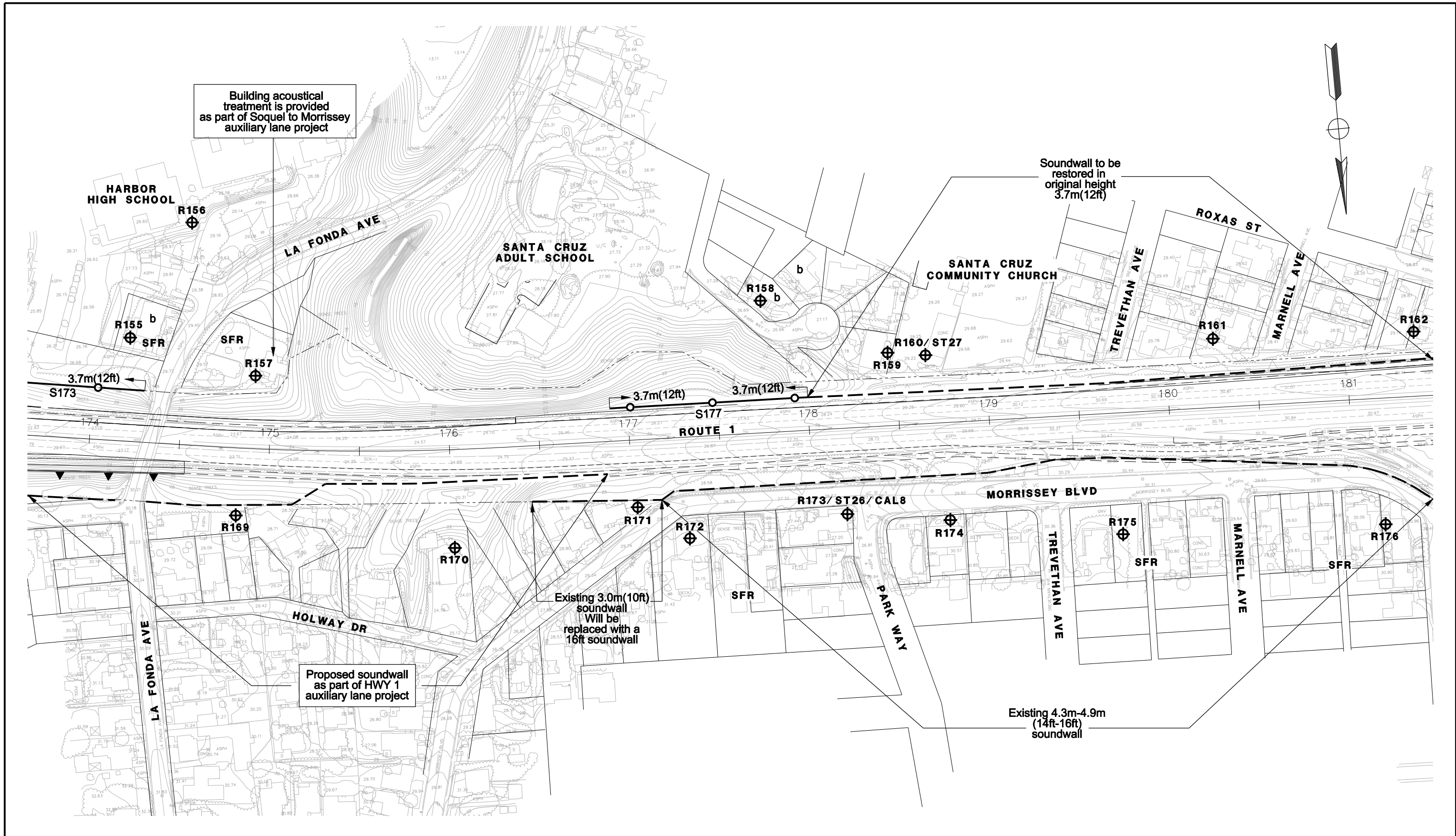




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⊕RXX	- SENSITIVE RECEIVER SITE	<b>MFR</b> - MULTI - FAMILY RESIDENCE			
⊕LT	- LONG TERM MEASUREMENT	<b>COMM</b> - COMMERCIAL			
⊕ST	- SHORT TERM MEASUREMENT	b - BENEFITED RESIDENCE			
⊕CAL	- CALIBRATION SITE				
—○—○—	- SOUNDWALL				
---	- EXISTING WALL				
▼▼▼	- RETAINING WALL				
◆◆◆	- CONCRETE BARRIER				







Building acoustical treatment is provided as part of Soquel to Morrissey auxiliary lane project

Soundwall to be restored in original height 3.7m(12ft)

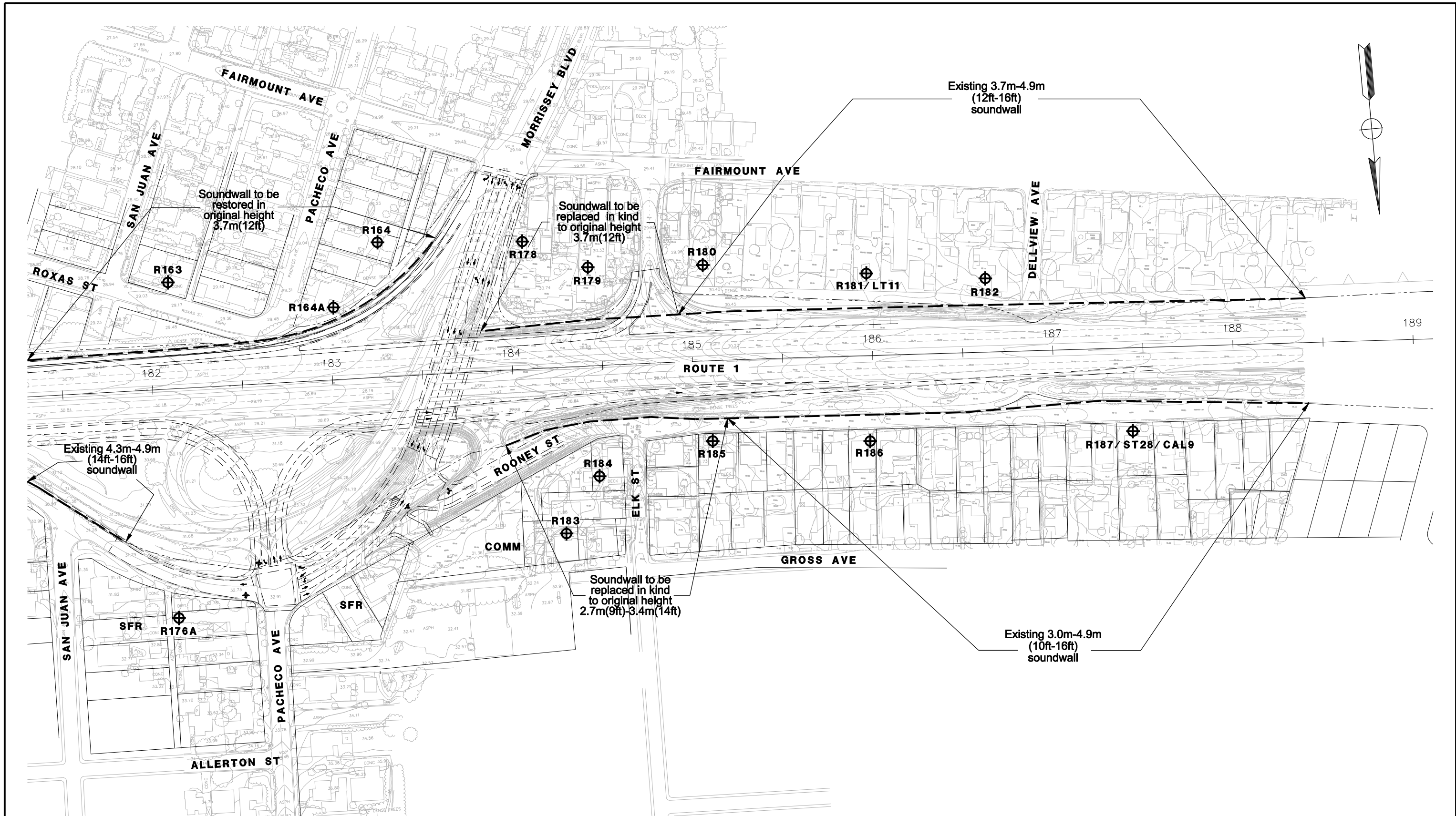
Existing 3.0m(10ft) soundwall Will be replaced with a 16ft soundwall

Proposed soundwall as part of HWY 1 auxiliary lane project

Existing 4.3m-4.9m (14ft-16ft) soundwall

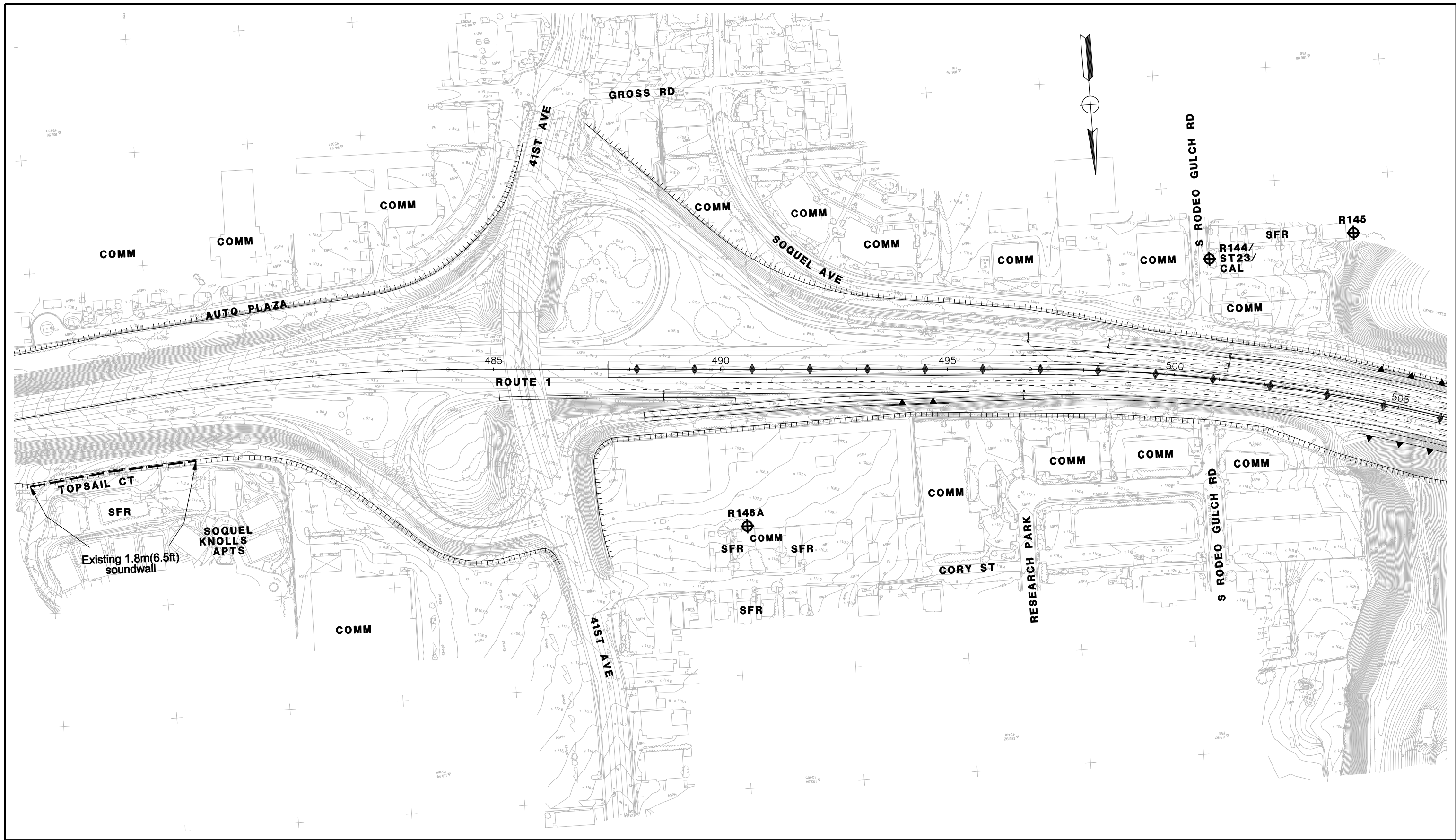
<b>LEGEND</b>		<b>SFR</b> - SINGLE FAMILY RESIDENCE <b>MFR</b> - MULTI - FAMILY RESIDENCE <b>COMM</b> - COMMERCIAL <b>b</b> - BENEFITED RESIDENCE	<div>1 : 2000 METERS</div> <div>0 m 50 m 100 m</div>	<b>ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b> FEBRUARY 26, 2013 SHEET NO. 19 OF 20	
<b>⊕RXX</b> - SENSITIVE RECEIVER SITE <b>⊕LT</b> - LONG TERM MEASUREMENT <b>⊕ST</b> - SHORT TERM MEASUREMENT <b>⊕CAL</b> - CALIBRATION SITE	<b>—○—</b> - SOUNDWALL <b>---</b> - EXISTING WALL <b>▼</b> - RETAINING WALL <b>◆</b> - CONCRETE BARRIER				





<b>LEGEND</b>		<b>SFR</b> - SINGLE FAMILY RESIDENCE <b>MFR</b> - MULTI-FAMILY RESIDENCE <b>COMM</b> - COMMERCIAL b - BENEFITED RESIDENCE	<div style="text-align: center;">1 : 2000 METERS</div> <div style="text-align: center;">0 m      50 m      100 m</div>	<b>ROUTE 1 SANTA CRUZ TSM ALTERNATIVE NOISE RECEIVER &amp; BARRIER LOCATIONS</b>	
<b>⊕ RXX</b> - SENSITIVE RECEIVER SITE <b>⊕ LT</b> - LONG TERM MEASUREMENT <b>⊕ ST</b> - SHORT TERM MEASUREMENT <b>⊕ CAL</b> - CALIBRATION SITE	<b>—○—</b> - SOUNDWALL <b>---</b> - EXISTING WALL <b>▼</b> - RETAINING WALL <b>◆</b> - CONCRETE BARRIER				





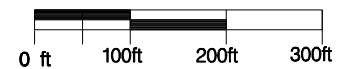
**LEGEND**

- ⊕RX - RECEIVER SITE
- ⊕LT - LONGTERM MEASUREMENT
- ⊕ST - SHORTTERM MEASUREMENT
- ⊕CAL - CALIBRATION SITE

- SOUNDWALL
- — — EXISTING WALL
- ◆— CONCRETE BARRIER
- ▼— RETAINING WALL

- SFR - SINGLE FAMILY RESIDENCE
- MFR - MULTI-FAMILY RESIDENCE
- COMM - COMMERCIAL
- b - BENEFITED RESIDENCE
- Ⓢ - SEVERELY IMPACTED RECEIVER

1in : 200ft



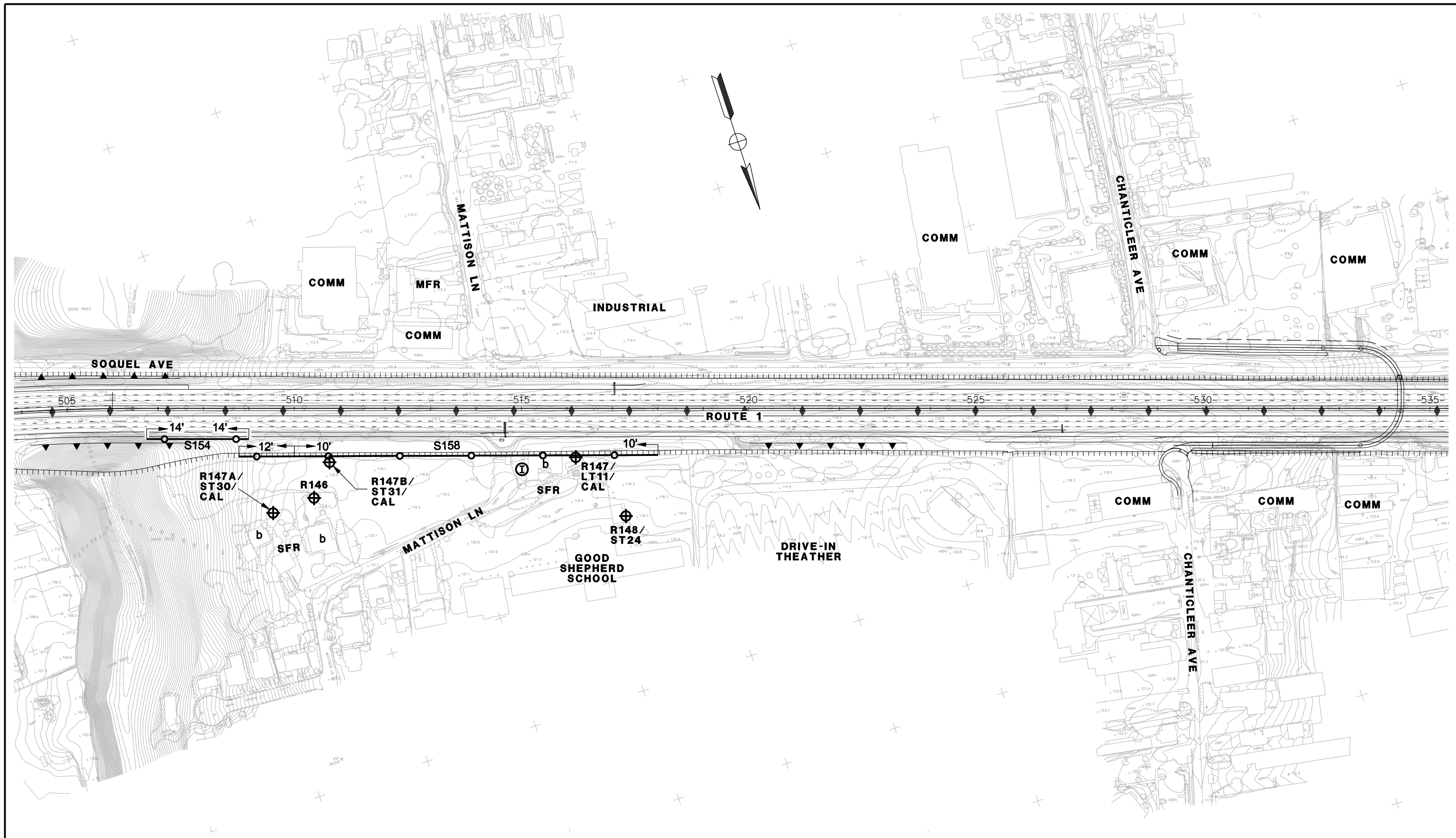
**ROUTE 1 SANTA CRUZ 41ST AVE TO  
SOQUEL AVE/AUXILIARY LANES PROJECT  
NOISE RECEIVER & BARRIER LOCATIONS**

FEBRUARY 26, 2013

SHEET NO. 1 OF 3

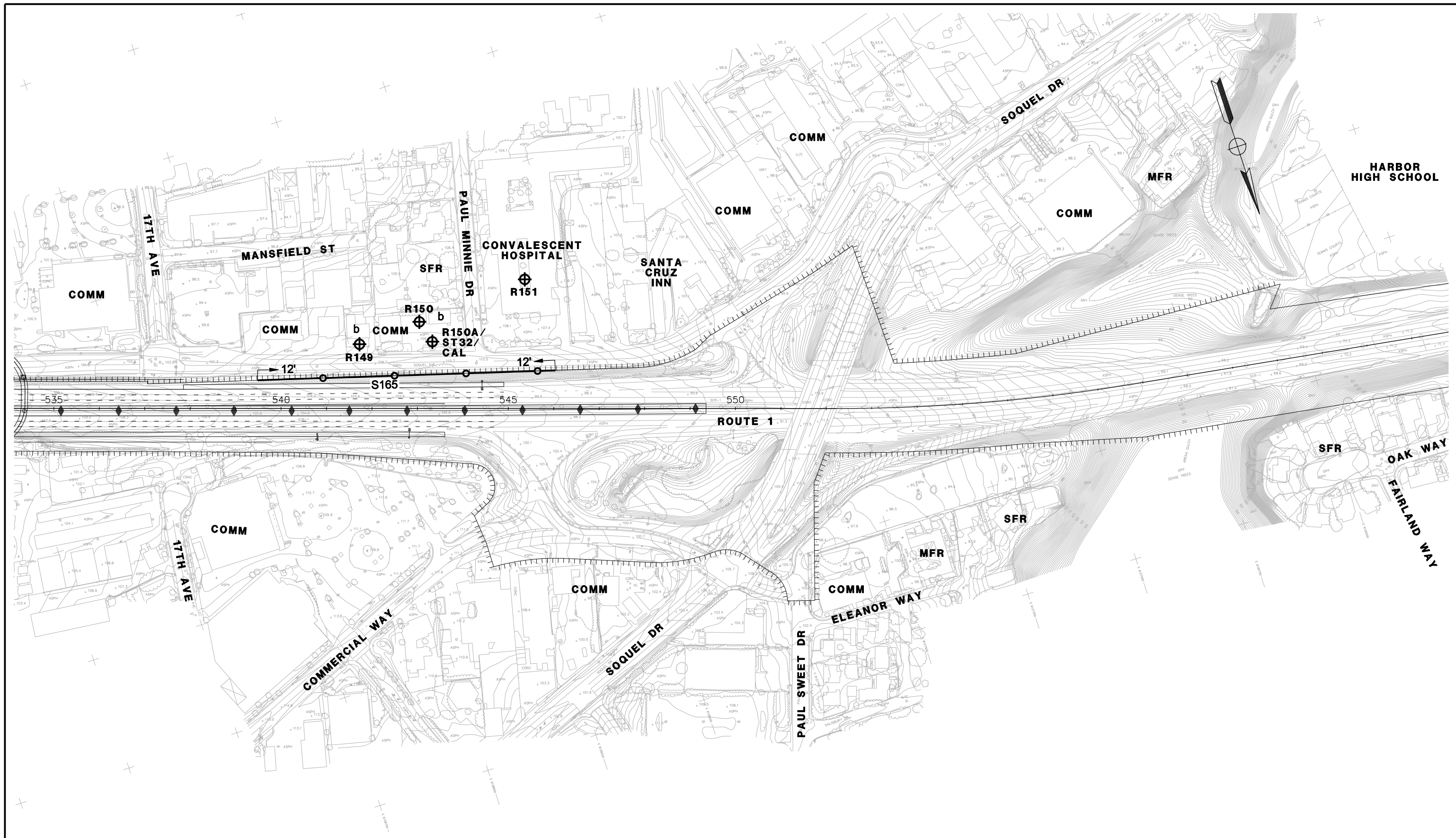






<b>LEGEND</b> <div> <div>⊕RXX</div> <div>⊕LT</div> <div>⊕ST</div> <div>⊕CAL</div> </div> <div> <div>- RECEIVER SITE</div> <div>- LONGTERM MEASUREMENT</div> <div>- SHORTTERM MEASUREMENT</div> <div>- CALIBRATION SITE</div> </div>			<div> <div>—○—○—</div> <div>— — —</div> <div>◆◆◆</div> <div>▼▼▼</div> </div> <div> <div>- SOUNDWALL</div> <div>- EXISTING WALL</div> <div>- CONCRETE BARRIER</div> <div>- RETAINING WALL</div> </div>			<div> <div>SFR</div> <div>MFR</div> <div>COMM</div> <div>b</div> <div>Ⓢ</div> </div> <div> <div>- SINGLE FAMILY RESIDENCE</div> <div>- MULTI-FAMILY RESIDENCE</div> <div>- COMMERCIAL</div> <div>- BENEFITED RESIDENCE</div> <div>- SEVERELY IMPACTED RECEIVER</div> </div>			<div>1in : 200ft</div> <div> <div>0 ft</div> <div>100ft</div> <div>200ft</div> <div>300ft</div> </div>		<div> <div>ROUTE 1 SANTA CRUZ 41ST AVE TO SOQUEL AVE/AUXILIARY LANES PROJECT</div> <div>NOISE RECEIVER &amp; BARRIER LOCATIONS</div> </div>		<div>FEBRUARY 26, 2013</div>	<div>SHEET NO. 2 OF 3</div>
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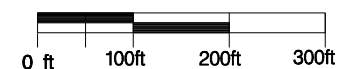
**LEGEND**

- ⊕RXX - RECEIVER SITE
- ⊕LT - LONGTERM MEASUREMENT
- ⊕ST - SHORTTERM MEASUREMENT
- ⊕CAL - CALIBRATION SITE

- - SOUNDWALL
- — — - EXISTING WALL
- ◆—◆— - CONCRETE BARRIER
- ▼—▼— - RETAINING WALL

- SFR - SINGLE FAMILY RESIDENCE
- MFR - MULTI-FAMILY RESIDENCE
- COMM - COMMERCIAL
- b - BENEFITED RESIDENCE
- Ⓢ - SEVERELY IMPACTED RECEIVER

1in : 200ft



**ROUTE 1 SANTA CRUZ 41ST AVE TO  
SOQUEL AVE/AUXILIARY LANES PROJECT  
NOISE RECEIVER & BARRIER LOCATIONS**

FEBRUARY 26, 2013

SHEET NO. 3 OF 3



## **Appendix L**

### **Notice of Preparation**





SCH NO. \_\_\_\_\_

## NOTICE OF PREPARATION

To: Interested Parties

From: California Dept. of Transportation,  
Central Region

2015 East Shields, Suite 100

Fresno, CA 93726-5428

Subject: **Notice of Preparation of a Draft Environmental Impact Report**

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

Project Title: Highway 1 HOV Lane Widening Project

Project Location: Highway 1 (designated State Route 1) in Santa Cruz County for a distance of approximately 8.25 miles between Larkin Valley/San Andreas Roads at the south and Morrissey Boulevard at the north

Project Description: • Widen the existing four-lane highway to a six-lane facility by adding one northbound and one southbound HOV lane

This is to inform you that the California Department of Transportation will be the Lead Agency in cooperation with the Santa Cruz County Regional Transportation Commission (SCCRTC)<sup>1</sup> in preparing an environmental impact report for the project described below. Your participation as a Responsible Agency is requested in the preparation and review of this document.

We need to know the views of your agency as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project. A combined CEQA EIR and NEPA Environmental Assessment is being prepared. This Notice of Preparation package is being transmitted also to federal agencies to solicit their comments regarding the scope of the NEPA document.

A more detailed project description, location map, and the potential environmental effects are contained in the attached materials.

A copy of the Initial Study is not attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please direct your response to:

James M. Tkach  
Acting Sr. Environmental Planner  
Caltrans, Central Region  
50 Higuera Street  
San Luis Obispo, 93401  
Telephone: 805 549-3196

Please supply us with the name for a contact person in your agency.

Date March 25, 2004

Signature  
Title

Roberta Lynn  
Sr. Environmental Planner

<sup>1</sup> The Highway 1 HOV Lane Widening Project will be transferred to the Highway 1 Construction Authority, a Joint Powers Agency that will assume full responsibility for project development and implementation in Fiscal Year 04-05.

## **Notice of Preparation of a Draft Environmental Impact Report Highway 1 HOV Lane Widening Project**

The Santa Cruz County Regional Transportation Commission (SCCRTC) is working in cooperation with the California Department of Transportation (Caltrans), the Lead Agency, to prepare an Environmental Impact Report (EIR) for the Highway 1 High Occupancy Vehicle (HOV) Lane Widening Project. This Notice of Preparation requests comments from responsible and trustee agencies regarding the significant environmental issues, reasonable alternatives, and reasonable mitigation measures that need to be discussed in the Draft EIR to address each agency's concerns. An Initial Study has not been prepared for this project and is, therefore, not attached to this Notice of Preparation.

### **Background**

Highway 1 (designated State Route or SR 1) serves as the primary route connecting communities in the southern and central areas of Santa Cruz County. Highway 1 links Watsonville, Aptos, Santa Cruz and University of California at Santa Cruz and is the southern terminus for State Routes 9 and 17, both of which bring heavy tourist traffic to coastal destinations in Santa Cruz and Monterey Counties. The population of Santa Cruz County has doubled in the past 30 years. During this time, no capacity enhancements have been constructed within the project limits, and in recent decades, this segment of Highway 1 has become heavily congested during morning and evening commute times. The 2001 Regional Transportation Plan identifies widening Highway 1 between Aptos and Santa Cruz as the highest priority project in Santa Cruz County. The first phase of improvements to Highway 1 is the 1/17 Merge Lanes Project with construction anticipated in Summer 2005 under Caltrans direction.

### **Project Description**

The project extends along Highway 1 in Santa Cruz County a distance of approximately 8.25 miles; the project limits are from 0.4 kilometers (0.2 miles) south of San Andreas/Larkin Valley Roads on the south to 0.3 kilometers (0.2 miles) north of Morrissey Boulevard on the north. The project location and vicinity are shown on Attachments 1 and 2, respectively. In addition to the two interchanges at the project limits, there are interchanges at Soquel Avenue, 41st Avenue, Bay Avenue/Porter Street, Park Avenue, State Park Drive, Rio Del Mar Boulevard, and Freedom Boulevard (nine interchanges total). The following improvements are proposed within the project limits:

- Widen the existing four-lane highway to a six-lane facility to accommodate one northbound and one southbound HOV lane,
- Provide 3 new pedestrian/bicycle over-crossings,
- Provide ramp metering,
- Provide Traffic Operations System (TOS) equipment,
- Modify interchanges to improve merging opportunities and ramp geometrics as follows:
  - Lengthen acceleration/deceleration lanes,
  - Improve sight distances,
  - Replace the railroad overpass structures and widen the current roadway bridges to accommodate highway widening.

Most of the proposed widening would be constructed in the median under Alternative 2B. At locations where the median width is insufficient, the required widening would be at the outside shoulder. Where frontage roads are adjacent to Highway 1, sound walls on safety-shaped barriers would be constructed to separate the two facilities and minimize right-of-way acquisition.

Concrete barriers would separate the northbound and southbound lanes, while striping would separate HOV from mixed-flow lanes.

### **Project Purpose and Need**

The purpose of the Highway 1 HOV Lane Widening Project is to reduce congestion, encourage carpooling and use of alternative transportation modes as means to increase transportation system capacity, and improve safety. Meeting these project purposes would also address the following related needs:

- Improve operations – peak period congestion currently extends up to eight hours on weekdays,
- Reduce delay for commuters, commerce, and emergency vehicles,
- Provide incentives to increase transit use and ridesharing,
- Reduce congestion-related accidents, and
- Reduce “cut-through” traffic on local streets.

### **Alternatives Under Consideration**

In addition to the No-Build Alternative (Alternative 1), two Build Alternatives (Alternatives 2A and 2B) are under consideration. Alternative 2A would provide a standard median width of 6.6 meters (21.6 feet). Alternative 2B would provide a reduced median width of 1.8 meters (5.9 feet), which would accommodate 0.6-meter (2-foot) inside shoulders and the concrete median barrier.

### **Anticipated Benefits and Environmental Effects**

Widening the highway to accommodate HOV lanes would encourage the use of carpools and express buses. Because HOV facilities transport more riders in fewer vehicles, congestion and delay during peak travel periods would be reduced. The project is expected also to reduce congestion and improve operations on local arterials that currently carry “cut-through” traffic diverted from congested highway conditions. Reduced congestion and improved operations along Highway 1 are anticipated to increase safety and reduce congestion-related accidents.

Widening the highway may affect wetlands and waterways within the project limits as well as special-status plant species and habitat for special-status wildlife species, potentially including California red-legged frog, tidewater goby, and steelhead. HOV lane widening will be designed to avoid the Valencia lagoon, which is a known breeding location for Santa Cruz long-toed salamander, and its associated upland habitat, insofar as possible. The project will be designed to accommodate upland drainage improvements to facilitate long-term maintenance requirements of the Valencia channel.

Historic resources adjacent to Highway 1 are listed in the California Inventory of Historic Places and/or the City of Santa Cruz Historic Building Survey; such resources may be protected under Section 4(f) of the DOT Act. Archaeological sites are likely on or adjacent to the project area. Some areas within the project limits indicate high sensitivity for the discovery of paleontological resources. Widening the highway may increase noise levels at residences and other sensitive receptors and is expected to introduce changes to the visual character of the corridor. Mitigation is anticipated to address noise, visual, cultural, biological, and paleontological impacts.

### **Public Meeting**

Agency and public meetings will be held to announce the initiation of studies and solicit input regarding potentially significant environmental issues, reasonable alternatives, and mitigation measures. The South Corridor Public Information Meeting will be held on April 26, 2004, at Sea

Cliff Inn located at 7500 Old Dominion Circle, in Aptos. This meeting will be open from 3:00 to 4:30 PM for agencies and 6:00 to 8:30 PM for the general public. The North Corridor Public Information Meeting will be held on April 29, 2004 in the Live Oak Community Room at Simpkins Family Swim Center located at 979 17<sup>th</sup> Avenue, Santa Cruz. This meeting will be open to the general public from 6:00 to 8:30 PM. The format for the public meetings offers an open house and map viewing from 6:00 until 7:00 PM, with a formal presentation followed by a question and answer period from 7:00 until 8:30 PM.

The purpose of these meetings is to provide responsible and Trustee Agency staff and the public an opportunity to comment on project alternatives, impacts, and issues to be considered as part of the project studies. Presentations will describe the project alternatives, environmental review process, project schedule, and project cost and funding. Graphics will be presented to assist the public in visualizing the proposed limits of project construction. Opportunities will be offered for comments to be provided either orally or in writing, and future opportunities for public involvement will be outlined. Agency representatives, interested organizations, and the general public are invited to attend.

**Document Details Report  
State Clearinghouse Data Base**

**SCH#** 2004032147  
**Project Title** Highway 1 HOV Lane Widening Project  
**Lead Agency** Caltrans #5

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**Type** NOP Notice of Preparation  
**Description** Widen the existing four-lane highway to a six-lane facility by adding one northbound and one southbound HOV lane on Highway 1 in Santa Cruz County for a distance of approximately 8.25 miles between Larkin Valley/San Andreas Roads at the south and Morrissey Boulevard at the North.

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**Lead Agency Contact**

<b>Name</b>	James Tkach		
<b>Agency</b>	Department of Transportation, District 5		
<b>Phone</b>	805-549-3196	<b>Fax</b>	
<b>email</b>			
<b>Address</b>	50 Higuera Street		
<b>City</b>	San Luis Obispo	<b>State</b> CA	<b>Zip</b> 93041-5415

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**Project Location**

**County** Santa Cruz  
**City** Santa Cruz, Capitola  
**Region**  
**Cross Streets** San Andreas/Larkin Valley Roads, Morrissey Blvd.  
**Parcel No.**  

<b>Township</b>	<b>Range</b>	<b>Section</b>	<b>Base</b>
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**Proximity to:**

**Highways** Hwy-1, 17, 9  
**Airports**  
**Railways** Southern Pacific  
**Waterways** Rodeo Gulch, Soquel Creek, Nobel Creek, Tannery Gulch, Borregos Creek, Aptos Creek, Valencia Cre  
**Schools** Live Oak SD, Pajaro Valley SD, Santa Cruz SD, Soquel Elementary  
**Land Use**

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**Project Issues** Aesthetic/Visual; Air Quality; Archaeologic-Historic; Geologic/Seismic; Noise; Traffic/Circulation; Vegetation; Wetland/Riparian; Wildlife

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**Reviewing Agencies** Resources Agency; California Coastal Commission; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 3; Native American Heritage Commission; Public Utilities Commission; State Lands Commission; California Highway Patrol; Air Resources Board, Transportation Projects; Regional Water Quality Control Board, Region 3

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**Date Received** 03/29/2004      **Start of Review** 03/29/2004      **End of Review** 04/27/2004



Resources Agency

☒ Resources Agency  
Nadell Gayou

☐ Dept. of Boating & Waterways  
Suzi Betzler

☒ California Coastal  
Commission  
Elizabeth A. Fuchs

☐ Colorado River Board  
Gerald R. Zimmerman

☐ Dept. of Conservation  
Roseanne Taylor

☐ California Energy  
Commission  
Environmental Office

☐ Dept. of Forestry & Fire  
Protection  
Allen Robertson

☒ Office of Historic  
Preservation  
Hans Kreutzberg

☒ Dept. of Parks & Recreation  
B. Noah Tlghman  
Environmental Stewardship  
Section

☐ Reclamation Board  
Lori Buford

☐ Santa Monica Mountains  
Conservancy  
Paul Edelman

☐ S.F. Bay Conservation &  
Dev't. Comm.  
Steve McAdam

☒ Dept. of Water Resources  
Resources Agency  
Nadell Gayou

Fish and Game

☐ Dept. of Fish & Game  
Scott Flint  
Environmental Services Division

☐ Dept. of Fish & Game 1  
Donald Koch  
Region 1

☐ Dept. of Fish & Game 2  
Banky Curtis  
Region 2

☒ Dept. of Fish & Game 3  
Robert Floerke  
Region 3

☐ Dept. of Fish & Game 4  
William Laudermilk  
Region 4

☐ Dept. of Fish & Game 5  
Don Chadwick  
Region 5, Habitat Conservation  
Program

☐ Dept. of Fish & Game 6  
Gabrina Gatchel  
Region 6, Habitat Conservation  
Program

☐ Dept. of Fish & Game 6 I/M  
Tammy Allen  
Region 6, Inyo/Mono, Habitat  
Conservation Program

☐ Dept. of Fish & Game M  
George Isaac  
Marine Region

Other Departments

☐ Food & Agriculture  
Steve Shaffer  
Dept. of Food and Agriculture

☐ Dept. of General Services  
Robert Sleppey  
Environmental Services Section

☐ Dept. of Health Services  
Wayne Hubbard  
Dept. of Health/Drinking Water

Independent  
Commissions/Boards

☐ Delta Protection Commission  
Debbie Eddy

☐ Office of Emergency Services  
John Rowden, Manager

☐ Governor's Office of Planning  
& Research  
State Clearinghouse

☒ Native American Heritage  
Comm.  
Debbie Treadway

☒ Public Utilities Commission  
Ken Lewis

☒ State Lands Commission  
Jean Sarino

☐ Tahoe Regional Planning  
Agency (TRPA)  
Cherry Jacques

Business, Trans & Housing

☐ Caltrans - Division of  
Aeronautics  
Sandy Hesnard

☐ Caltrans - Planning  
Ron Helgeson

☒ California Highway Patrol  
John Olejnik  
Office of Special Projects

☐ Housing & Community  
Development  
Cathy Creswell  
Housing Policy Division

Dept. of Transportation

☐ Dept. of Transportation 1  
Mike Eagan  
District 1

☐ Dept. of Transportation 2  
Don Anderson  
District 2

☐ Dept. of Transportation 3  
Jeff Pulverman  
District 3

☐ Dept. of Transportation 4  
Tim Sable  
District 4

☐ Dept. of Transportation 5  
David Murray  
District 5

☐ Dept. of Transportation 6  
Marc Birnbaum  
District 6

☐ Dept. of Transportation 7  
Stephen J. Buswell  
District 7

☐ Dept. of Transportation 8  
Linda Grimes,  
District 8

☐ Dept. of Transportation 9  
Gayle Rosander  
District 9

☐ Dept. of Transportation 10  
Tom Dumas  
District 10

☐ Dept. of Transportation 11  
Bill Figge  
District 11

☐ Dept. of Transportation 12  
Bob Joseph  
District 12

Cal EPA

☐ Air Resources Board

☐ Airport Projects  
Jim Lerner

☒ Transportation Projects  
Kurt Karperos

☐ Industrial Projects  
Mike Tollstrup

☐ California Integrated Waste  
Management Board  
Sue O'Leary

☐ State Water Resources Control  
Board  
Jim Hockenberry  
Division of Financial Assistance

☐ State Water Resources Control  
Board  
Student Intern, 401 Water Quality  
Certification Unit  
Division of Water Quality

☐ State Water Resources Control Board  
Steven Herrera  
Division of Water Rights

☐ Dept. of Toxic Substances Control  
CEQA Tracking Center

Regional Water Quality Control  
Board (RWQCB)

☐ RWQCB 1  
Cathleen Hudson  
North Coast Region (1)

☐ RWQCB 2  
Environmental Document  
Coordinator  
San Francisco Bay Region (2)

☒ RWQCB 3  
Central Coast Region (3)

☐ RWQCB 4  
Jonathan Bishop  
Los Angeles Region (4)

☐ RWQCB 5S  
Central Valley Region (5)

☐ RWQCB 5F  
Central Valley Region (5)  
Fresno Branch Office

☐ RWQCB 5R  
Central Valley Region (5)  
Redding Branch Office

☐ RWQCB 6  
Lahontan Region (6)

☐ RWQCB 6V  
Lahontan Region (6)  
Victorville Branch Office

☐ RWQCB 7  
Colorado River Basin Region (7)

☐ RWQCB 8  
Santa Ana Region (8)

☐ RWQCB 9  
San Diego Region (9)

☐ Other

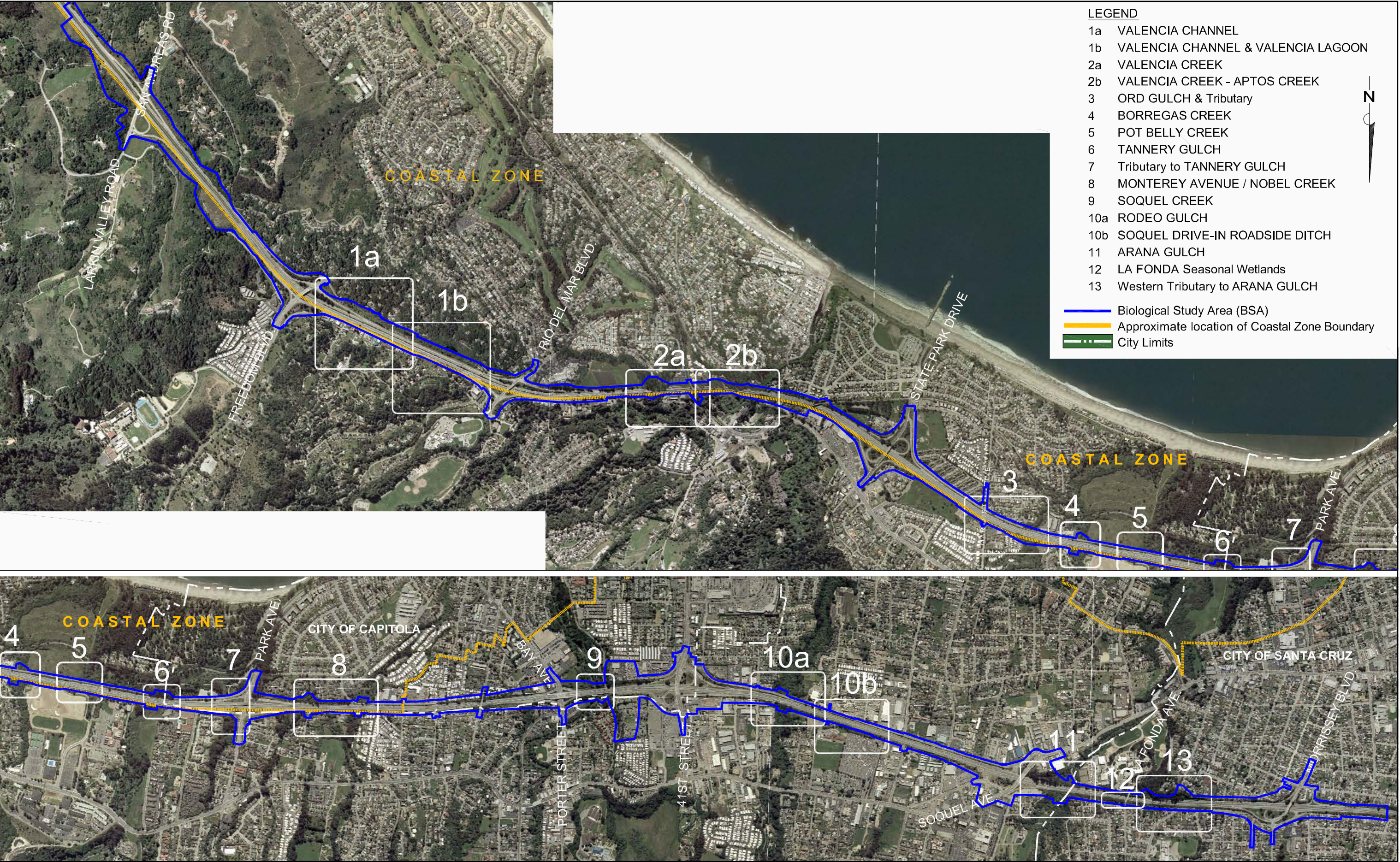
Last Updated on 01/12/04

## **Appendix M**

### **Jurisdictional Site Maps of Wetlands and Other Waters**

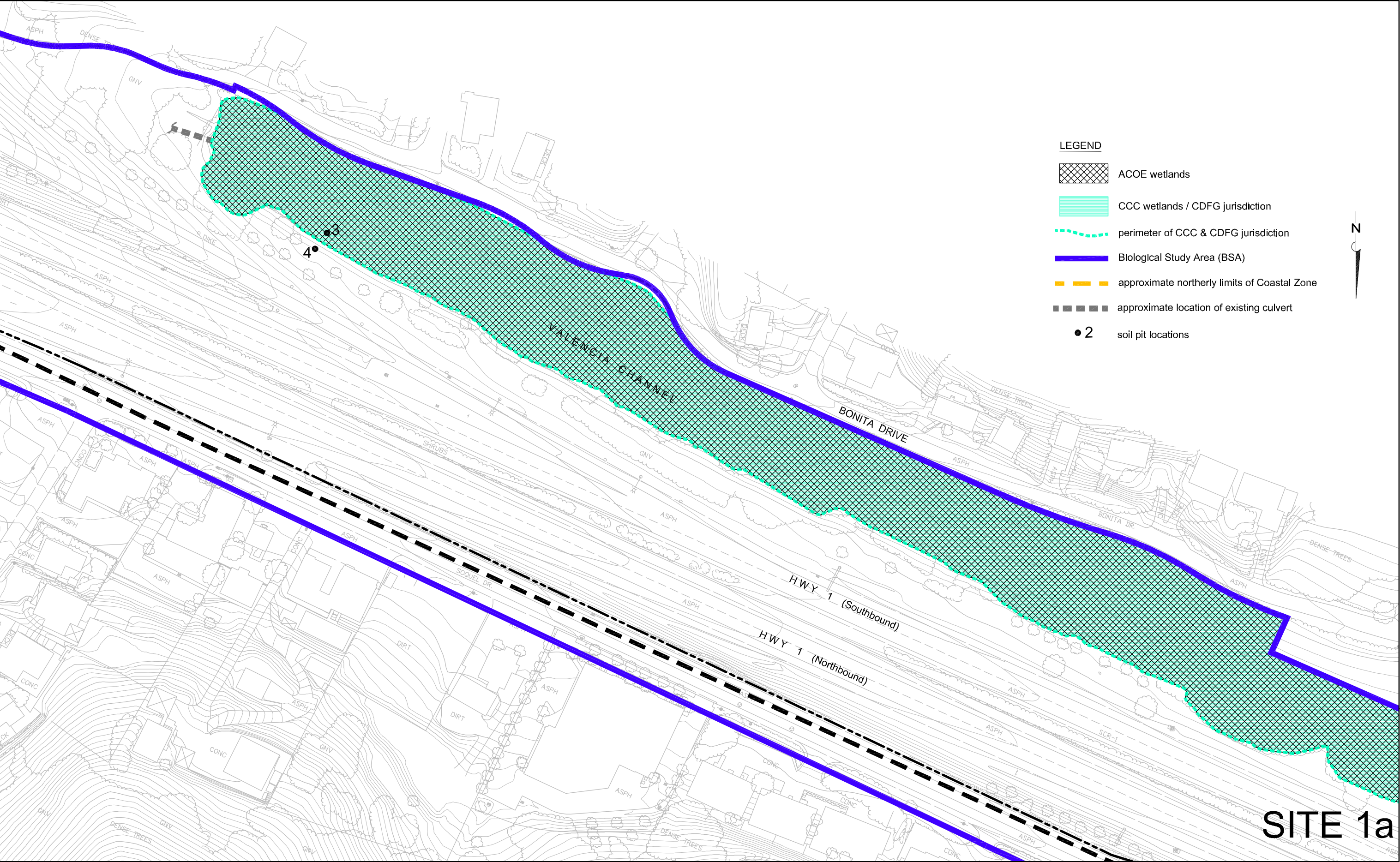








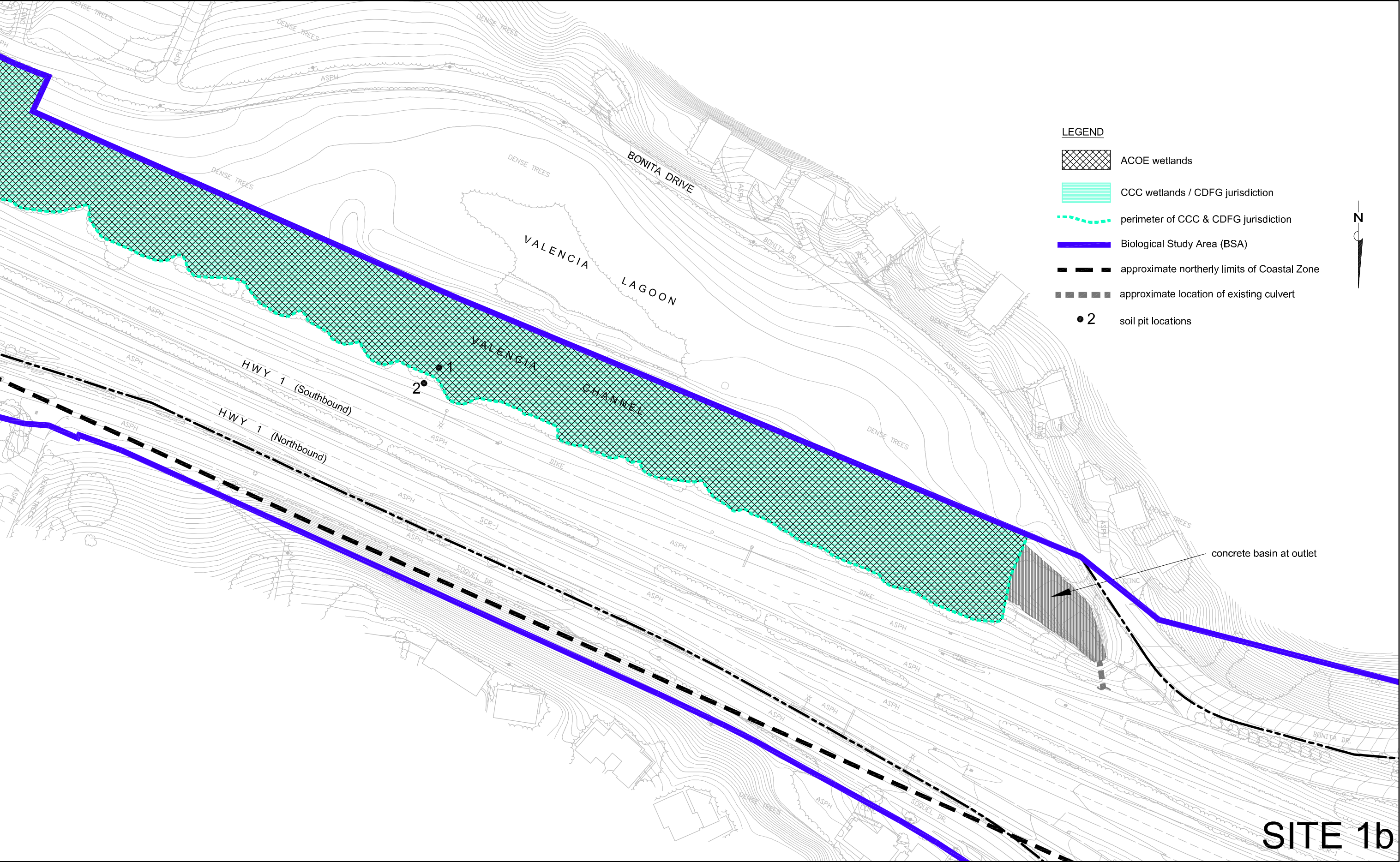




SHEET: 2 OF 14		SCALE: 1:1200		WETLAND ASSESSMENT Highway 1 HOV Lane Project - Santa Cruz, California	JURISDICTIONAL SITE 1a Valencia Channel
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DATE: 3.8.10		BY: dh REV. 1-CZB			







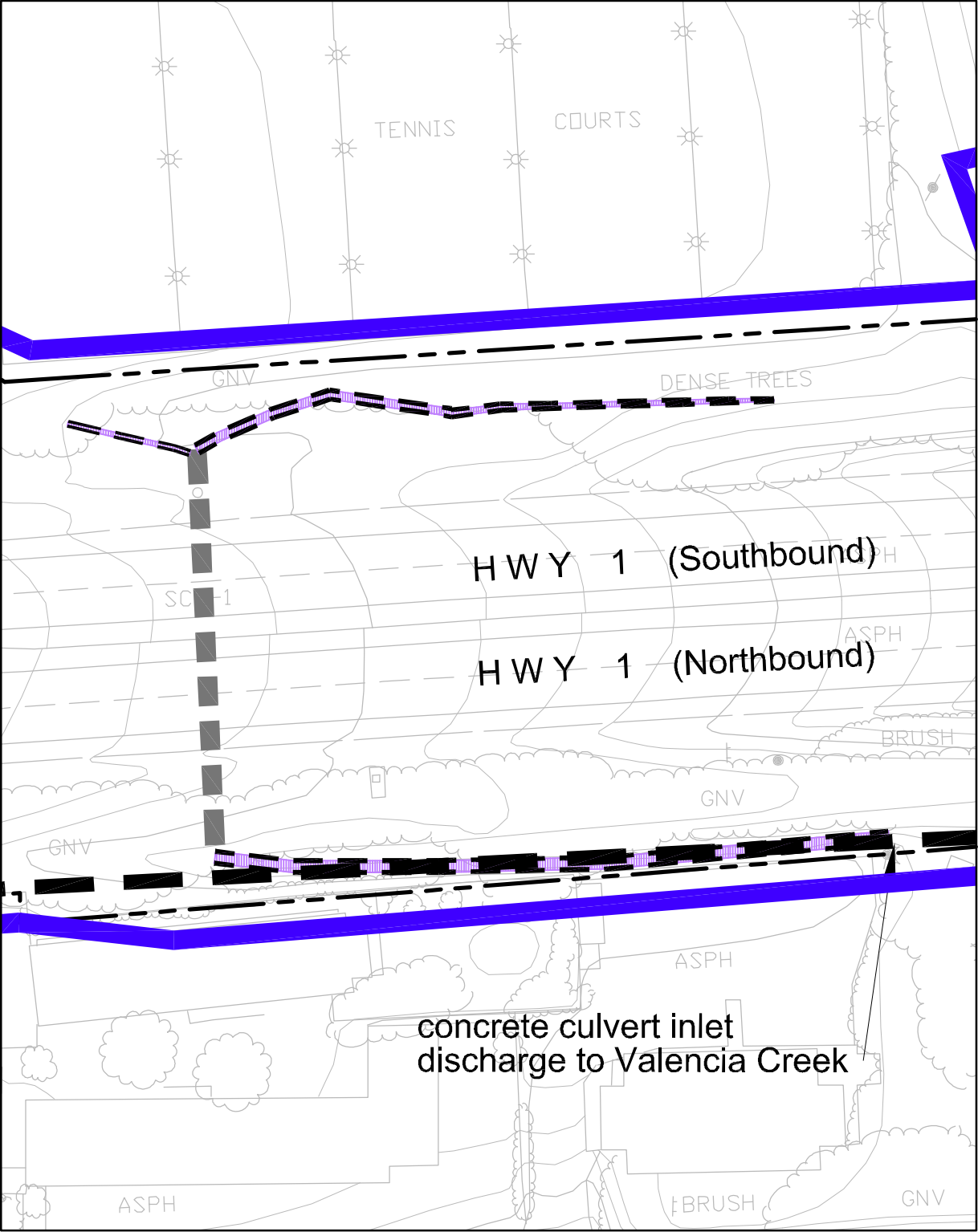
- LEGEND
- ACOE wetlands
  - CCC wetlands / CDFG jurisdiction
  - perimeter of CCC & CDFG jurisdiction
  - Biological Study Area (BSA)
  - approximate northerly limits of Coastal Zone
  - approximate location of existing culvert
  - soil pit locations

SITE 1b

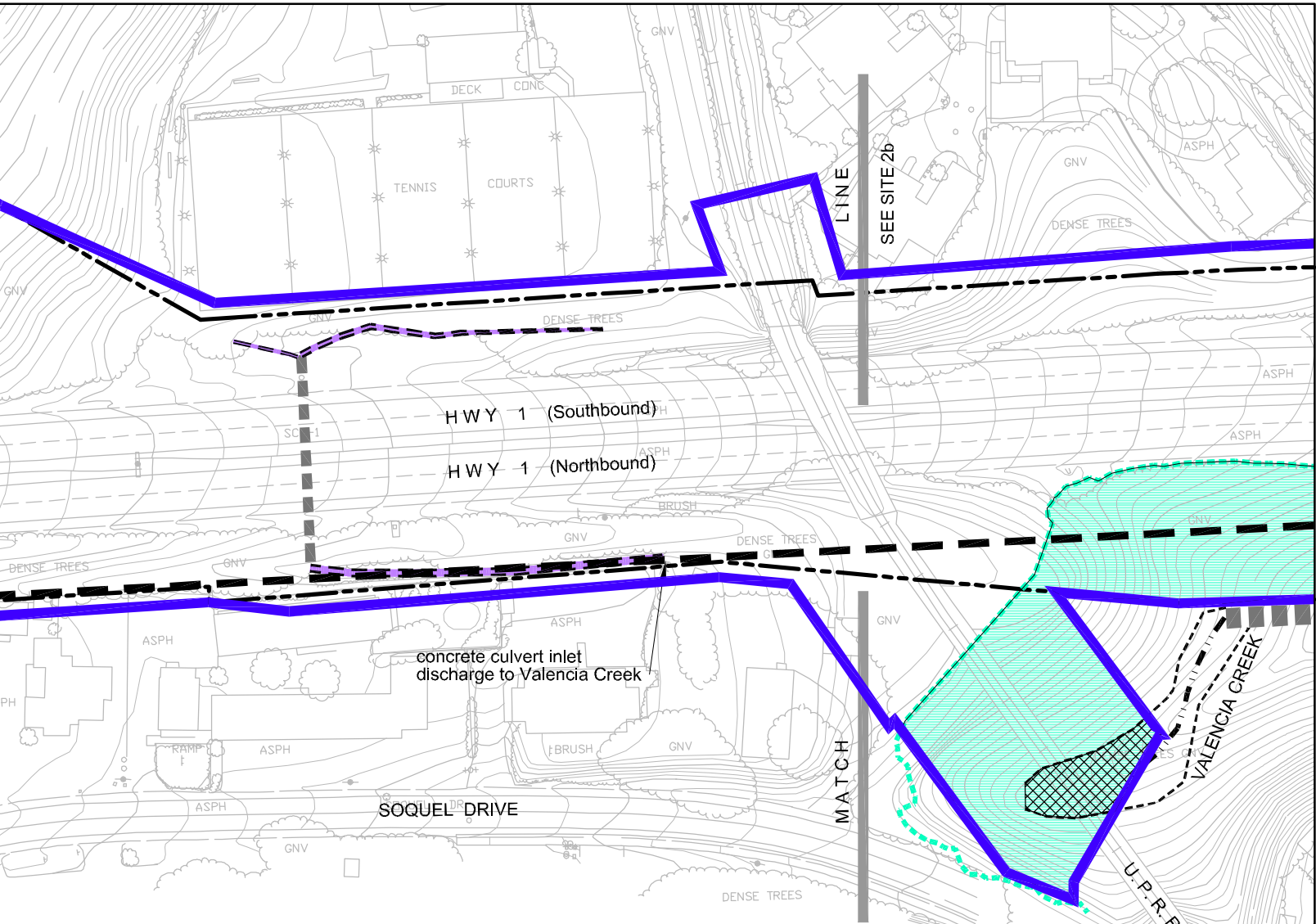
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DATE: 3.8.10		Highway 1 HOV Lane Project - Santa Cruz, California	
BY: dh		JURISDICTIONAL SITE 1b	
REV. 1-CZB		Valencia Channel & Valencia Lagoon	







JURISDICTIONAL AREA 2a  
Enlargement - 1: 600



SEE ENLARGEMENT AT LEFT

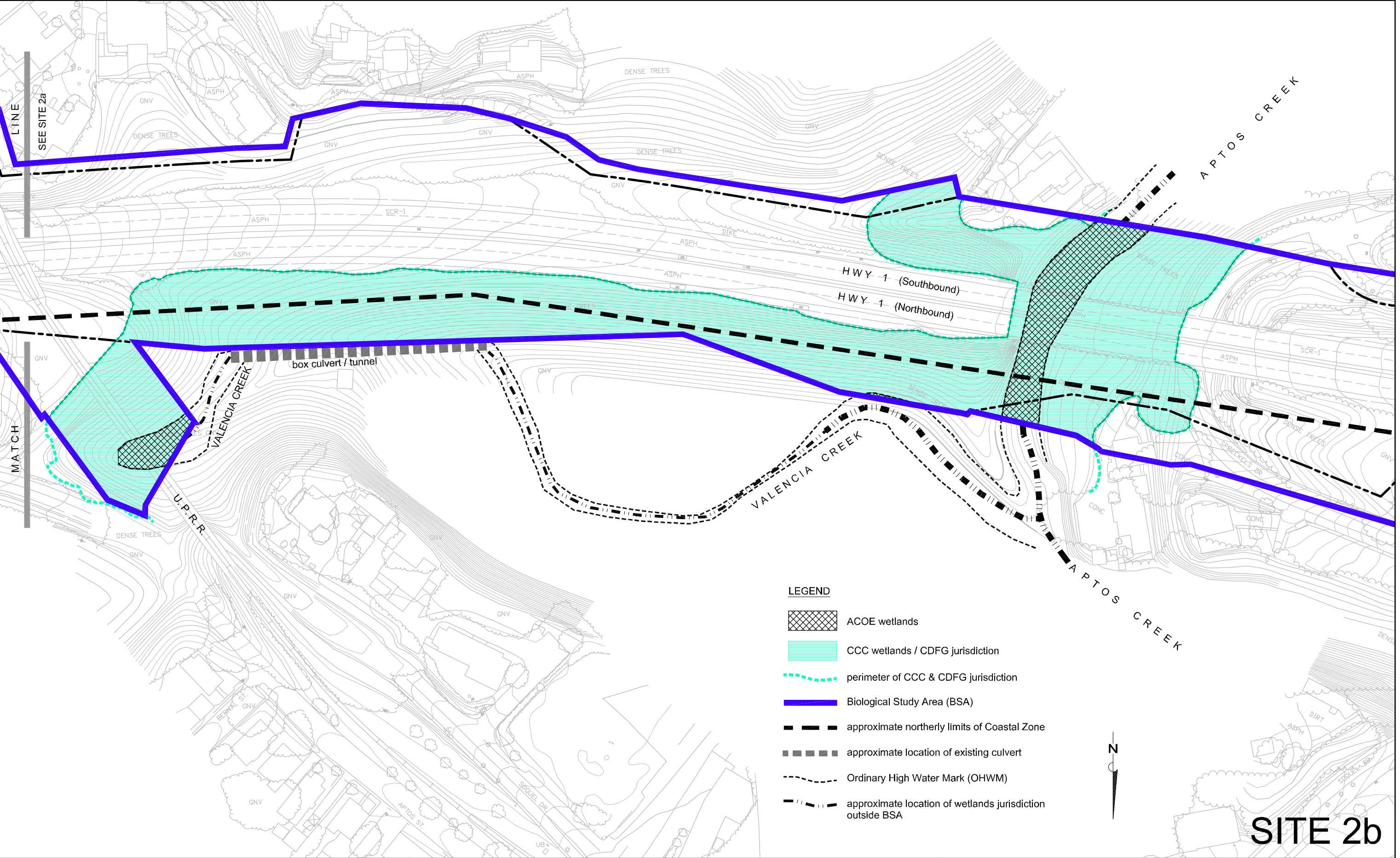
LEGEND

- ACOE Other Waters and CCC / CDFG jurisdiction
- top of bank
- Ordinary High Water Mark (OHWM)
- Biological Study Area (BSA)
- approximate northerly limits of Coastal Zone
- approximate location of existing culvert
- approximate location of wetlands jurisdiction outside BSA
- CCC wetlands / CDFG jurisdiction
- perimeter of CCC & CDFG jurisdiction
- ACOE wetlands

SITE 2a





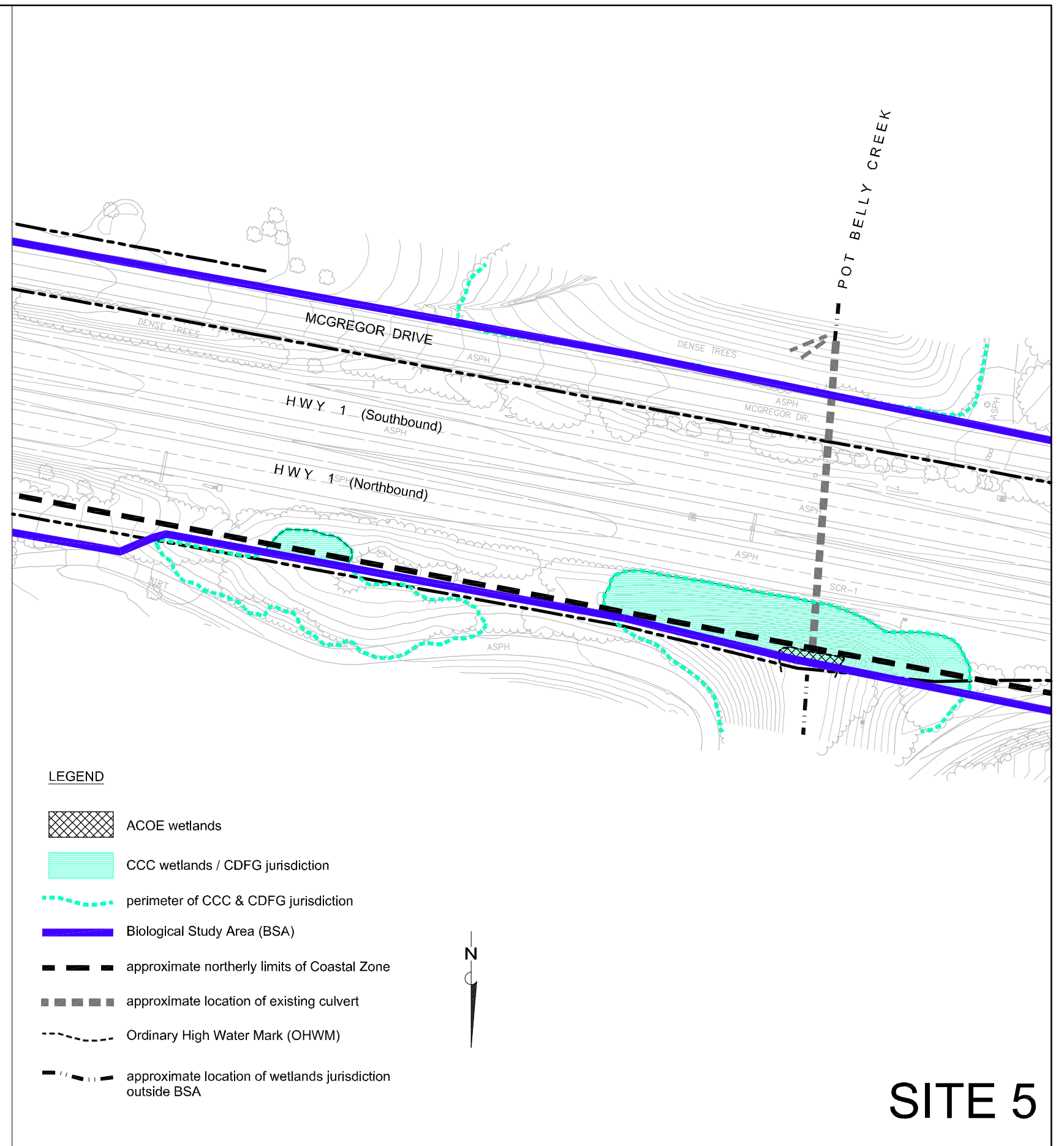
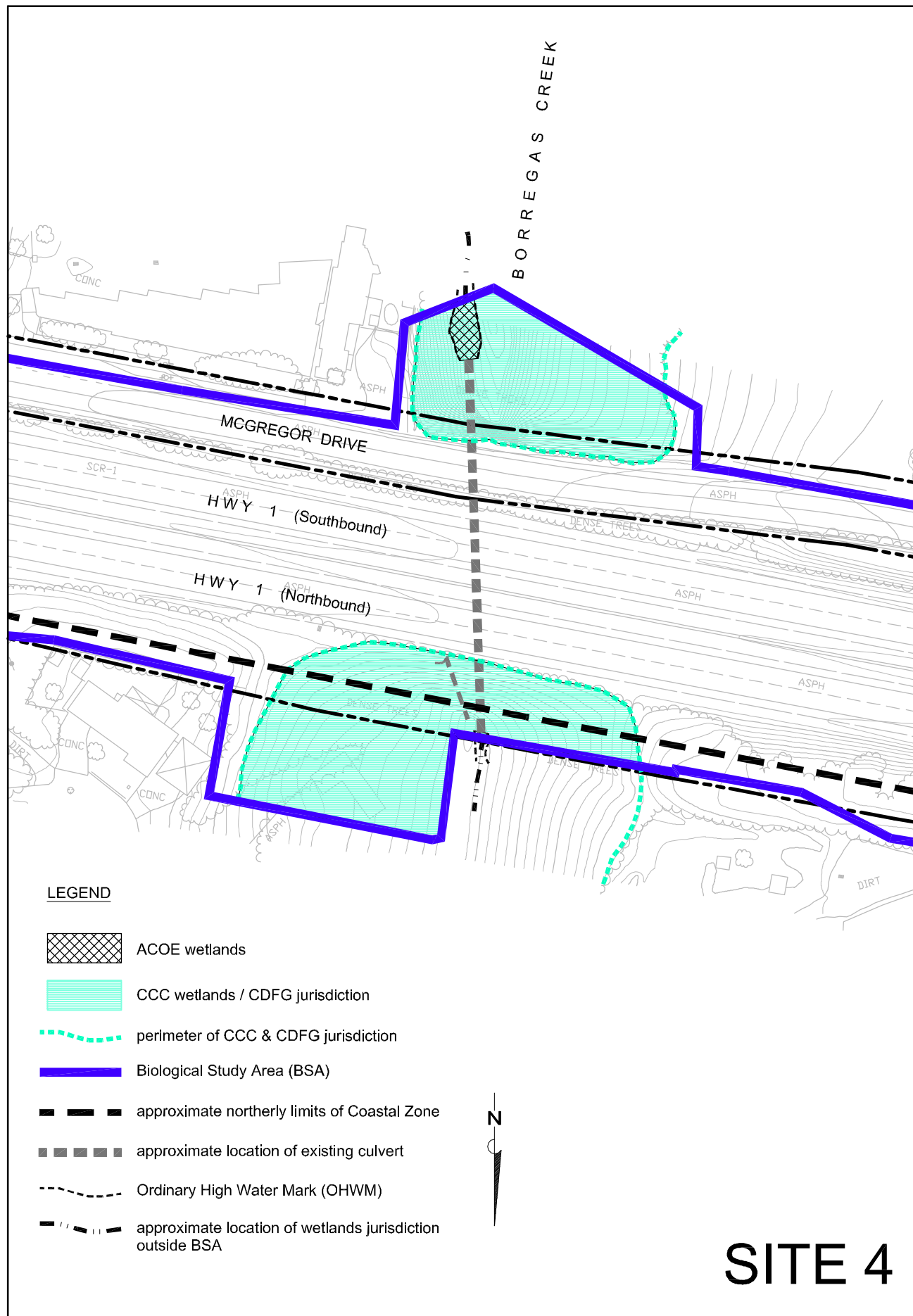






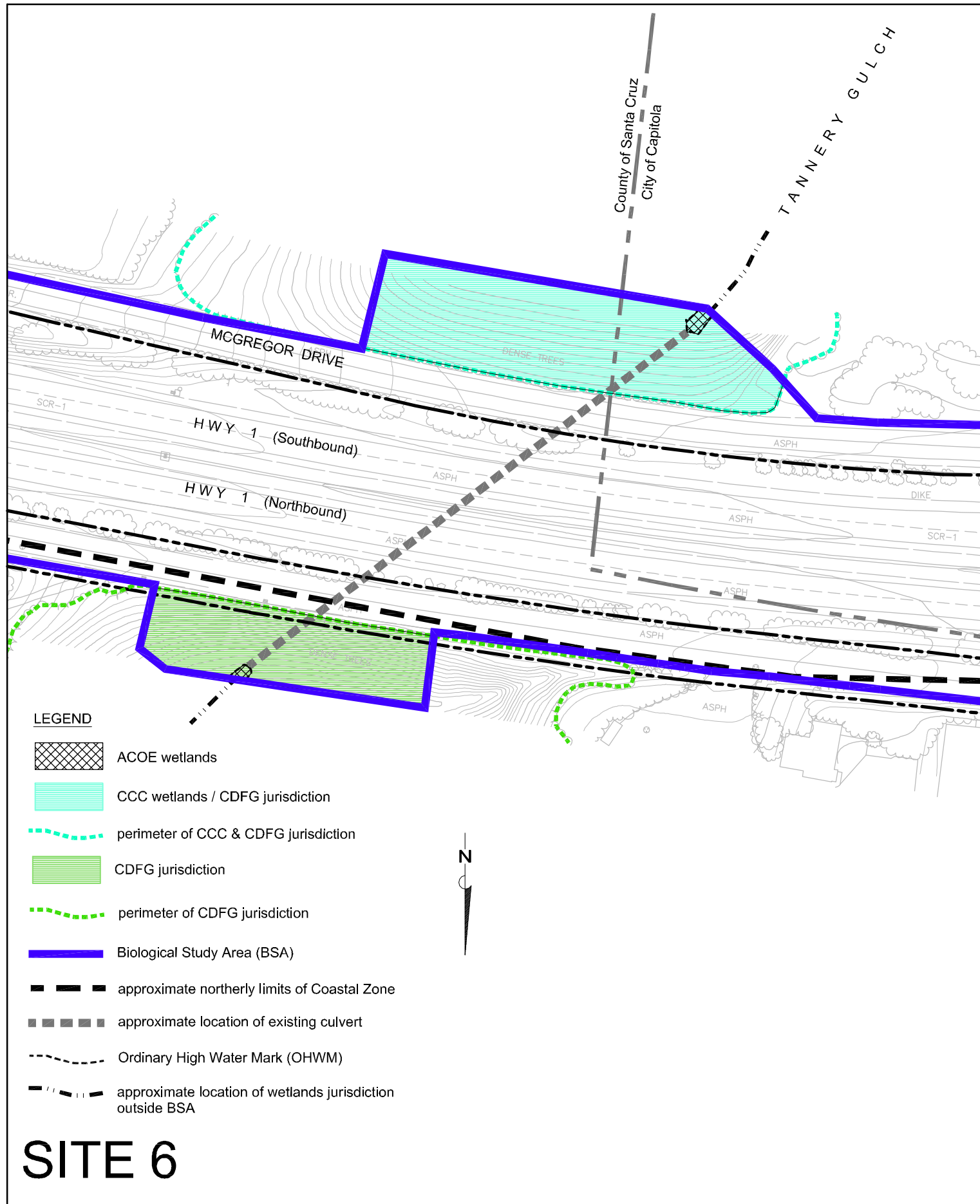












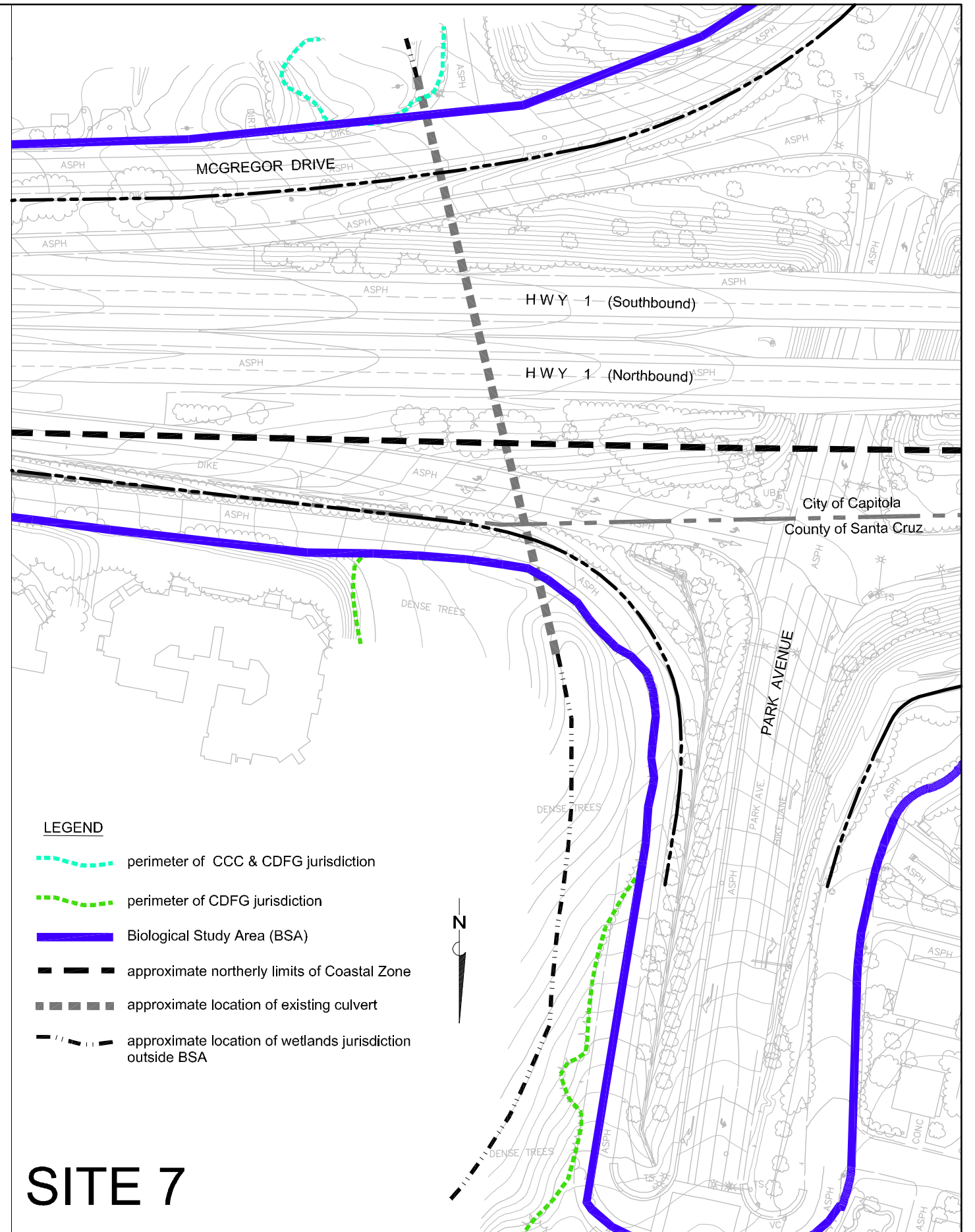
## SITE 6

SHEET: 8 OF 14 SCALE: 1:1200

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DATE: 3.8.10 BY: dh REV. 1-CZB

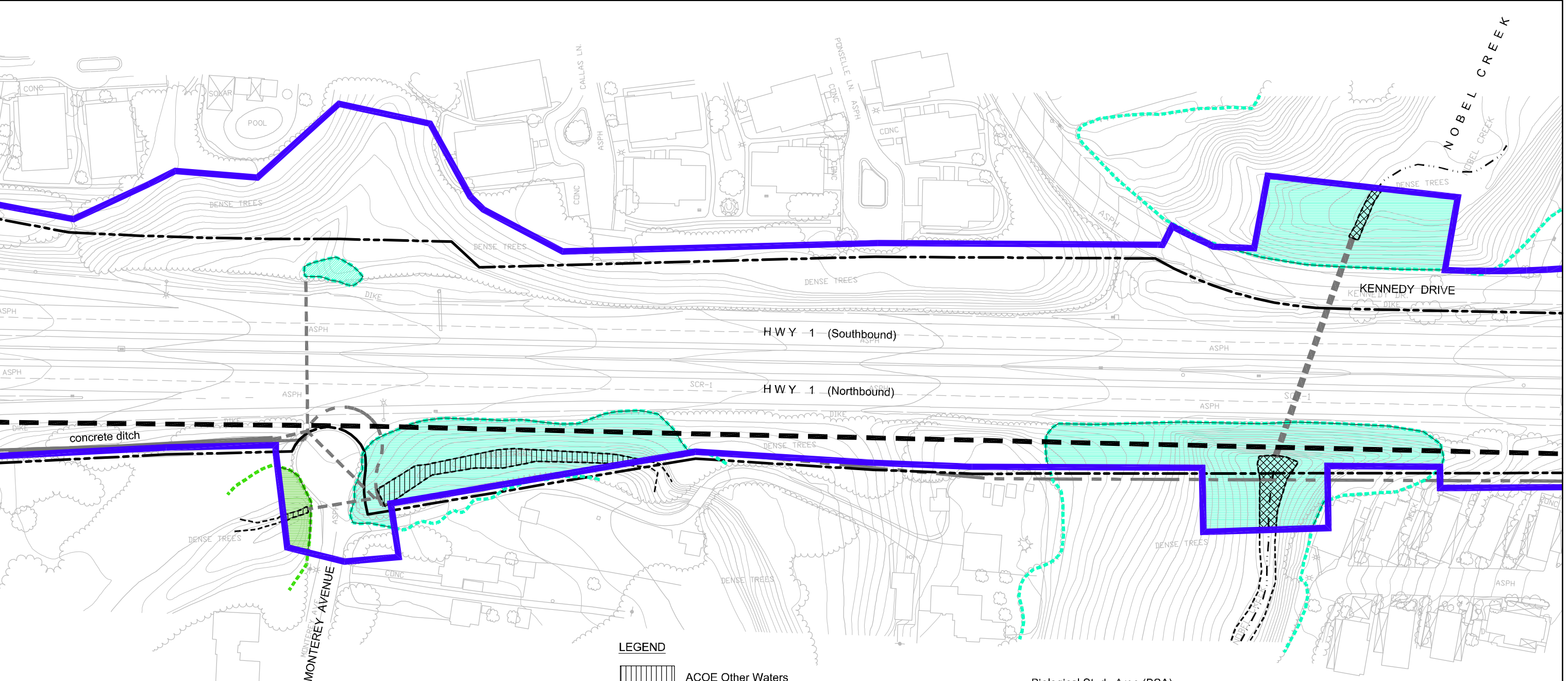
## WETLAND ASSESSMENT Highway 1 HOV Lane Project - Santa Cruz, California



## SITE 7

## JURISDICTIONAL SITE 6 - Tannery Gulch JURISDICTIONAL SITE 7 - Tributary to Tannery Gulch





LEGEND

- ACOE Other Waters
- ACOE wetlands
- CCC wetlands / CDFG jurisdiction
- perimeter of CCC & CDFG jurisdiction
- CDFG jurisdiction
- perimeter of CDFG jurisdiction

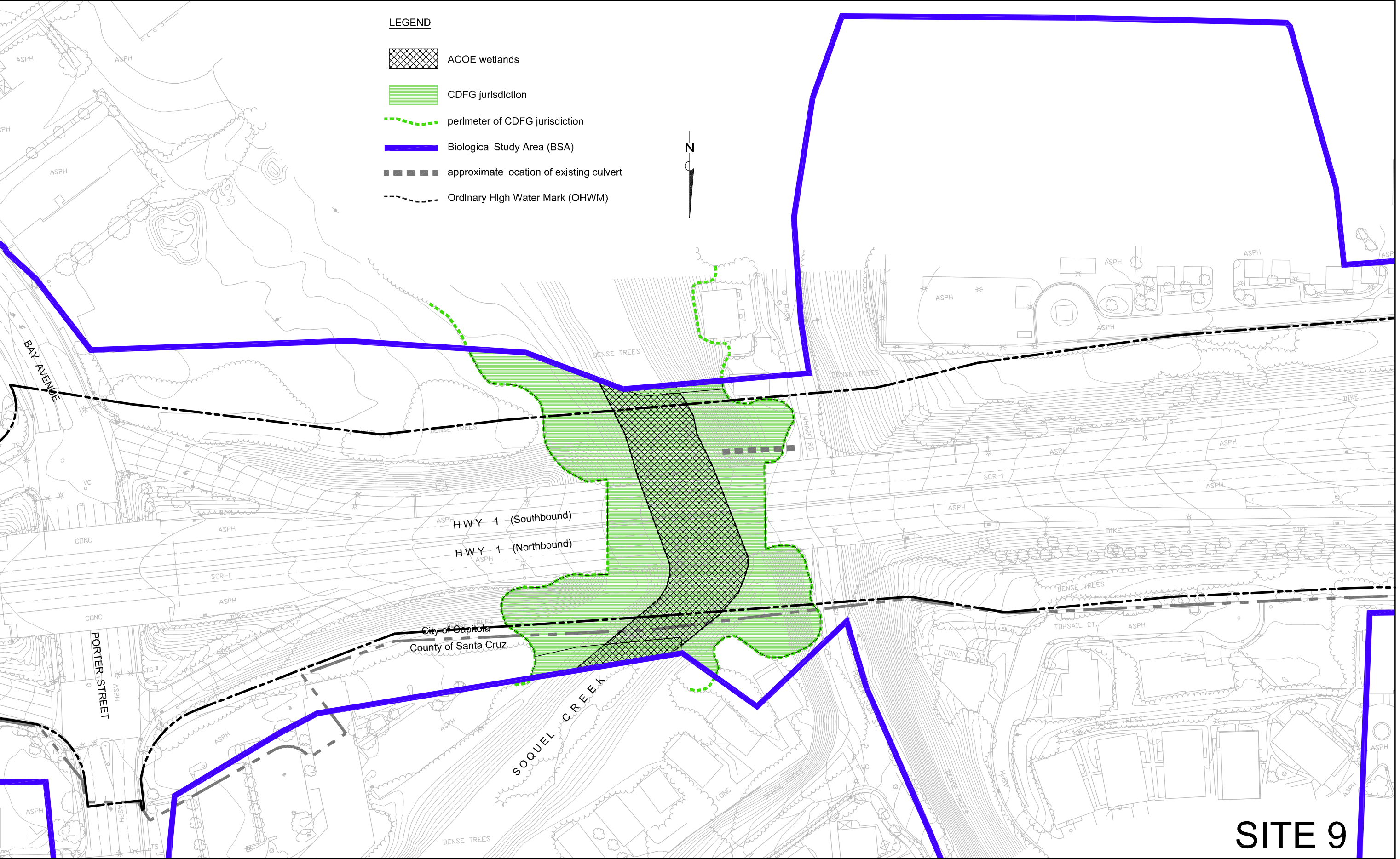
- Biological Study Area (BSA)
- approximate northerly limits of Coastal Zone
- approximate location of existing culvert
- Ordinary High Water Mark (OHWM)
- top of bank
- approximate location of wetlands jurisdiction outside BSA



SITE 8

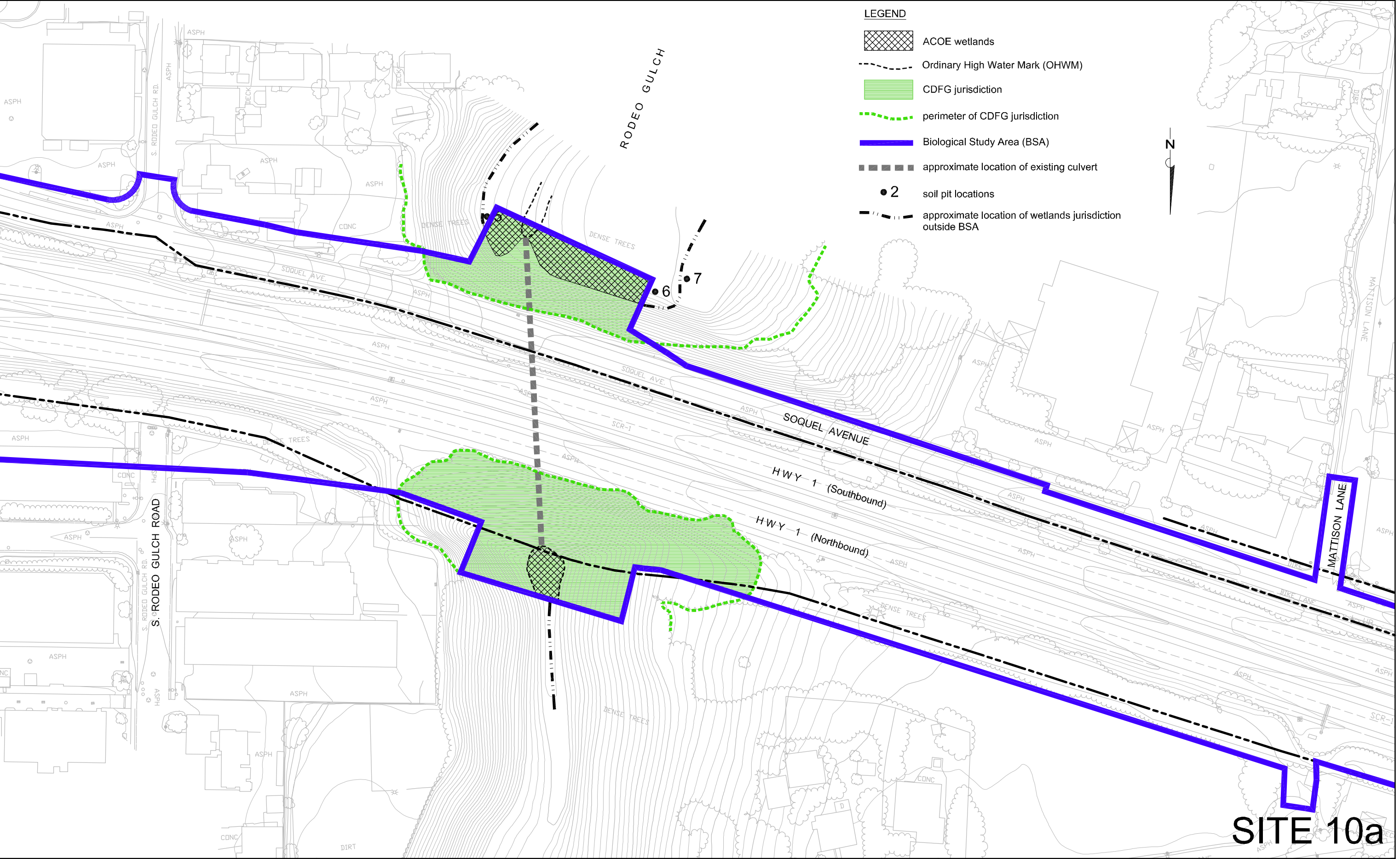






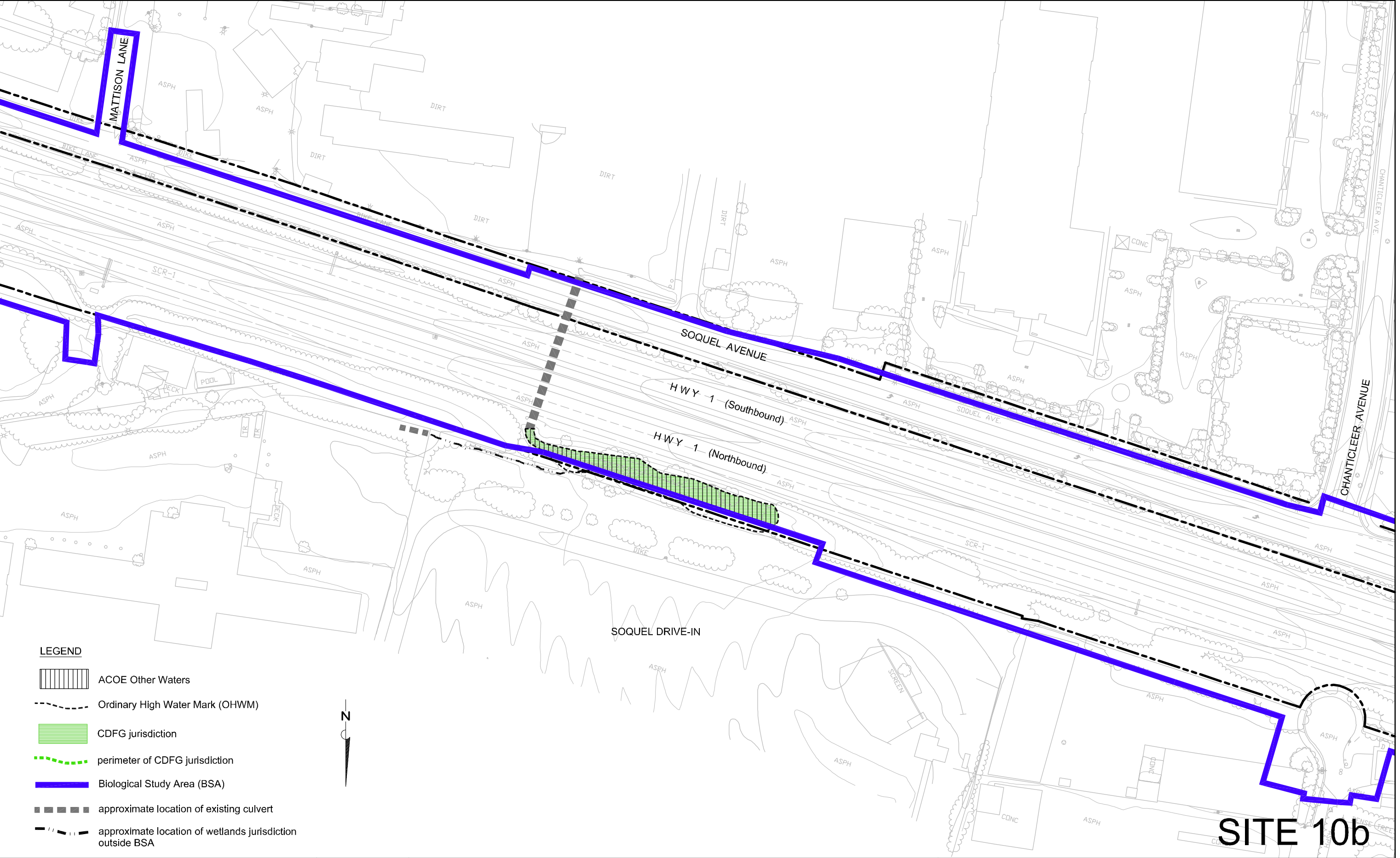






SHEET: 11 OF 14		SCALE: 1:1200		WETLAND ASSESSMENT Highway 1 HOV Lane Project - Santa Cruz, California	JURISDICTIONAL SITE 10a Rodeo Gulch
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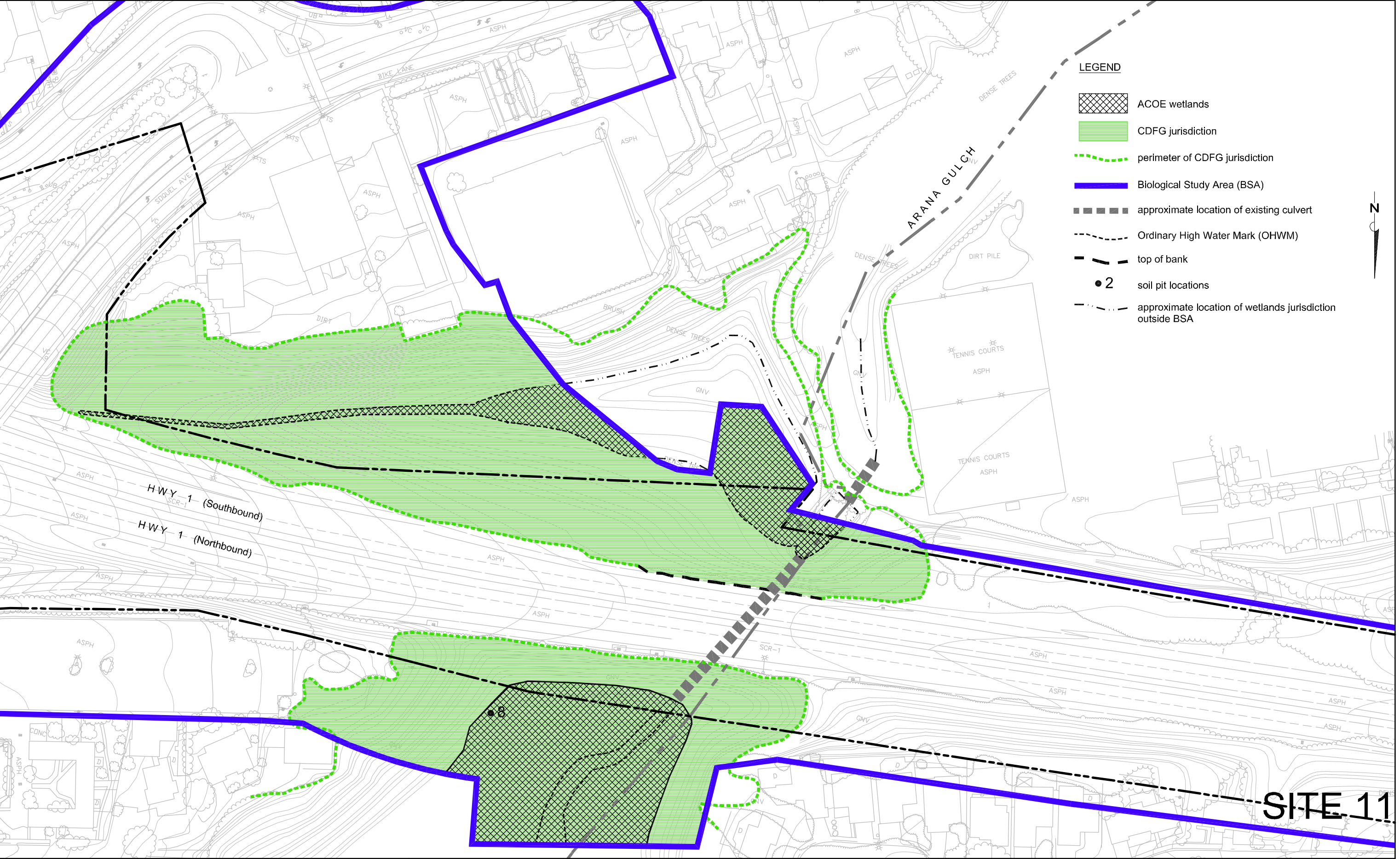




SHEET: 12 OF 14		SCALE: 1:1200		WETLAND ASSESSMENT Highway 1 HOV Lane Project - Santa Cruz, California	JURISDICTIONAL SITE 10b Soquel Drive-In Roadside Ditch
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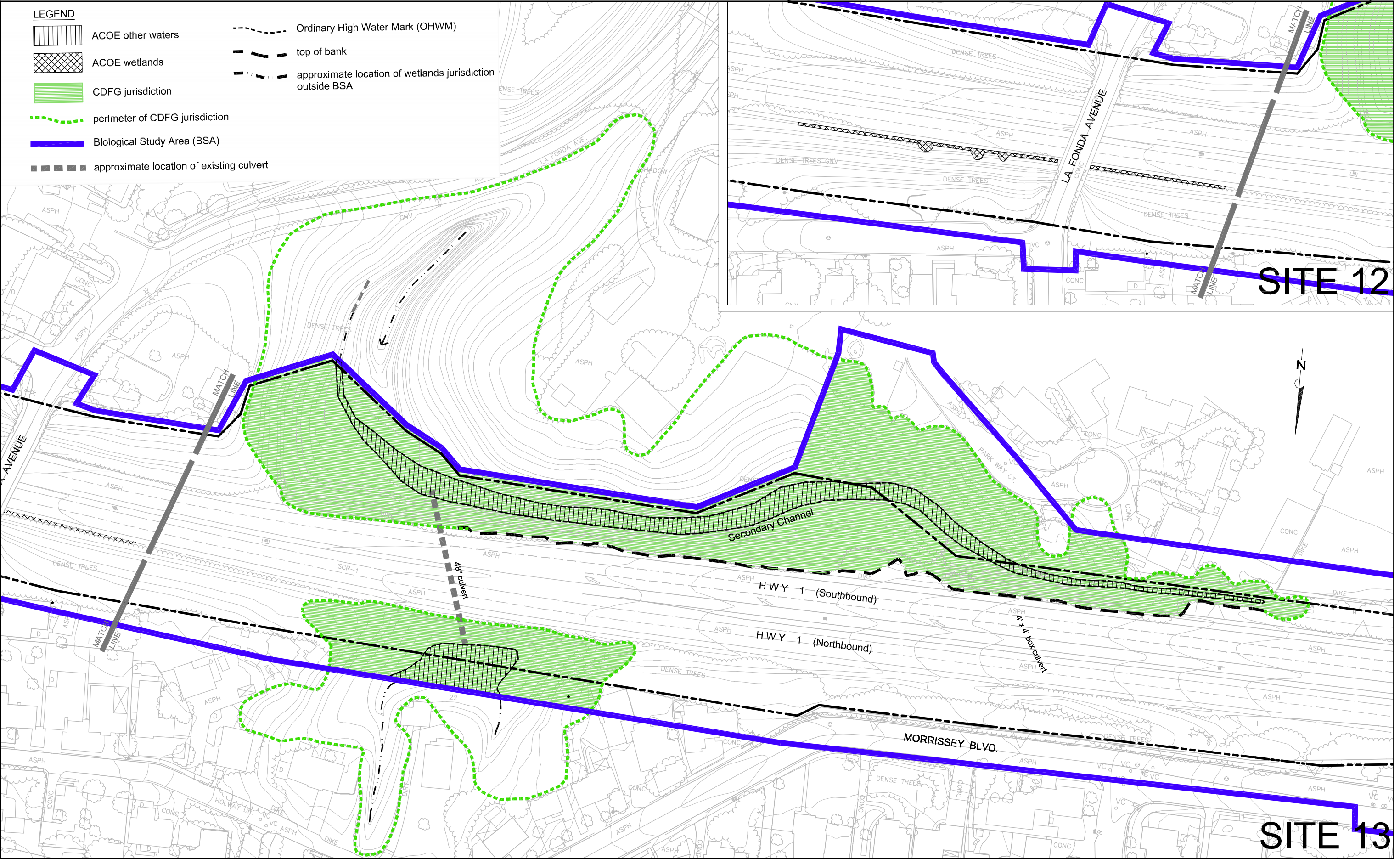
















## **List of Technical Studies**



## **List of Technical Studies**

Many technical studies were used to analyze the impacts of the proposed project and the No Build Alternative, and they are summarized in the EIR/EA. These studies include the following:

- Air Quality Study Report, March 2013
- Archaeological Survey Report, December 2010 – Confidential
- Community Impact Assessment, September 2015
- Draft Relocation Impact Study, June 2015
- Drainage Report, December 2013
- Growth Inducement Study, September 2008
- HOV Report – September 2007
- Historic Property Survey Report, December 2010 – Volume I is confidential
- Historic Resources Evaluation Report, May 2010
- Location Hydraulics Study Report, March 2013
- Natural Environment Study, January 2015
- Noise Study Report, May 2013
- Paleontological Evaluation Report and Addendum, April 2008/September 2011 – Confidential
- Parking Impacts Memorandum, April 2011
- Phase 1 Initial Site Assessment, March 2014
- Preliminary Geotechnical Report, July 2007
- Storm Water Data Report, November 2012
- Technical Memorandum on Energy Impacts, May 2011
- Traffic Operations Report, April 2012
- Traffic Operations Report Supplemental Report, May 2010
- Transit Market Analysis Study – May 2008
- Visual Impact Assessment, July 2013
- Water Quality Study, March 2013

Technical studies are available for viewing, along with copies of this EIR/EA, at the locations shown below:

Caltrans  
District 5 San Luis Obispo Office  
50 Higuera Street  
San Luis Obispo, CA 93401

Santa Cruz County  
Regional Transportation Commission  
1523 Pacific Avenue  
Santa Cruz, CA 95060

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