

**County of Santa Barbara
Department of Public Works, Transportation**

Proposed Final Mitigated Negative Declaration

**Kinevan Road Bridge 51C-214 Replacement
Project**

13NGD-00000-00002 SCH#2013031069

March 2013



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1.0 INTRODUCTION

1.1 PURPOSE AND LEGAL AUTHORITY

The California Environmental Quality Act (CEQA) requires that local, regional, and state agencies and special purpose districts prepare an Initial Study to identify potential environmental impacts associated with discretionary actions. An Initial Study is generally used to determine if significant impacts would occur, and to determine the need for preparation of either a Negative Declaration or further analysis in an EIR. The Santa Barbara County Public Works Department has prepared this Initial Study for the proposed replacement of the Kinevan Road bridge (51C-214) at San Jose Creek to comply with the provisions of CEQA.

1.2 PROJECT PROPONET

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1.3 PROJECT BACKGROUND

Kinevan Road is an east-west oriented, mountainous, rural collector road that begins at its junction with West Camino Cielo Road approximately .22 miles west of the State Highway 154, and extends approximately one mile northwest and then turns back east roughly paralleling Highway 154 where it connects with the intersection of Stage Coach Road and State Highway 154. Bridge 51C-214 lies near the mid-point of Kinevan Road and crosses San Jose Creek. The exact age of the original bridge is unknown but likely was first built in 1886 as part of the Summit house and toll gate which was part of the original Col. Freemont trail of 1846. County bridge inspection records from 1968 describe the bridge as in fair condition. By 1978 the bridge was so deteriorated that a load limit was placed on it by the County Board of Supervisors of 8 tons per vehicle weight. Priority was given to strengthen the bridge for heavier loads due to possible fire access problems. In 1981, the bridge was reconstructed in its present day configuration with wooden deck timbers and concrete reinforced wing walls and abutments. Due to excessive decay in the bridge stringers in 2006 the bridge was determined to be structurally deficient with a sufficiency rating of 32.5 on a 100 scale. In 2011 the structure again had load limits placed on it and was determined to be eligible for replacement under the Federal Highway Bridge Replacement Program.

1.4 PROJECT LOCATION

The bridge is located near the summit of San Marcos Pass (also known as State Highway 154), off Stagecoach Road on Kinevan Road (Figure 1). Kinevan Road connects to Stagecoach Road approximately 500 feet south of the intersection of Stagecoach Road and Highway 154. The bridge is located approximately one quarter mile from the intersection of Kinevan and Stagecoach Roads (Figure 2).

1.5 PROJECT OBJECTIVES

The objective of the project is to improve the safety and reliability of the Kinevan Road bridge crossing San Jose Creek. The replacement of the bridge is funded under the Federal Highway Bridge Program and the Highway Toll Credit Program.

1.6 PROJECT APPROVALS AND PERMITS

Project implementation may require the County to obtain permits and other forms of approval from Federal and State agencies. These agencies may include, but are not limited to the following:

1.6.1 Federal Agencies

- No Federal permits are required as there is no construction activity within the creek bed and there are no federally listed species in the project vicinity.

1.6.2 State Agencies

- California Department of Fish and Wildlife Streambed Alteration Agreement will be required for temporary impacts to riparian trees and the substantial changes to the creek bed caused by shading from the increased width of the bridge deck.

1.6.3 Local Agencies

- Santa Barbara County Public Works Department requires a roadway encroachment permit for contractors to work within the County owned right of way.

1.7 PUBLIC COMMENTS

In compliance with Section 15703 of the State Guidelines for the implementation of the California Environmental Quality Act, the Santa Barbara County Public Works Department accepted written comments on the adequacy of the information contained in the Draft MND during the public review period which ended on April 24, 2013.

One comment letter was received from the following party:

- Native American Heritage Commission

Section 15074(b) of the State Guidelines for the Implementation of the California Environmental Quality Act, requires the decision-making body to consider comments received on the MND when approving a project. The comment letter from the Native American Heritage Commission has been provided as Attachment A to the DFMND. No changes to the DFMND were warranted and no response to the public comment letter was provided.

2.0 PROJECT DESCRIPTION

Santa Barbara County is proposing to replace the Kinevan Road bridge (51C-214) over San Jose Creek, located on Kinevan Road, 1/2 mile west of State Route 154. The existing bridge is structurally deficient with a sufficiency rating of less than 50 which qualifies it to be replaced using Highway Bridge Program funding. Due to the constraints of the narrow approach roadways, the new bridge will need to be replaced essentially on the same alignment. The replacement plan is to leave the existing abutments, creek channel walls and wing walls in place avoiding any work within the creek channel. The new bridge will be longer than the existing bridge in order to place the new foundations in a location that spans over the creek, existing abutment and wing walls.

The existing bridge 51C-214 is a single-span bridge with timber stringers and a wood deck, it is approximately 1'-9" deep, 15'-6" wide and 24'-0" long with cut stone abutments and wing walls. The abutments and wing walls support the existing structure and are serving as the creek channel walls underneath the bridge.

The new bridge will be approximately 46.5 feet long, 22 feet wide and 17 inches deep with brown powder coated metal tube bridge railings. The bridge deck will be pre-cast and pre-stressed concrete with a polyester concrete overlay. The new foundation will consist of Cast in Drill Hole (CIDH) footing drilled into rock within the existing paved roadway. The approach road will be raised approximately one foot to conform with the new bridge and will be reconstructed with asphalt concrete for 60 feet on the northern approach and 110 feet on the eastern approach to correct the existing reverse super-elevation of the bridge conform to the roadway.

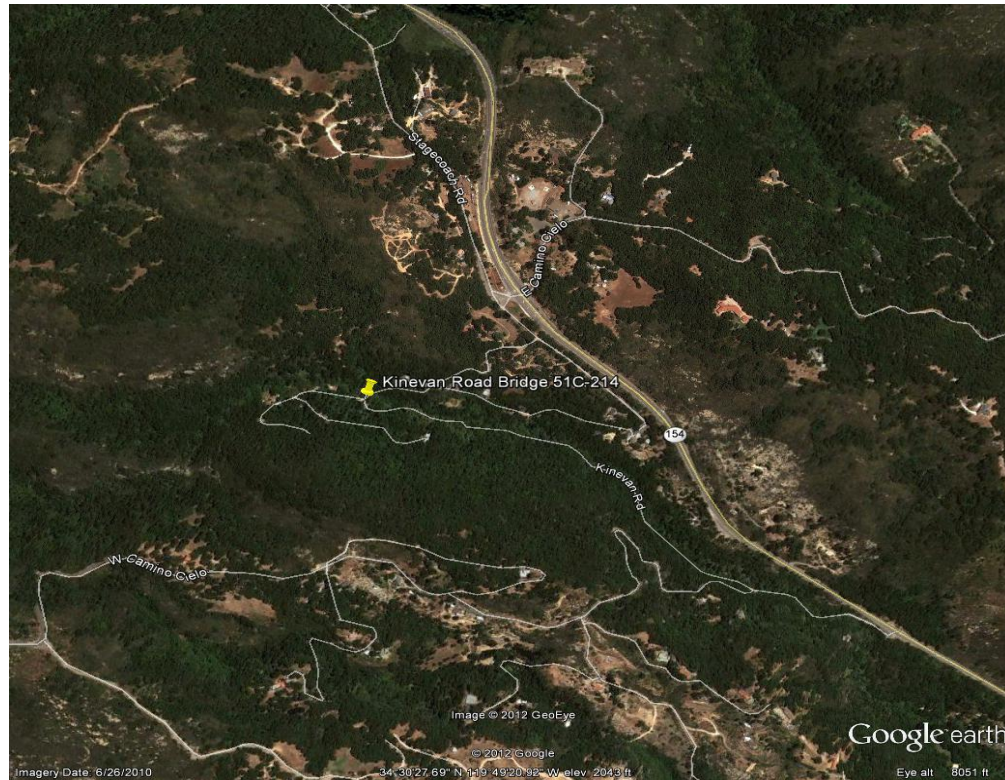
Total grading of the project is estimated to be 145 cubic yards. Approximately 45 cubic yards for roadway excavation and 100 cubic yards of cut for the bridge structure, with a maximum cut of eight feet in the paved roadway for the new CIDH foundations. Approximately 125 cubic yards of earth and rock material is projected to be exported from site and 20 cubic yards used as fill material.

Seven trees will be removed: one multi-trunked alder (trunk DBHs = 18", 18", 12", and 12"), one coast live oak (*Quercus agrifolia*) 7" DBH, however, it is being severely girdled by three strands of barbed fencing wire, three multi-trunked California bays (DBHs of 12", 8", and 6"; 4" and 4"; 8" and 8"), one 6" California bay, and one 4" bigleaf maple. Of those trees, only the multi-trunked alder is located within the creek bank, the other tree removals are required for proper sight distance and maintaining access to the private road and driveway. Most of the vegetation removal will consist of non-native species. Soil compaction is unlikely because most areas in the Project Impact Area (PIA) have already been disturbed and are already subject to vehicle and equipment travel. Permanent disturbance will be limited to the areas taken up by new railing posts (20 square feet) and by increases in paved road shoulders for bridge conforms of 658 square feet (0.0151 acres). Of the 1498 square feet (0.0344 acres) of impacts to natural communities and land uses, 840 square feet (0.0193 acres) will be temporary and 658 square feet (0.0151 acres) will be permanent. No impacts will occur to wetlands or waters of the U.S.. Biological monitoring will take place throughout the project. On site monitoring would include a worker education presentation, pre-construction surveys and monitoring during construction by a qualified biologist.

The project area will be restored after construction by a qualified restoration biologist. Plantings will consist of native trees and shrubs found in the local area with an extensive effort to remove non-native and invasive species. A compost blanket will be utilized on all disturbed areas. The restoration plan will be developed to meet the requirements of the California Department of Fish and Wildlife (CDF&W) Lake and Streambed Alteration Agreement (LSAA) for the project.

Kinevan Road will be closed just east of the bridge for the new bridge construction. The easterly portion and a portion of the north approach of Kinevan Road will be used for staging, stock piling and vehicle parking. Project plans depicting the bridge layout and impacts areas are shown in Figure 4 and 5. Preliminary construction plans (65%) are attached in Appendix 12.3.

2.1 SITE LOCATION MAP FIGURE 1



2.2 SITE PHOTOGRAPHS FIGURE 2



Eastern side creek channel view upstream



Western side creek bank view downstream



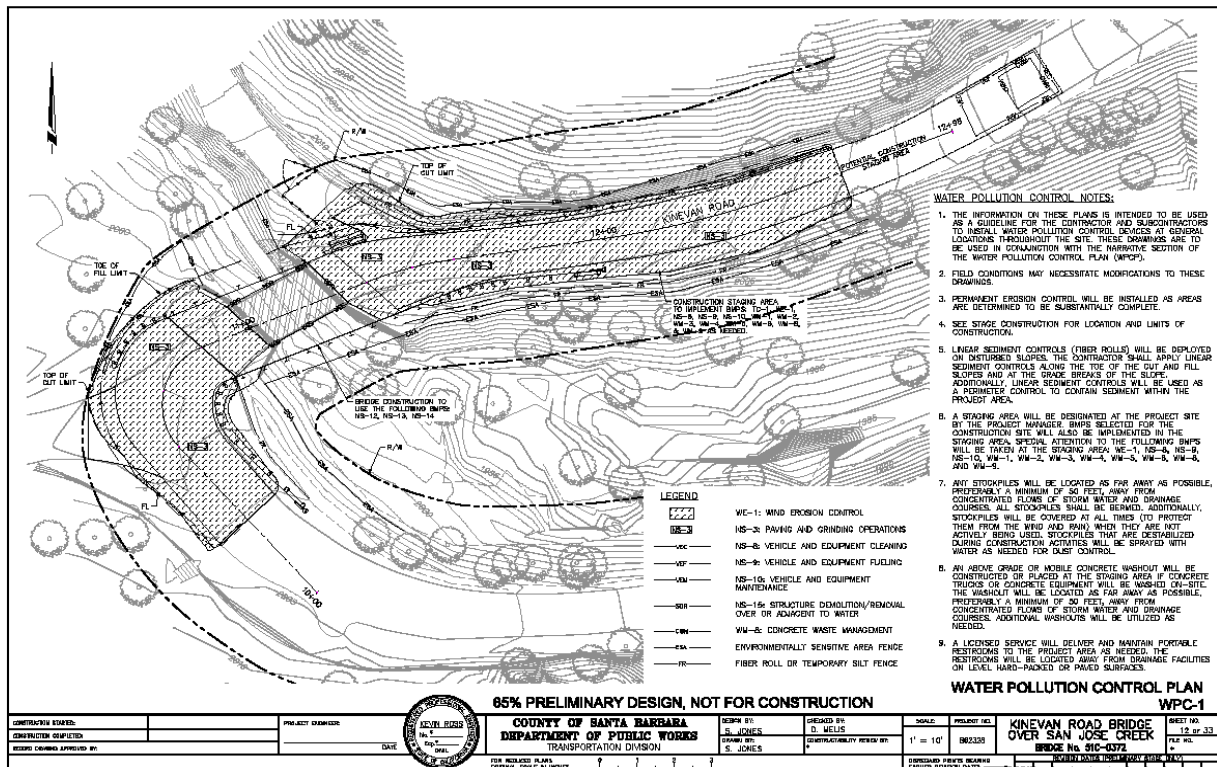
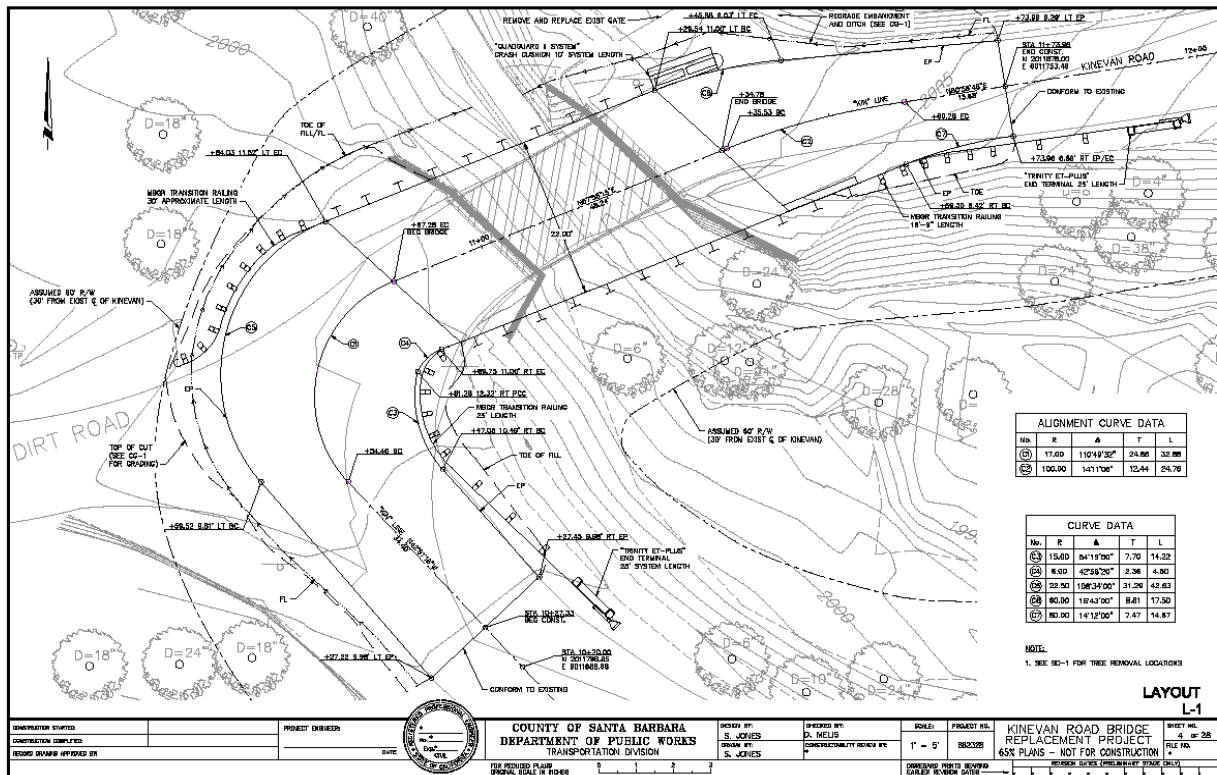
Eastern approach to Bridge 51C-214



Western approach to Bridge 51C-214

2.3 AERIAL PHOTOGRAPH FIGURE 3





Site Information	
Comprehensive Plan Designation	Rural, Existing Developed Rural Neighborhood, Residential Ranchette, Bridge 51C-214 is between APN 153-808-022 & 002 in the Second Supervisorial District
Zoning District, Ordinance	Santa Barbara County Land Use Development Code, RR-20. Rural Residential with a minimum lot size of 20 acres.
Site Size	Project area less than one acre
Present Use & Development	Santa Barbara County Public Road Right of Way
Surrounding Uses/Zoning	North: Existing Developed Rural Neighborhood South: Existing Developed Rural Neighborhood East: Existing Developed Rural Neighborhood West: Existing Developed Rural Neighborhood
Access	Bridge 51C-214 spans San Jose Creek on Kinevan Road
Public Services	Water Supply: N/A Sewage: N/A Fire: Santa Barbara County Fire Department, Fire Station #12 Other: Goleta Union Elem. school district; Santa Barbara High School District

3.0 ENVIRONMENTAL SETTING

3.1 PHYSICAL SETTING

All proposed construction would occur within the existing roadway right-of-way of Kinevan Road. However construction access and staging may cause partial disruptions to the driveway access of one adjacent parcel on Kinevan Road:

- APN 153-080-022, 15 Kinevan Road, 39.75 acres, zoned Residential Ranchette (RR-20); land use designation is Existing Developed Rural Neighborhood.

The immediate project area is rural and mountainous with residential homes in an area comprised of larger parcels from 39.75 acres to approximately 3 acres. The topography is generally steep along the sides of Kinevan Road. San Jose Creek runs along Kinevan Road and supports an oak woodland and riparian habitat along the creek banks. The general area along San Marcos Pass and West Camino Cielo was once frequented by the Chumash Indians and there are many known archeological sites including cave paintings. Kinevan Road is likely part of the original Col. Freemont trail of 1846 and was later used as the stage coach route from Santa Barbara to Santa Ynez in the 1880's.

The Biological Study Area (BSA) for the Kinevan Road bridge project covers 2.64 acres or 114,998 square feet of two natural communities and two land uses. The area within the BSA subject to both permanent and temporary disturbance is referred to as the Project Impact Area (PIA) and covers 0.0363 acres or 1581 square feet.

3.2 OTHER PENDING AND APPROVED DEVELOPMENT

3.2.1 Santa Barbara County

The following list of projects was obtained from Santa Barbara County Planning and Development cumulative projects list (dated June 2012) for the South Coast, detailing projects within approximately a four mile radius of the project in the unincorporated Goleta and Santa Barbara areas.

Galbraith Lot Split: Tentative Parcel Map 14,571 for a lot split into 2 lots. 08TPM-00000-00011 Residential, Tentative Parcel Map in process. APN 153-131-007.

Painted Cave Mutual Water Company Tank Replacement. Project to replace existing water storage tanks. 09CUP-00000-00018, Commercial, approved Minor Conditional Use Permit. APN 153-131-002.

Section 15355 of the State CEQA Guidelines states that "cumulative impacts refers to two or more individual effects which when considered together are considerable or which compound or increase other environmental impacts." Further, "the individual effects may be changes resulting from a single project or a number of separate projects", and "the cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects." "Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."

4.0 POTENTIALLY SIGNIFICANT EFFECTS CHECKLIST

The following checklist indicates the potential level of impact and is defined as follows:

Potentially Significant Impact: A fair argument can be made, based on the substantial evidence in the file, that an effect may be significant.

Less Than Significant Impact with Mitigation: Incorporation of mitigation measures has reduced an effect from a Potentially Significant Impact to a Less Than Significant Impact.

Less Than Significant Impact: An impact is considered adverse but does not trigger a significance threshold.

No Impact: There is adequate support that the referenced information sources show that the impact simply does not apply to the subject project.

Reviewed Under Previous Document: The analysis contained in a previously adopted/certified environmental document addresses this issue adequately for use in the current case and is summarized in the discussion below. The discussion should include reference to the previous documents, a citation of the page(s) where the information is found, and identification of mitigation measures incorporated from the previous documents.

4.1 AESTHETICS/VISUAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. The obstruction of any scenic vista or view open to the public or the creation of an aesthetically offensive site open to public view?				X	
b. Change to the visual character of an area?			X		
c. Glare or night lighting which may affect adjoining areas?				X	
d. Visually incompatible structures?				X	

Existing Setting: The project site is located approximately .27 miles east of the intersection of State Highway 154 and Stage Coach Road in an existing developed rural area surrounded by the Los Padres National Forest. The project site is within a travel corridor in an area with a designed scenic value level of “One-Most Scenic” in the Open Space Element of the Santa Barbara County Comprehensive Plan. State Highway 154 is designated as a “scenic highway”. Kinevan Road bridge 51C-214 is not visible from the State Highway 154, as it is lower in elevation, in a canyon and is completely obscured by a live oak woodland and steep topography. The County’s Visual Aesthetics Impact Guidelines classify mountainous areas and travel corridors as “especially important” visual resources. The project will not impact important visual resources, obstruct public views, substantially alter the natural character of the landscape or involve extensive grading visible from public areas. Public views from the roadway are limited to immediately neighboring properties and are dominated by steep slopes covered in an oak woodland forest which precludes most skyline major features.

Impact Discussion:

- a. The proposed replacement bridge would be constructed at the same location and elevation as the existing bridge and would not block public views or create an aesthetically offensive site. The project will call for vegetation removal in the immediate project area and for periodic heavy equipment activity over the construction period which may degrade the visual quality of the views along Kinevan Road. This impact is considered less than significant due to the very small area affected and to the fact that none of the disturbance would be visible from State Highway 154. Graded areas will be treated with a compost blanket and a native seed mix and then will be replanted with native vegetation.
- b. The installation of the bridge deck and road shoulder widening requires the removal of seven trees along the side of Kinevan Road. These trees would be visible to users of Kinevan Road such as motorists, bicyclists and pedestrians. These trees are generally small and under the oak and riparian canopy, the removals may temporarily degrade the visual quality of Kinevan Road. All trees will be replaced as part of a habitat restoration plan to satisfy the CDF&W LSAA or 1602 permit. However, the large number of existing trees and remaining thick tree canopy would obscure the loss of the trees. Therefore, this impact to visual quality is considered less than significant.

- c. Project related construction activities will not require any night lighting. There will be no increase in ambient light level at the residences along Kinevan Road.
- d. The proposed replacement bridge would be constructed at the same location with roughly the same alignment and configuration. The only difference is the new bridge deck would be pre-cast and pre-stressed concrete with a polyester concrete overlay rather than wood. Therefore, the new bridge would be compatible with adjacent land uses.

Mitigation and Residual Impact:

No mitigation measures are required. The project would not create any significant project-specific aesthetic impacts or substantially contribute to cumulative impacts. Residual impacts would be less than significant.

4.2 AGRICULTURAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Convert prime agricultural land to non-agricultural use, impair agricultural land productivity (whether prime or non-prime) or conflict with agricultural preserve programs?				X	
b. An effect upon any unique or other farmland of State or Local Importance?				X	

Setting:

An important farmland map for the project area was reviewed by the California Department of Conservation. The project site is not within any lands designated as prime farmland, statewide-importance farmland and unique farmland. The project area is designated as other land. Other land is land not included in any other mapping category. Common examples include low density rural developments, brush timber, wetland and riparian areas not suitable for livestock grazing, confined livestock, poultry, or aquaculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded by urban development and greater than 40 acres is mapped as other land. The nearest agricultural land to the project site is located approximately three miles either to the north in the Santa Ynez Valley area of State Highway 154 or to the south in the foothills of the unincorporated Goleta area. The project impact area is exclusively within County owned right-of-way adjacent to an existing developed mountainous rural neighborhood.

Impact Discussion:

- a. The proposed project would not involve the conversion of agricultural lands, or conflict with existing uses of preserve programs.
- b. The proposed project would not affect farmland of State or Local Importance.

Mitigation and Residual Impact: No impacts are identified. No mitigations are necessary. Residual impacts would be less than significant.

4.3 AIR QUALITY

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. The violation of any ambient air quality standard, a substantial contribution to an existing or projected air quality violation, or exposure of sensitive receptors to substantial pollutant concentrations (emissions from direct, indirect, mobile and stationary sources)?				X	
b. The creation of objectionable smoke, ash or odors?				X	
c. Extensive dust generation?				X	
Greenhouse Gas Emissions	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
d. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				X	
e. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X	

Setting:

The project site is located in Santa Barbara County within the South Central Coast Air Basin (SCCAB) which encompasses three counties: San Luis Obispo, Santa Barbara and Ventura. The Santa Barbara County portion of the SCCAB periodically fails to meet air quality standards and is a designated “non-attainment” area for the State 8-hour ozone standard and State particulate matter (PM₁₀) standard.

Air pollution control is administered on three governmental levels. The U.S. Environmental Protection Agency (EPA) has jurisdiction under the Clean Air Act, the California Air Resources Board (CARB) has jurisdiction under the California Health and Safety Code and the California Clean Air Act, and the Santa Barbara County Air Quality Pollution District (SBCAPCD) shares responsibility with the CARB for ensuring that all State and Federal ambient air quality standards are attained within the Santa Barbara County portion of the SCCAB.

The SBCAPCD and Santa Barbara County Association of Governments adopted the 2010 Clean Air Plan in January 2011, which was prepared to address the requirements of the California Clean Air Act. The 2010 Clean Air Plan provides an update to the County’s emission inventory, and all feasible measures to reduce emissions of ozone precursors by at least 5 percent per year. Overall, air quality in Santa Barbara County is improving, as the number of County exceedances of the State 1-hour ozone standard has declined from 37 days in 1990 to three days or less in recent years.

The project location sits on top of San Marcus pass between two air monitoring stations. The closest air quality monitoring station is about two and half miles north on Paradise Road in the Los Padres National Forest but does not monitor for particulate matter and most representative of the project site is the Goleta station, located about 4 miles southeast of the project site.

PM data from the nearest station most the representative of the project site is included in Table 1.

Table 1. Summary of Ambient Air Quality Data

Pollutant	2009	2010	2011
Ozone: Paradise Road-Los Padres National Forest			
Highest 1-Hour concentration (ppm)	0.089	0.089	0.089
Highest 8-Hour concentration (ppm)	0.081	0.083	0.083
Number of State Exceedances (8 hour>0.070 ppm)	5	6	3
Number of Federal Exceedances (8 hour>0.070 ppm)	2	1	1
Particulate Matter less than 10 microns (PM10) -Goleta Station			
Highest Sample (micrograms/cubic meter)	N/A	45.2	70.0
Number of State Exceedances (Samples>50)	N/A	0	0
Particulate Matter less than 2.5 microns (PM 2.5) -Goleta Station			
Highest Sample (micrograms/cubic meter)	N/A	23.6	18.4
Number of Federal Exceedances (Samples>35)	N/A	0	0

Greenhouse gases (GHGs) include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydro fluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃). Combustion of fossil fuels constitutes the primary source of GHGs. GHGs accumulate in the atmosphere, where these gases trap heat near the Earth's surface by absorbing infrared radiation. This effect causes global warming and climate change, with adverse impacts on humans and the environment. Potential effects include reduced water supplies in some areas, ecological changes that threaten some species, reduced agricultural productivity in some areas, increased coastal flooding, and other effects.

Following Executive Order S-3-05 in June 2005, which declared California's particular vulnerability to climate change, the California Global Warming Solutions Act of 2006 (AB 32) was signed by Governor Arnold Schwarzenegger on September 27, 2006. Greenhouse gases (GHGs) are defined as any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include, but are not limited to, water vapor, carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). These greenhouse gases lead to the trapping and buildup of heat in the atmosphere near the earth's surface, commonly known as the Greenhouse Effect. There is increasing evidence that the Greenhouse Effect is leading to global warming and climate change.

In response to global warming, AB 32 requires the CARB to adopt a statewide greenhouse gas emissions limit equivalent to the statewide GHG emissions levels in 1990 to be achieved by 2020 and requires the CARB to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. In June 2008, CARB developed a Draft Scoping Plan for Climate Change, pursuant to AB 32. This Draft Scoping Plan proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, and enhance public health while creating new jobs and enhancing the growth in California's economy.

Senate Bill 97, enacted in 2007, amends the CEQA statute to clearly establish that greenhouse gas emissions and the effects of GHG emissions are appropriate for CEQA analysis. It directs the California Office of Planning and Research (OPR) to develop guidelines addressing the analysis and mitigation of greenhouse gas emissions by July 1, 2009 and for the California Resources Agency to certify and adopt the CEQA Guidelines by January 1, 2010. Equipment and vehicles used to construct the new bridge would emit greenhouse gases

(primarily carbon dioxide), and may contribute to global climate change.

The Santa Barbara County Planning and Development Department (2008) has developed the following thresholds to determine the significance of long-term air emissions under the California Environmental Quality Act.

- Project emissions (mobile and stationary sources) greater than the daily trigger for offsets of 55 pounds per day for NO_x and ROC, and 80 pounds per day for PM₁₀,
- Emit less than 25 pounds per day of NO_x or ROC from motor vehicle trips;
- Cause or contribute to a violation of any California or National ambient air quality standard (except ozone);
- Exceed the health risk public notification thresholds of the APCD; and
- Be inconsistent with the adopted 2010 Clean Air Plan.

No thresholds have been established for short-term impacts associated with construction activities. However, the County's Grading Ordinance requires standard dust control conditions for all projects involving grading activities. Long-term/operational emissions thresholds have been established to address mobile emissions (i.e., motor vehicle emissions) and stationary source emissions (i.e., stationary boilers, engines, paints, solvents, and chemical or industrial processing operations that release pollutants).

Impact Discussion:

a-c. Potential Air Quality Impacts

Short-Term Construction Impacts. The proposed project would generate air pollutant emissions as a result of construction activities; primarily exhaust emissions from heavy-duty trucks, worker vehicles and heavy equipment. Emissions were estimated for a peak day, focusing on earthwork required for the bridge approaches. It was assumed that 4 truck trips (8 one-way trips) and 6 worker trips (12 one-way trips) would occur on a peak work day. Estimated project peak day emissions are listed in Table 2. Due to their small magnitude and duration, project emissions are considered a less than significant air quality impact.

Table 2. Construction Emissions

Source	Pounds per Peak Day			
	ROC	NO _x	CO	PM-10
Equipment	9.3	127.0	60.0	7.4
On-road vehicles	0.3	3.3	3.1	0.1
Fugitive dust	0.0	0.0	0.0	86.6
Total	9.6	130.3	63.1	94.1

Construction-related earthwork at the project site would not have the potential to result in significant project-specific short-term emissions of fugitive dust and PM₁₀, with the implementation of standard dust control measures that are required for all new development in the County.

Emissions of ozone precursors (NO_x and ROC) during project construction would result primarily from the on-site use of heavy equipment. Due to the limited period of time that heavy equipment operation would occur on the project site, construction-related emissions of NO_x and ROC would not be significant on a project-specific or cumulative basis. However, due to the non-

attainment status of the air basin for ozone, the project should implement measures recommended by the SBCAPCD to reduce construction related emissions of ozone precursors to the extent feasible. Compliance with these measures are routinely required for all new development in the County.

Long-Term Operation Emissions. The proposed project is limited to replacement of an existing bridge at the same location and configuration, and would not result in an increase in traffic volumes or resulting air emissions following completion of construction. Therefore, the proposed project would not have any long-term air quality impacts.

d-e. Greenhouse Gas Emissions/Global Climate Change

The County's methodology to address Global Climate Change in CEQA documents is evolving. The County is currently working to develop a Climate Action Plan consistent with CEQA Guidelines Section 15183.5 (Tiering and Streamlining the Analysis of Greenhouse Gas Emissions). Until the Climate Action Plan is formally adopted, the County will follow an interim approach to evaluating GHG emissions. This interim approach will look to criteria adopted by the San Luis Obispo County Air Pollution Control District (SLOAPCD) for land use development projects.

Based on Table 2 Construction Emissions above, the GHG emissions from this project are considered to be less than 1,150 metric tons/year and cumulative impacts as a result of GHG emissions are considered to be less than significant.

The project involves direct replacement of an existing roadway bridge, and would not result in any long-term changes in traffic patterns or traffic volumes, and would not increase vehicle emissions. The project would not result in any greenhouse gas emissions from stationary sources during long-term operation or from non-stationary sources during long-term operation, and would not contribute to climate change (excluding short-term construction activities). The project does not involve any new land use plans or amendments to the General Plan.

Cumulative Impacts:

Projects not having an appreciable effect on existing emissions and not exceeding established thresholds for long-term air quality impacts for NO_x and/or ROG emissions are considered as not having the potential to result in significant cumulative air quality impacts.

Mitigation and Residual Impact:

No significant impacts were identified; therefore, mitigation is not required. Residual impacts would be less than significant.

4.4 BIOLOGICAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
Flora					
a. A loss or disturbance to a unique, rare or threatened plant community?			X		
b. A reduction in the numbers or restriction in the range of any unique, rare or threatened species of plants?		X			
c. A reduction in the extent, diversity, or quality of native vegetation (including brush removal for fire prevention and flood control improvements)?			X		
d. An impact on non-native vegetation whether naturalized or horticultural if of habitat value?			X		
e. The loss of healthy native specimen trees?		X			
f. Introduction of herbicides, pesticides, animal life, human habitation, non-native plants or other factors that would change or hamper the existing habitat?				X	
Fauna					
g. A reduction in the numbers, a restriction in the range, or an impact to the critical habitat of any unique, rare, threatened or endangered species of animals?			X		
h. A reduction in the diversity or numbers of animals onsite (including mammals, birds, reptiles, amphibians, fish or invertebrates)?			X		
i. A deterioration of existing fish or wildlife habitat (for foraging, breeding, roosting, nesting, etc.)?			X		
j. Introduction of barriers to movement of any resident or migratory fish or wildlife species?			X		
k. Introduction of any factors (light, fencing, noise, human presence and/or domestic animals) which could hinder the normal activities of wildlife?			X		

Setting: Existing Plant and Animal Communities and Conditions

The project area subject to biological survey consists of a 400-foot-long reach of San Jose Creek, as well as 100 feet in either direction perpendicular to bridge 51C-214. Within this Biological Study Area (BSA) there are a number of areas containing different natural vegetation communities. The Project Impact Area (PIA) is within the highly disturbed transportation corridor containing Kinevan Road, bridge 51C-214, Stagecoach Road, and a private dirt road that parallels the creek.

Vegetation:

The BSA includes all areas subject to disturbance, as well as an additional 200 feet upstream and downstream of bridge 51C-214. The project area contains a diversity of land use and habitat types, including a reach of San Jose Creek, a portion of Kinevan Road and a residential community. Vegetation and land uses present in the project area include:

- Coast live oak / California blackberry-poison oak woodland (Ow);
- White alder-California black walnut riparian woodland (Ri);
- Historic landscape (H);

- Ruderal (R) (including the dirt two-track road);

This section presents descriptions of natural and vegetation communities, including discussions of common and characteristic plant species. Other biological conditions described cover invasive species, followed by aquatic resources and common wildlife species in each community.

Coast Live Oak / California Blackberry – Poison Oak Woodland (Ow)

Evergreen coast live oak trees (*Quercus agrifolia*) predominate on the slopes that surround the stream at the Kinevan Road bridge. The oaks continue down to the deciduous woodland that runs along the stream. Shade cast by these mature trees limits understory development. California blackberry (*Rubus ursinus*) and poison oak (*Toxicodendron diversilobum*) are common. Shrubs characteristic of the coastal sage scrub community appear in openings, including sticky monkeyflower (*Mimulus aurantiacus*), fuchsia-flowered gooseberry (*Ribes speciosa*), basket brush (*Rhus trilobata*), coyote brush (*Baccharis pilularis*), and globe mallow (*Sphaeralcea malvaefolia*). California bay (*Umbellularia californica*) is a common associate near the creek, and one madrone (*Arbutus menzeisii*) grows on the opposite side of Kinevan Road downstream of the bridge site.

The area of coast live oak/California blackberry – poison oak woodland within the BSA is 1.04 acres. This natural community does not occur in the project impact area.

White Alder-California Black Walnut Riparian Woodland (Ri)

Kinevan Canyon is deep and narrow where the bridge is located, creating a local climate that is unusually moist and shaded. White alder (*Alnus rhombifolia*) and California black walnut (*Juglans californica*) are the most common along the stream, with big-leaf maple (*Acer macrophyllum*) and coast live oak. The road runs along the side of the creek, leaving little area for understory development beyond the bouldery streambed. California blackberry, poison oak, and periwinkle are the most common understory plants. Willows (*Salix* spp.) and panicled rush (*Scirpus microcarpus*) grow in the occasional sunny openings. Himalayan blackberry has invaded the creek along with a few apple (*Malus domestica*) trees and pear trees.

The area of white alder-black walnut riparian woodland in the BSA is 1.18 acres. The area of this land use type in the project impact area is 0.0286 acres

Historic Landscape (H)

The upper canyon in the vicinity of the bridge was part of the Kinevan Ranch. In addition to the remnant of an apple orchard, pear tree and a large and thriving Himalayan blackberry thicket, a mixture of cedar (*Deodara* sp.), incense-cedar (*Calocedrus decurrens*), pines (*Pinus* spp.), and other ornamental trees face the creek from the opposite side of the road, dating back at least to the early 20th century. Algerian ivy is the dominant understory plant beneath these introduced trees, with occasional foxglove (*Digitalis purpurea*).

The area of historic landscape in the BSA is 0.33 acres. The area of this land use type in the project impact area is 0.0018 acres

Ruderal (Ru)

This land use type occurs along the edges of Kinevan Road and a private dirt road. The strip of land between Kinevan Road and the creek just downstream of the bridge is frequently disturbed, and the sparse vegetation is composed of weedy, colonizing species. Smilo grass, Italian thistle, summer mustard, sow thistle, and wild oat are most common. The non-native vegetation extends down to the creek where some ornamental split-leafed philodendron (*Monstera deliciosa*) plants have become established. A private dirt road runs along the upstream inland side of the creek, inside the barbed wire fence line that parallels Kinevan Road as it rises out of the canyon. The vegetation on the road is ruderal, and dominated by smilo grass, Italian thistle, and oats. Vegetation on the road cut, however, is dominated by the native understory plants of the coast live oak / California blackberry – poison oak woodland. It is traveled often enough that plant cover on the road is very low.

The area of ruderal vegetation in the BSA is 0.09 acres. The area of this land use type in the in the project impact area is 0.0059 acres and includes 0.0046 acres of existing dirt access road that traverses the riparian habitat.

Summary Table of Acreages of Natural Communities and Land Uses in the Project Area

Natural Community/Land Use Type	Acreage in the Project Area Subject to Impacts		
	Temporary	Permanent	Total
Coast Live Oak/California Blackberry – Poison Oak Woodland	0.000	0.000	0.000
White Alder-California Black Walnut Riparian_Woodland	0.0149	0.0137	0.0286
Historic Landscape	0.0012	0.0006	0.0018
Ruderal	0.0051	0.0008	0.0059**
TOTAL	0.0212	0.0151	0.0363

** Includes 0.0046 acres of existing dirt access road that traverses the riparian habitat.

Trees to be Removed		
Species	Single (S) or Multi-trunk (M)	DBH (in inches)
Coast live oak	S	7
White alder	M	18, 18, 12, 12
Big-leafed maple	S	4
California bay	M	12, 8, 6
California bay	M	4, 4
California bay	M	8, 8
California bay	S	6

*Diameter at breast height

Wildlife

San Jose Creek and its riparian habitat provides important habitat for wildlife. The project area supports a large variety of bird species and varied wild life species associated with the mountainous and forest region adjacent to the Los Padres National Forest. Wildlife surveys of the project area recorded a wide range of wildlife species diversity and an overall high number of bird species.

Wildlife observed in the project area included larger mammals such as Coyote (*Canis Latrans*), Mule deer (*Odocoileus hemionus*) smaller mammals such as Brush rabbit (*Sylvilagus bachmani*) and Botta' pocket gopher (*Thomomys bachmani*). Raptors included the Red tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*) and turkey vulture (*Cathartes aura*). Smaller birds included Pacific-slope flycatcher (*Empidonax difficilis*); Cassin's vireo (*Vireo cassinii*); Warbling vireo (*Vireo gilvus*); Hutton's vireo (*Vireo huttonii*); Steller's jay (*Cyanocitta steller*); Western scrub-jay (*Apelocoma californicus*); American crow (*Corvus brachyrhynchos*); Oak titmouse (*Baeolophus inornatu*); Bushtit (*Psaltiriparus minimus*); House wren (*Troglodytes aedon*); Wrentit (*Chamaea fasciata*); Yellow warbler (*Setophaga petechial*); Orange-crowned warbler (*Oreothlypis celata*); Spotted towhee (*Pipilo maculatus*); Dark-eyed junco (*Junco hyemalis*); Purple finch (*Carpodacus purpureus*); Lesser goldfinch (*Carduelis psaltria*); White-throated swift (*Aeronautes saxatalis*); Anna's hummingbird (*Calypte anna*); Nuttall's woodpecker (*Picoides nuttallii*); Hairy woodpecker (*Picoides villosus*); Northern flicker (*Colaptes auratus*) and Black phoebe (*Sayornis nigricans*). Other species observed include the Western fence lizard (*Sceloporus occidentalis*) and the Northern tree frog (*Pseudacris regilla*).

Wildlife Corridors

Within the San Marcus pass area the San Jose Creek riparian corridor is intact. San Jose Creek provides a protected corridor from the foothills of Goleta into the headwaters of San Jose Creek which accesses the Los Padres National Forrest. San Jose Creek allows for larger mammals and birds to move between the coastal foothills and Santa Ynez valley without having to cross developed areas, steep slopes with dense vegetation and State Highway 154. It is expected that wildlife use San Jose Creek as a movement corridor as evidenced by wildlife scat and tracks in the project area.

Flora and Fauna Surveys

The following discussion is based on the results of a Natural Environment Study (NES) prepared for the project by Tom Olson of Garcia and Associates. The NES is available for review upon request at Santa Barbara County Public Works. The NES included biological surveys for flora and fauna in the project area. Studies conducted to assess potential occurrence of, and project-related effects on, sensitive biological resources included those listed below. Following the completion of the surveys, vegetation types were described and lists of plants and wildlife observed were compiled.

- Vegetation mapping and general botanical surveys;
- Rare plant surveys;
- Counts of native trees subject to removal;
- An evaluation of San Jose Creek as steelhead habitat;
- An evaluation of San Jose Creek as habitat for California red-legged frog, western pond turtle, and South Coast newt;
- An evaluation of bat habitat within the environmental study limits; and General wildlife surveys.

The rare plant and habitat survey was conducted on June 18, 2012 by botanist Kathy Rindlaub and biologist Suzan Kissée. Although the survey was conducted in early June, many species were still in late flowering at that time. Evidence of the remains of annual species was present and plants were identifiable to at least the genus level. Observations were made from the bridge deck and ends of the bridge, as well as by walking under and around the bridge. The area covered by Ms. Kissée and Ms. Rindlaub was the BSA, which included 200 feet upstream and downstream along the creek and up to 100 feet out from the bridge, perpendicular to the creek. The biologists surveyed for occurrences of listed and sensitive species and evaluated the project area as potential habitat for such species. Vegetation types were identified and mapped. The listed and sensitive species searched for are discussed in vegetation section. A list of all plant species observed during the surveys was compiled and is included in this Appendix A.

Invasive Plant Species

Although work will be restricted to previously disturbed areas, there is potential for the transport of seed of invasive plants to nearby natural communities, including coast live oak/California blackberry – poison oak woodland. During field surveys, 48 plant species were observed, including 20 non-native plants. Of the non-native species total, 8 are included on either the Natural Resource Conservation Service’s list of noxious weeds in California (U.S. Department of Agriculture 2011) or the California Invasive Species Advisory Committee Invasive Species List (a list compiled from the California Department of Food and Agriculture list, the Cal-IPC Invasive Plant Inventory, and Weeds of California book/list). Invasive species are included in the list of all plants observed in Appendix A.

- Algerian ivy;
- Summer mustard;
- Prickly lettuce;
- Smilo grass;
- Himalayan blackberry;
- Curly dock;
- Sowthistle; and
- Periwinkle.

The spread of invasive plant seeds by equipment will be controlled. Project vehicles and equipment will be thoroughly washed prior to the start of this project. No equipment or vehicles will be allowed in areas of natural communities.

The likelihood and magnitude of invasive plants impacting the project area will be minimized because all equipment and vehicles will be washed before work begins and the equipment will not be driven into natural communities. This is considered to be a less than a substantial impact.

Project impacts will be reduced to non-substantial levels by the implementation of standard best management practices. No impacts to federal or state listed species, waters of the U.S., or natural communities are expected. As such, no compensatory mitigation is necessary.

Habitats of Concern

Santa Barbara County considers oak woodlands, oak forests and individual oak trees as important biological resources. The County Deciduous Oak Tree Protection and Regeneration Ordinance (no. 4490) was adopted in 2003 to protect Valley and Blue oaks. The County’s Grading Ordinance was subsequently revised to include native oak tree removal (Ordinance # 4491) which included Coast Live oak. The

ordinance set limits on the number of oak tree removals and required replacement thresholds. Valley oak trees are considered protected when they are six inches in diameter at breast height (four feet). Coast Live oaks are considered protected if they are at least eight inches diameter at breast height. Oak trees in the Coastal Zone are also protected by the Coastal Zoning Ordinance (Article II) with the same required replacement threshold if they are at least 8 inches diameter at breast height.

The State of California also recognizes oak forests as important biological resources. Senate Concurrent Resolution 17 – Protection of Oaks - This resolution identifies four species of native oaks (Valley oak [*Quercus lobata*], Blue oak [*Q. douglasii*], Coast live oak [*Q. agrifolia*], and Engelmann oak [*Q. engelmannii*]) as sensitive biological resources, and requires that impacts to oak habitats be avoided or lessened, and that losses be mitigated.

Special Status Plant Species

Special status plant species are either listed as endangered or threatened under the Federal or California Endangered Species Act, or rare under the California Native Plant Protection Act, or considered to be rare or of scientific interest (but not formally listed) by resource agencies, professional organizations (e.g. Audubon Society, California Native Plant Society) and the scientific community.

Only two listed species potentially occur in the region: Gambel's watercress (*Nasturtium gambelii*) and Santa Ynez false lupine (*Thermopsis macrophylla*). Neither was found during the survey. Both are perennials that would have been visible at the time of the survey. The project area generally lacks suitable habitat for Gambel's watercress (lack of marsh habitat) and Santa Ynez false lupine (lack of chaparral and sandy soils). Habitat was present in the project area for nine non-listed special-status plants, including:

- Slender silver moss (*Anomobryum julaceum*)
- Late-flowered mariposa-lily (*Calochortus fimbriatus*);
- Umbrella larkspur (*Delphinium umbraculorum*)
- Ojai fritillary (*Fritillaria ojaiensis*)
- Mesa horkelia (*Horkelia cuneata* ssp. *puberula*)
- Santa Lucia dwarf rush (*Juncus luciensis*)
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)
- Pale-yellow layia (*Layia heterotricha*)
- Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*)

The California Natural Diversity Database (CNDDB) and the California Native Plant Society's online 8th edition of the Inventory of Rare and Endangered Plants were queried for results on nine quadrangles including and surrounding the San Marcos Pass quadrangle, where the project is located. The 11 species listed above are described in the following sections.

Gambel's Watercress

Gambel's watercress (also known as swamp cress) is an aquatic perennial that ranges from the south Central Coast through the South Coast and into Baja California in below 350 m (1148 ft.) elevation. It is listed as Endangered by the USFWS and as Threatened by the CDFW. A related species, common watercress (*Nasturtium officinale*) is widely distributed and cultivated. Common watercress is found in most areas with open water. There are a few reports of intermediates between the two species (Al-Shehbaz, Ihsan A. 2012). Gambel's watercress usually is hairy, and has both narrower leaves and fruit than common watercress. The fruit width is affected by the seed arrangement: one row for Gambel's watercress and two rows for common watercress.

Gambel's watercress occurs in marshes, and along streams and lakeshores, generally below 350 m (1,148 ft.) elevation. Although there was running water in this narrow reach of Kinevan Creek, no Gambel's watercress was found. At just under 2,000 ft., the project site is above the elevation range of this species. The survey was conducted in late July, when common watercress was in both flower and fruit. The nearest population of Gambel's watercress is in the North County on Vandenberg Air Force Base, on a fen-like tributary to San Antonio Creek.

No Gambel's watercress plants were found and none are expected due to lack of suitable habitat.

Santa Ynez false lupine

Santa Ynez false lupine is listed as rare by the State of California. It has a very limited distribution between the end of pavement on West Camino Cielo at the Winchester Gun Club (about 3 miles west of Highway 154) and Refugio Canyon Road to the west. Historic reports of additional populations have not been verified recently, despite focused surveys by qualified botanists. One theory is that these outliers became established briefly following fires or other disturbance, but did not persist.

Santa Ynez false lupine is a shrub-like perennial that has broad, palmately arranged leaflets and golden flowers. Unlike lupine, it bears only three leaflets, and has 10 free stamens, making the genus fairly easy to identify. It would have been past flowering in July, when the project site was surveyed, but the distinctive fruits of the pea family would have been evident. This species prefers open areas in chaparral and on sandstone. The project site does not include chaparral vegetation, and little of the surrounding area has recently been disturbed. Although the habitat is not suitable the project site is within the elevational range for this species: 425 to 1400 meters elevation (1,400 – 4,593 ft.).

Santa Ynez false lupine is endemic to a small area of the Santa Ynez Mountains. It prefers open areas in chaparral on sandstone or sandstone-derived soils, and apparently tolerates disturbance generated by fuel break maintenance. The nearest known population is in chaparral habitat around Broadcast and Santa Ynez peaks, 7-8 miles west of the project site. Reports of Santa Ynez false lupine in other locations have been checked over the past 20 years by Mark Borchert, US Forest Service Ecologist, and Dr. Dieter Wilkin, of the Santa Barbara Botanic Garden. None of these historic locations now support Santa Ynez false lupine, according to the comments on occurrences in the CNDDB. This perennial should have been visible at the time of the survey.

No perennial lupines or false lupines were found.

Slender Silver Moss

Slender silver moss has a California Rare Plant Rank of 2. This species is often found on moist rock outcrops along road cuts. The habitats in which it is found include coniferous and upland broad-leaved forests and chaparral at elevations from 300 feet to 3,000 feet. The nearest reported occurrence is on West Camino Cielo near the Winchester Gun Club, more than two miles from the project area.

This species was not found during the survey of the project area. Slender silver moss would have been identifiable at the time of the survey if it was present. This species is not expected to be in the project area based on survey results.

Late-flowered Mariposa Lily

Late-flowered mariposa lily has a California Rare Plant Rank of 2. This species is often found within dry coastal woodlands and chaparral up to an elevation of 3000 feet, frequently on serpentine soils. The nearest reported occurrence of late-flowering mariposa lily is southeast of the site between Kinevan Road and Highway 154, more than one-half mile from the project area; however, that occurrence was observed in 1955.

This species was not found during the survey of the BSA. Late-flowering mariposa lily would have been identifiable at the time of the survey if it was present. This species is not expected to be in the project areas based on survey results.

Umbrella larkspur

Umbrella larkspur has a California Rare Plant Rank of 1B. This species is often found on mesic sites associated with cismontane woodlands at elevations from 1,312 feet to 5,249 feet. The nearest reported occurrence is in lower Oso Canyon, north of the Santa Ynez River, near Los Prietos Boys' Camp, more than two miles from the project area.

This species was not found during the survey of the project area. Umbrella larkspur would have been identifiable at the time of the survey if it was present. This species is not expected to be in the project area based on survey results.

Ojai fritillary

Ojai fritillary has a California Rare Plant Rank of 1B. This species is often found on rocky sites. The habitats in which it is found include upland broad-leaved forests, lower montane coniferous forests, and chaparral at elevations from approximately 1,000 feet to 2,200 feet. The nearest reported occurrence is north of the Santa Ynez River in Upper Oso Canyon at Nineteen Oaks Camp, more than two miles from the project area.

This species was not found during the survey of the BSA. Ojai fritillary would have been identifiable at the time of the survey if it was present. This species is not expected to be in the project area based on survey results.

Mesa Horkelia

Mesa horkelia has a California Rare Plant Rank of 1B. This species is often found in open areas of sandy or gravelly sites. The habitats in which it is found include chaparral, cismontane woodlands, and coastal scrub at elevations from 230 feet to 2,600 feet. The nearest reported occurrence is described only as being on the north side of San Marcos Pass in the Santa Ynez mountains and was observed in 1930. This location is more than one-half mile from the project area.

This species was not found during the survey of the BSA. Mesa horkelia is a perennial herb and would have been identifiable at the time of the survey if it was present. This species is not expected to be in the project area based on survey results.

Santa Lucia Dwarf Rush

Santa Lucia dwarf rush has a California Rare Plant Rank of 1B. This species is often found along streamsides. The habitats in which it is found include vernal pools, meadows, lower montane coniferous forests, chaparral, and Great Basin scrub at elevations from approximately 1,000 feet to 6,700 feet. The nearest reported occurrence is three miles west of San Marcos pass in the Camino Cielo region of the Santa Ynez mountains, approximately one mile from the project area.

This species was not found during the survey of the BSA. Santa Lucia dwarf rush would have been identifiable at the time of the survey if it was present. This species is not expected to be in the BSA based on survey results.

Coulter's Goldfields

Coulter's goldfields have a California Rare Plant Rank of 1B. This species is often found on alkaline soils in playas and sinks. The habitats in which it is found include grasslands, coastal salt marshes, and vernal pools at elevations from sea level to 4,600 feet. The nearest reported occurrence is in the Goleta Slough in the neighboring Goleta quad, more than six miles from the project area.

This species was not found during the survey of the project area. Coulter's goldfields would have been identifiable at the time of the survey if it was present. This species is not expected to be in the BSA based on survey results and no reported occurrences within the San Marcos Pass quad.

Pale Yellow Layia

Pale yellow layia has a California Rare Plant Rank of 1B. This species is often found in open areas on alkaline or clay soils. The habitats in which it is found include cismontane woodlands, pinyon-juniper woodlands, and grasslands at elevations from 900 feet to 4,480 feet. The nearest reported occurrence is three miles southeast of San Marcos Pass summit within neighboring the Santa Barbara quad, more than three miles from the project area.

This species was not found during the survey of the project area. Pale yellow layia would have been identifiable at the time of the survey if it was present. This species is not expected to be in the BSA based on survey results and lack of reported observations within the San Marcos Pass quad.

Santa Barbara Honeysuckle

Santa Barbara honeysuckle has a California Rare Plant Rank of 1B. The habitats in which it is found include chaparral, cismontane woodlands, and coastal sage scrub at elevations from sea level to 3,300 feet. The nearest reported occurrence is north of Santa Barbara, two miles east-southeast of Brush Peak, northwest of the San Marcos Trout Club, approximately three quarters of a mile from the project area.

This species was not found during the survey of the project area. Santa Barbara honeysuckle is a perennial evergreen shrub and would have been identifiable at the time of the survey if it was present. This species is not expected to be in the BSA based on survey results.

Special Status Wildlife Species

Thirteen species of special-status animals are known or have the potential to occur in the project area on more than just an occasional basis. Of that total, suitable habitat occurs near the project impact area for six species: California red-legged frog, foothill yellow-legged frog, South Coast newt, two-striped garter snake, Cooper's hawk, and yellow warbler. Seven other special-status animals potentially occur in the region, but suitable breeding/roosting habitat is lacking. However these species could occur on an uncommon to occasional basis during migration, dispersal, or foraging: western pond turtle (*Emys marmorata*), southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), western mastiff bat (*Eumops perotis californicus*), Yuma myotis bat (*Myotis yumanensis*), pallid bat (*Antrozous pallidus*), and big free-tailed bat (*Nyctinomops macrotis*). Southern California steelhead is also included in this section even though there are barriers to passage downgradient of the project area. If steelhead could get to this reach of San Jose Creek, there is marginally suitable habitat.

These species are described in the following sections. A list of all wildlife species observed has been included in Appendix B.

Southern California Steelhead

The Southern California steelhead is federally listed as endangered under the ESA (NMFS 1997) and is a state Species of Special Concern. This species migrates up coastal streams in Santa Barbara County during years with adequate rainfall.

The BSA was evaluated for a number of special-status wildlife species, including steelhead by biologists Larry Hunt and Tom Olson on July 26, 2012. No steelhead were observed and the water was too low to accommodate fish. This species is not expected to occur in the BSA. This observation was confirmed in a September 17, 2012 letter from NMFS which stated the reach of San Jose Creek in the project area is upgradient of barriers to fish passage. There is no steelhead habitat in the project impact areas. Although steelhead critical habitat occurs in San Jose Creek, it is substantially downgradient of the BSA. There is no critical habitat for steelhead in the project area or in the project impact area.

Foothill Yellow-legged Frog

The foothill yellow-legged frog is listed as a California Species of Concern. It frequents rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands, and is sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools. This frog originally ranged from northern Oregon west of the Cascades south along the coast ranges to the San Gabriel Mountains, and south along the foothills of the western side of the Sierra Nevada Mountains to the Tehachapi Mountains, with an isolated population (now possibly extinct) in the San Pedro Martir Mountains of Baja California. There is one historic sighting of this species in the region, but it has not been observed in Santa Barbara County since the 1930s. It appears to be extirpated from the region.

No foothill yellow-legged frogs were observed during the July 26, 2012 survey. As noted above, none have been reported in about 80 years. This species appears to be extirpated from the region, even though habitat exists in some reaches of streams such as San Jose Creek. Foothill yellow-legged frogs are not expected to occur presently in or near the project area.

California Red-legged Frog

The California red-legged frog is federally listed under the Endangered Species Act as a threatened species throughout its range in California. It is also a Species of Special Concern in California. The main cause of its decline is habitat loss and destruction, but introduced predatory species such as bullfrogs, might also be a factor. California red-legged frogs occur in slow-moving or standing deep ponds, pools and streams. Tall vegetation, like grasses, cattails and shrubs, provide protection from predators and the sun. They cannot tolerate excessive heat. During times when streams have low or absent water, California red-legged frogs they may be noted in wet meadows or damp grasses.

No red-legged frogs were observed during the July 26, 2012 survey. The reach of San Jose Creek in the project area and associated riparian community represents good-quality habitat for this species. As such, there is 1.17 acres of red-legged frog habitat in the project area. Habitat for this species does not occur in the project impact area. Within the project area, the creek bed is damp in most places with surface water present in small scour pools beneath boulders just upstream and downstream of the bridge. Pools are less than 15 square feet in area and less than six inches deep and appear to be maintained by combination of a high water table and shaded location. Several late-stage Pacific tree frog (*Pseudacris regilla*) tadpoles were observed in a pool upstream of the bridge. The streambed is dry for at least 500-750 feet upstream of bridge. Red-legged frogs could use this area throughout the year, even during times when the water

level is low. There is no red-legged frog habitat in the project impact area. Work will occur in areas above the creek, on the road and in adjacent ruderal areas.

The nearest reported occurrence (CDF&W 2012) of this species is approximately 1.3 miles north-northwest of the project area. Critical habitat for the California red-legged frog does not occur in the BSA, but is approximately 0.3 mile to the north.

South Coast Newt

The full species, Coast Range newt (*Taricha torosa*) from Monterey County south is considered by CDF&W to be a Species of Special Concern. By extension, the South Coast newt (*T. t. torosa*) subspecies is as Species of Special Concern. It is known to occur in coastal streams with bedrock pools in Santa Barbara County. This taxon is known to move up and down streams as suitable pools become available, particularly after years of high runoff and pool scour (Olson personal observations).

No South Coast newts were observed during the July 26, 2012 survey. Although there was only limited surface water at the time of the survey, the reach of San Jose Creek in the project area was considered to be good quality habitat for this taxon. The 1.17 acres of creek and riparian habitat in the project area are suitable habitat for this species. There is no South Coast newt habitat in the project impact area.

Western Pond Turtle

The western pond turtle is designated as a Species of Special Concern by CDF&W. Western pond turtles occur along the Central Coast of California east to the Sierra Nevada and along the southern California coast inland to the Mojave and Sonoran deserts. Western pond turtles appear to be locally abundant in a few areas and considerably less common over the majority of their range. This species' numbers have been reduced in excess of 90% from historic levels in substantial portions of their range, and many remaining populations are heavily adult biased (Holland 1991, 1994).

Western pond turtles are active year-round, with reduced activity in colder months (October–February). They are a highly aquatic species requiring upland habitats for nesting, overwintering, and movement (Holland 1994). Typical western pond turtle habitat includes slow-moving or stagnant pools at least three feet deep and 0.5 feet in diameter with bank cover, such as vegetation, tree roots, or riprap boulders (Rathbun et al. 1992). This species has been observed using pools as shallow as 18 inches in depth (Olson, personal observations). Suitable aquatic habitat also requires basking sites such as mats of emergent vegetation, submerged mats of aquatic vegetation, and exposed logs, rocks, or mud banks. Suitable upland habitat, for nesting and overwintering, includes areas with exposed south-facing slopes, open-scrub or grassland vegetation, and dense soils (Holland 1991).

No western pond turtles were observed during the July 26, 2012 survey. As described earlier, the water level was low at the time of the survey and only a few pools with surface water were present. This species is less able to utilize intermittent streams than the red-legged frog, South Coast newt, and two-striped garter snake. Western pond turtles are not expected to occur in this reach of San Jose Creek.

Two-striped Garter Snake

The two-striped garter snake is a California Species of Special Concern that occurs along the central and southern California coastal streams from Monterey County to northern Baja California. It is a highly aquatic species, and is dependent on freshwater aquatic habitats for breeding and foraging. It is typically found in streams, ponds, and reservoirs with permanent water and sufficient emergent vegetation. It appears to prefer relatively slow-moving waters in small streams with a large prey-base of tadpoles, frogs, and fish. Highest densities are associated with arroyos or coastal lagoons with open areas of bare soil,

short grass, or large, flat boulders with southern exposures for basking that are adjacent to deep pools with plentiful prey.

Two-striped garter snakes are active both day and night, and feed primarily on frogs, tadpoles, small fish, salamanders, and earthworms. Females give birth to live young in mid to late summer. Adults reach an average snout-vent length of about 24 to 28 inches. Populations have undergone a relatively recent decline brought about by modifications of streams and adjacent habitats.

No two-striped garter snakes were observed during the July 26, 2012 survey. The reach of San Jose Creek in the BSA, along with the 1.17 acres of white alder – black walnut riparian woodland, contains good quality habitat for this species. As such, there is potential that two-striped garter snakes occur in or near the BSA. There is no habitat for this species in the project impact area.

Cooper's Hawk

The Cooper's hawk is considered to be a Species of Special Concern by CDF&W. Habitat for this species has been declining statewide due to conversion of riparian and oak woodlands. In the northern Santa Barbara County area, the Cooper's hawk is a regular winter visitor and is known to nest in limited numbers in the area. It is regularly sighted, particularly during winter months, but is not a common breeding species. When they are observed in the region, Cooper's hawks tend to nest in oak trees, especially if the oaks are in or adjacent to riparian zones. Cottonwoods and large willows also provide potential nest sites.

During the June 20, 2012 survey by biologist Peter Gaede, one Cooper's hawk was observed west of the existing bridge soaring over oak woodland habitat. In addition, a stick nest was spotted in a large alder tree over the bridge. There is potential for this species to nest in and forage over the project area. The amount of habitat in the project area includes the 1.17 acres of white alder – black walnut riparian woodland and the 1.04 acres of coast live oak/California blackberry – poison oak woodland, a total of 2.31 acres. Cooper's hawks could potentially use the vicinity during winter, migration, and breeding times of the year.

Least Bell's Vireo

Least Bell's vireo is listed as Federal and State Endangered. It was formerly abundant in the riparian woodlands of California's Central Valley and low elevation riparian streams in southern California and northern Baja, Mexico. It was one of California's most abundant birds in the late 19th and early 20th centuries, but was reduced to just 300 pairs by 1986. Historically, the Least Bell's Vireo was a common to locally abundant species in lowland riparian habitat, ranging from coastal southern California through the Sacramento and San Joaquin Valleys as far north as Red Bluff. Populations also occurred in the foothill streams of the Sierra Nevada and Coast Ranges, and in Owens Valley, Death Valley, and scattered locations in the Mojave Desert. By the time the species was listed by the U.S. Fish and Wildlife Service in 1986, it had been extirpated from most of its historic range, and numbered just 300 pairs statewide. Populations were confined to eight counties south of Santa Barbara, with the majority of birds occurring in San Diego County. In the decade since listing, Least Bell's Vireo numbers have increased, and the species is expanding into its historic range.

The breeding season is mostly mid-April to early June (Baicich and Harrison 1997). The open-cup nest is constructed of a variety of items, such as pieces of bark, fine grasses, plant down, and horse hair, and is often placed on a slender branch of willow, other shrub, mesquite, or other small tree, usually 2–3 feet, but sometimes 1–10 feet, aboveground. Nests are typically located near dense thickets along water or along dry parts of intermittent streams, and are placed low in dense riparian vegetation with a large degree of vertical strata. This taxon is typically associated with willow, cottonwood, mule fat, wild blackberry, or mesquite in desert localities (Zeiner et al. 1990).

No least Bell's vireos were observed during surveys conducted in the project area on June 20, 2012 and July 26, 2012. The riparian vegetation lacks the density and structure below 10 feet to be suitable nesting habitat for this species. However least Bell's vireos could use the BSA during migration. The amount of potential migratory habitat in the project area is 1.17 acres.

The nearest reported occurrences in the CNDDDB are two non-specific sightings to the north. These two observances reported by the CNDDDB were within the San Marcos Quad were in 1980 when one individual was observed along the Santa Ynez River near the Paradise Campground downstream from Gibraltar Reservoir. Paradise Campground is approximately three miles from the BSA. The second occurrence is of a least Bell's vireo nest observed on Kelly's Creek, a tributary to the Santa Ynez River with no further location details. The sighting was from 1933 and noted that the nest was two feet from the ground in a willow. That location is approximately two miles from the project.

Critical habitat for this species does not occur in the project area, but is along the Santa Ynez River, approximately three miles from the project area.

No habitat for this species occurs in the project impact area.

Southwestern Willow Flycatcher

Southwestern willow flycatchers nest in riparian habitats, usually with surface water present. Vegetation is normally dense with a height of 10 feet or greater. Overstory vegetation may or may not be present as well. Nesting has been noted in habitat patches of about two acres to hundreds of acres in size (Sogge et al. 2010). This species is later arriving in the spring than many of the other migratory species. Nesting can be spread out from late May until mid-August. Nesting normally occurs in riparian habitats that are adjacent to flowing water.

No southwestern willow flycatchers were observed during surveys conducted in the BSA on June 20, 2012 and July 26, 2012. The riparian vegetation lacks the density and structure below 10 feet to be suitable nesting habitat for this species. However this species could use the project area during migration. The nearest reported occurrences in the CNDDDB are two reports near Gibraltar Reservoir, about seven miles to the northeast. The amount of potential migratory habitat in the project area is 1.17 acres.

Critical habitat for this species does not occur in the project areas, but is along the Santa Ynez River, approximately three miles from the project area.

No habitat for this species occurs in the project area.

Yellow Warbler

The yellow warbler is a Species of Special Concern in California. It nests and forages in brushy habitat, especially in riparian zones. This species is also known to nest in lower densities in shrublands, edges of wooded habitats, residential areas, and parks. Prey items for yellow warblers are mostly insects, especially arthropods. Its distribution and population numbers have been reduced by the conversion of riparian habitats to other uses.

One yellow warbler was observed in the project area on June 20, 2012 by biologist Peter Gaede. Although a nest was not observed, the sighting could indicate nesting in the project area. The amount of nesting habitat in the project area is 1.17 acres.

Mammals: Bats

The potential for bats to utilize the bridge as roosting habitat by bats was evaluated by Paul Collins on June 13, 2012. Mr. Collins evaluated the project area and the bridge in particular for use by all species of bats. During the June 13, 2012 survey conducted by Paul Collins, there were no protected hollows under the existing bridge that would be suitable for bat night or day roosting. There was no evidence of any bat use in the under structure of the bridge. The bridge is too low (e.g. 5.0 to 6.5 foot clearance to the ground and creek corridor under the bridge. There was no urine staining or bat guano on the beams of the bridge or on the ground under the bridge. As the decking for the bridge is composed of planks laid side-by-side, the small crevices between each plank are open to the road above. Soil erodes through the small cracks between the bridge planks which makes them unsuitable for bat roosting. The existing bridge does not provide potential roosting habitat for bats. Because there is potential for some use of the project area to be used as foraging habitat, four special-status bats are discussed below:

Western Mastiff Bat

The western mastiff bat is Species of Special Concern in California and is found in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. The western mastiff bat is primarily a cliff-dwelling species, where maternity colonies roost generally under exfoliating rock slabs (e.g., granite, sandstone or columnar basalt), but roosts can also be found in high buildings, trees and tunnels.

No western mastiff bats were identified within the project area at the time of the wildlife survey, either by sight, sound, or sign. No cliffs or crevices appropriate for roosting were observed within the project area or the surrounding area. Based on these results no bats of any species are expected to utilize the bridge for roosting. The 2.31 acres of oak woodland and riparian woodland habitat represent foraging habitat for bats, including this species that could be used on an irregular basis.

The only reported identification of western mastiff bats in the San Marcos quad occurred on June 13, 1998, in the White Rock recreation area in the upper Santa Ynez valley, north of Paradise Canyon. Bat(s) were repeatedly detected acoustically at dusk. The exact location unknown; however the source gives locality as "White Rock picnic area in the upper Santa Ynez valley, about 55 km east of Vandenberg AFB." The location was mapped at "White Rock recreation area" as a best estimate. Based upon the "best estimate" GPS coordinates, the location is approximately 2.70 miles from the project area,

Yuma Myotis

Yuma myotis is a Species of Special Concern in California. There was no evidence of bats, including Yuma myotis, using the existing bridge for roosting. Although this species is more likely to roost in crevices and caves instead of on bridges, it has the potential to forage in and near the project area.

No evidence of bat use was found under or on the existing bridge, however the 2.31 acres of oak woodland and riparian woodland in the project area represents foraging habitat for bat species, including the Yuma myotis.

Pallid Bat

The pallid bat is a Species of Special Concern in California. There was no evidence of bats, including pallid bats, using the existing bridge for roosting. Although this species is more likely to roost in

buildings, caves, or crevices instead of on bridges, it has the potential to forage in and near the project area.

The 2.31 acres of oak woodland and riparian woodland in the project area represents foraging habitat for bat species, including the pallid bat.

Big Free-tailed Bat

The big free-tailed bat is a Species of Special Concern in California. As described in Section 4.6, there was no evidence of bats, including big free-tailed bats, using the existing bridge for roosting. Although this species is more likely to roost in crevices instead of on bridges, it has the potential to forage in and near the project area.

The 2.31 acres of oak woodland and riparian woodland in the BSA represent foraging habitat for bat species, including the big free-tailed bat.

Wetlands

The project impact area for this project occurs outside of the bed and banks of San Jose Creek. As such, no wetlands or waters of the U.S. occur in the project impact area. There will be no impacts to wetlands or waters of the U.S.

Impact Discussion:

- (a) The project was designed to clear span San Jose Creek to minimize impacts. No construction will occur in the creek bed or banks. The wider bridge and roadway widening to conform the bridge to the road travel way will result in the removal of several small native trees. Due to the small area affected, this impact is considered less than significant.
- (b) The project would not result in permanent impacts to any rare or special status plant species. One special status plant species is found in the project area: Coast live oak. The County's Grading Ordinance protects native oak trees (Ordinance # 4491) which includes Coast live oak. The ordinance set limits on the number of oak tree removals and required replacement thresholds. The loss of a protected oak tree is considered potentially significant impact. Tree replacement requirements identified in Mitigation Measures BIO-1 would ensure impacts are reduced to less than significant. Two special status plant communities are found within the project area: Coast live oak woodland and White Alder-California Black Walnut Riparian Woodland. The loss of several native riparian trees is considered a potentially significant impact to the White Alder-California Black Walnut Riparian Woodland. At least one tree is proposed to be removal from the creek bank and six others nearby. The California Department of Fish and Wildlife (CDF&W) protects creeks and their riparian habitat under CDF&W code section 1602 (a). This code section states that an entity may not substantially change the bed, channel, or bank of, any river, stream, or lake. Tree replacement requirements identified in Mitigation Measures BIO-2 would ensure impacts are reduced to less than significant.
- (c) The proposed bridge project would not result in the loss of any other native vegetation. The removal of vegetation only affects an invasive species. Therefore impacts are less than significant.
- (d) The project would not result in the loss of any annual grassland. The project impact area contains mostly ruderal plants that are composed primarily of non-native species. This habitat does not provide significant habitat value because is not utilized by raptors or other wildlife species, etc.

- (e) 7 trees would be impacted, including the removal of one Coast live oak and 6 other native trees consisting of Bay Laurel, Alder and Big Leaf Maple. The tree removals will cause a temporary impact to the structure of the riparian corridor associated with San Jose Creek at the bridge. The impact to native specimen trees is considered less than significant because less than 10 percent of the native trees found in the project area would be removed. Any Oak, Maple, Alder and Bay trees removed that are greater than 3" DBH will be replaced at ratio of 10:1. Native understory species will also be planted in the area. Restoration will be conducted as required by a Lake and Streambed Alteration Agreement from the CDF&W.
- (f) The project would not result in other factors that would change the habitat. No chemicals, lighting, animals, human habitation or invasive species would be associated with the project implementation.
- (g) The project would not result in any impacts to rare or special status species.

Steelhead. The Southern Steelhead is a federally listed as an endangered species and is a State Species of Special Concern. Based on written correspondence with the Nation Marine Fisheries Service, letter dated September 17, 2012 the project is not likely to adversely affect steelhead even though San Jose Creek has the potential for steelhead in its lower reaches. The reach that contains the project location is upgradient of several obstacles such as waterfalls. Therefore, Steelhead are not expected to occur in San Jose Creek at the project area. There is no steelhead habitat in the project impact area therefore no impacts will occur and mitigation measures are not necessary.

Foothill yellow-legged frog. The foothill yellow-legged frog is listed as a California Species of Concern. No foothill yellow-legged frogs were observed during the July 26, 2012 survey. As noted above, none have been reported in about 80 years. This species appears to be extirpated from the region, even though habitat exists in some reaches of streams such as San Jose Creek. Foothill yellow-legged frogs are not expected to occur presently in or near the project area. Because this species has apparently been extirpated from the region, no impacts will occur and mitigation measures are not necessary.

California red legged frog. The California red-legged frog is federally listed under the Endangered Species Act as a threatened species throughout its range in California. It is also a Species of Special Concern in California. The project impact areas does not include red-legged frog habitat, however, work will occur near San Jose Creek and accompanying riparian habitat. As such, it is unlikely that direct impacts to this species would occur, but indirect impacts are possible. Mitigation measures described in Bio 3 would be implemented, including the restriction of work areas; designating staging and parking areas to previously disturbed locations; environmental awareness training; a pre-construction survey; and biological monitoring during peak times of work near the creek. Mitigation measures described in Bio 3 will reduce these impacts to a less than significant level.

Least Bell's vireo and Southwestern willow flycatcher – migratory habitat. Both species are listed as Federal and State Endangered. Neither of these species were observed during surveys conducted in the project area on June 20, 2012 and July 26, 2012. Critical habitat for both of these species does not occur in the project area and no habitat for both of these species occurs in the project impact area. Because no take of individuals and little or no impacts to migratory habitat for this species are expected no mitigation measures are necessary.

Yellow warbler. The yellow warbler is a Species of Special Concern in California. One yellow warbler was observed in the project area on June 20, 2012 by biologist Peter Gaede. Although a nest was not observed, the sighting could indicate nesting in the BSA. The amount of nesting habitat in the project area is 1.17 acres. If workers need to enter the riparian zone to retrieve debris during the nesting season (March 1 through August 15), a biologist will accompany the workers to ensure that no yellow warbler nests will be disturbed. Implementation of mitigation

measures such as a pre-construction survey and biological monitoring will reduce this impact to a non-substantial level. Mitigation measures described in Bio 4 will reduce these impacts to a less than significant level.

Cooper's hawk. The Cooper's hawk is considered to be a Species of Special Concern by CDF&W. During the June 20, 2012 survey by biologist Peter Gaede, one Cooper's hawk was observed west of the existing bridge soaring over oak woodland habitat. In addition, a stick nest was spotted in a large alder tree over the bridge. There is potential for this species to nest in and forage over the project area. To reduce impacts to this species to less than substantial levels construction will be scheduled to coincide with the post-nesting time for Cooper's hawks. The potential occurrence of an active Cooper's hawk nest would be a focus of the pre-construction survey and biological monitoring. Mitigation measures described in Bio 5 will reduce these impacts to a less than significant level.

Western mastiff bat and Big free-tailed bat – foraging habitat. Both bat species are Species of Special Concern in California. No evidence of bat use was found under or on the existing bridge, however the 2.31 acres of oak woodland and riparian woodland in the project area represent foraging habitat for both bat species. An inspection of the bridge will be part of the biologist's pre-construction survey. If bats are found on the bridge, an exclusion plan will be developed before demolition can start. No night work is planned, if night lighting is needed for security purposes the lights will be directed inward to reduce potential impacts to bats foraging at night. No direct impacts to bats will occur due to demolition of the bridge, no mitigation measures are necessary

South Coast newt and Two-striped garter snake. Both of these species are California Species of Special Concern. No South Coast newts and no two-striped garter snakes were observed during the July 26, 2012 survey. However, this reach of San Jose Creek in the project area is considered to be good quality habitat for both of these taxon. The 1.17 acres of creek and riparian habitat in the project area contains suitable habitat for both of these species. Mitigation measures described in Bio 3 would be implemented, including the restriction of work areas; staging and parking areas to previously disturbed locations; environmental awareness training; a pre-construction survey; and biological monitoring during peak times of work near the creek. Mitigation measures described in Bio 3 will reduce these impacts to a less than significant level.

Western pond turtle. The western pond turtle is designated as a Species of Special Concern by CDF&W. No western pond turtles were observed during the July 26, 2012 survey, the water level was low at the time of the survey and only a few pools with surface water were present. This species is less able to utilize intermittent streams. Western pond turtles are not expected to occur in this reach of San Jose Creek. However, the potential for impacts will be reduced by the implementation of avoidance and minimization measures described in Bio 3. Mitigation measures described in Bio 3 will reduce any potential impacts to a less than significant level.

- (h) The project related loss of habitat would be minimal and temporary. Constructions related disturbance such as noise, vibration and equipment activity would be localized and occur in previously disturbed areas of paved roadway and dirt shoulders. Therefore, a reduction in diversity or substantial reduction in the numbers of wildlife is not expected.
- (i) As discussed in e. and g. a small amount of temporary project related habitat loss would occur due to tree removals. However, such habitat loss is not anticipated to affect local wildlife populations.
- (j) San Jose Creek may be used as a corridor by wildlife moving through the area as it provides habitat and cover from the nearby State Highway 154. No barriers to wildlife would be involved and no work would occur at night, when most wildlife movement occurs. Therefore, impacts to wildlife movement are considered less than significant.

- (k) Project implementation would not involve fencing. The project site is located within an existing roadway in a residential development, such that existing sources of lighting, noise, vehicle traffic and human presence are commonly present. The project would not result in a substantial increase in factors which may hinder normal activities of wildlife. Therefore, impacts to wildlife movement are considered less than significant.

Cumulative Impacts:

Since the project would not significantly impact biological resources onsite, it would not have a cumulatively considerable effect on the County's biological resources.

Mitigation and Residual Impact:

The following mitigation measures would reduce the project's biological resource impacts to a less than significant level

Bio-1. Oak Trees. The loss of any protected coast live oak tree greater than 8" Dbh would be mitigated by planting coast live oaks at a mitigation ration of 10:1, such that 10 coast live oak trees would be planted for each tree removed. Replacement coast live oak trees would be planted within the Kinevan Road right of way area near the project location. One to five gallon container oaks would be used and should be propagated from genetic stock originating from the southern Santa Barbara County region. Each mitigation tree should be protected against ground disturbance, soil compaction, over irrigation and should be fenced or provided with herbivore protection (wire cages or equivalent). Mitigation trees shall be irrigation when natural moisture conditions are inadequate to ensure survival of the plants. Irrigation shall be provided for a period of at least two years from initial planting; 80% of plantings must survive for three an additional years without irrigation to be considered successful. All planting shall be installed between October 1 and April 30 to take advantage of the rainy season.

Plan Requirements and Timing: Mitigation measures shall be included in the project plans and specifications. **MONITORING:** A qualified native plant specialist shall conduct the native tree planting and follow up biological monitoring. The County senior environmental planner shall ensure compliance with this measure.

Bio-2. Riparian trees and vegetation. Additional trees removed from the White Alder-California Black Walnut Riparian Woodland would be mitigated by planting at the following CDF&W mitigation ratios as required by the Lake and Stream bed Alteration Agreement for the project. Alders and Big Leaf Maple trees shall be replaced at a ratio of 10:1. such that 10 trees would be planted for each one removed. Other native riparian plants and shrubs shall be planted to restore the understory as directed by a CDF&W approved habitat restoration plan. The plan shall include removal of invasive species and the use of a compost blanket with a native seed mix on all areas subject to grading disturbance. Replacement trees and native plants would be planted within the Kinevan Road right of way area near the project location.

Plan Requirements and Timing: Mitigation measures shall be included in the project plans and specifications. **MONITORING:** A qualified native plant specialist shall conduct the native tree planting and biological monitoring. The County senior environmental planner shall ensure compliance with this measure.

Bio-3. California red legged frog and other aquatic invertebrate species. To prevent possible direct and indirect impacts to the California red legged frog, western pond turtles, South Coast newts and two-striped garter snakes the following measures shall be implemented. These measures include; 1) the restriction of work areas 2) staging and parking in areas of previous disturbance, locations such as the paved roadway

surface; 3) environmental awareness training; 4) a pre-construction survey; 5) and biological monitoring during peak times of work near the creek.

Plan Requirements and Timing: Mitigation measures shall be included in the project plans and specifications. **MONITORING:** A qualified biologist shall conduct the pre-construction survey and biological monitoring. The County senior environmental planner shall ensure compliance with this measure.

Bio-4. Nesting birds. The project area shall be the focus of a pre-construction survey for nesting birds. If workers need to enter the riparian zone to retrieve debris during the nesting season (March 1 through August 15), a biologist will accompany the workers to ensure that no yellow warbler nests will be disturbed.

Plan Requirements and Timing: Mitigation measures shall be included in the project plans and specifications. **MONITORING:** A qualified biologist shall conduct the pre-construction survey and any biological monitoring. The County senior environmental planner shall ensure compliance with this measure.

Bio-5. Nesting raptors: Coopers hawk. The potential occurrence of a Cooper's hawk nest would be a focus of the pre-construction survey and biological monitoring. There is potential for this species to nest in and forage over the project area. If it is determined a stick nest spotted in a large alder tree over the bridge is an active Coopers hawk nest, construction will be scheduled to coincide with the post-nesting time for Cooper's hawks.

Plan Requirements and Timing: Mitigation measures shall be included in the project plans and specifications. **MONITORING:** A qualified biologist shall conduct the pre-construction survey and biological monitoring. The County senior environmental planner shall ensure compliance with this measure.

With the incorporation of these measures, residual impacts would be less than significant.

4.5 CULTURAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
Archaeological Resources					
a. Disruption, alteration, destruction, or adverse effect on a recorded prehistoric or historic archaeological site (note site number below)?				X	
b. Disruption or removal of human remains?				X	
c. Increased potential for trespassing, vandalizing, or sabotaging archaeological resources?				X	
d. Ground disturbances in an area with potential cultural resource sensitivity based on the location of known historic or prehistoric sites?		X			
Ethnic Resources					
e. Disruption of or adverse effects upon a prehistoric or historic archaeological site or property of historic or cultural significance to a community or ethnic group?				X	
f. Increased potential for trespassing, vandalizing, or sabotaging ethnic, sacred, or ceremonial places?				X	
g. The potential to conflict with or restrict existing religious, sacred, or educational use of the area?				X	

Setting:

Regional Prehistoric Overview. The following overview is part of the Archeological Study Report prepared for the project by Marc Linder of Applied Earth Works, Inc. The overview presents the prehistory of California and is demonstrated by the chronological breakdown developed by Glassow et al. (2007) that divides California into six periods:

1. Paleo-Indian (pre-7000 B.C.)
2. Milling Stone (7000–4500 B.C.)
3. Foundations of a Maritime Lifeway (4500–2000 B.C.)
4. Marine and Terrestrial Transitions from the Middle to Late Holocene (2000 B.C.– A.D. 1)
5. Important Technological and Social Developments (A.D. 1–1000)
6. Complexity and Climatic Change (A.D. 1000–1542)

Paleo-Indian (Prior to 7000 B.C.)

Humans were present in the Santa Barbara Channel by 12,000 years ago, as indicated by human bones from Santa Rosa Island that are at least that old (Erlandson et al. 2007:57). The earliest human presence on the mainland is reflected by a basal corner of a Clovis point, which may indicate a mainland occupation of a comparable age (Glassow et al. 2007:192). These are some of the oldest archaeological finds from North America. Coastal sites of California dating earlier than 7000 B.C. have been included in the Paleo-Coastal Tradition (Glassow et al. 2007:192). Following Davis et al. (1969), Moratto (1984:104) uses the term “Paleo-Coastal” to refer to the possible descendants of Paleoindians who inhabited the coast at estuaries and bay shores. Not many sites have been found from this period. Besides the sites described above, only two additional sites from the Channel Islands and one other site from the Santa Barbara Channel mainland date prior to 7000 B.C. (Glassow et al. 2007:192). Sites from this period are characterized by an artifact assemblage of primarily flaked stone tools and people appear to have subsisted largely on plants, shellfish, and some vertebrate

species (Erlandson et al. 2007:57). Fishing with gorge and line was practiced by about 7800 B.C.; however, milling implements were not used during this period (Glassow et al 2007:192).

Milling Stone Period (7000–4500 B.C.)

After 7000 B.C. the population began expanding and use of metates and manos become common. Approximately 40 sites have been dated to the Milling Stone Period and many sites contain substantial deposits with hundreds of artifacts implying regular use and longer periods of residence (Glassow et al 2007:192–194). These ground stone implements have been interpreted as evidence for a subsistence focus on seeds and other plant materials, and may imply increased storage of food between seasons (Glassow 1996). Hammer stones, fire-altered rocks, and a variety of flaked stone tools are also abundant in site dating to this period (Glassow et al. 2007:194). Estuarine shell species are very common in sites of this age along the channel coast and appear to have been more important than other animal food sources (Erlandson 1991, 1994; Warren 1968). Additionally, artifacts made from exotic obsidian, imported from at least as far away as the southeastern Sierra Nevada, have been recovered from sites dating to the early phases of this era (Erlandson 1994). However, sites of this age contain few or no projectile points (Glassow et al. 2007:194). *Olivella biplicata* shellbeads make their first appearance during the Milling Stone Period, but they do not indicate social stratification as in later prehistory (Glassow et al. 2007:195). The patterned distribution of artifact types interred with burials indicate that social status was determined by an individual's own accomplishments rather than on inherited or ascribed social standing (Erlandson 1993; Glassow 1996; King 1990).

Foundations of a Maritime Lifeway (4500–2000 B.C.)

This period represents a time of technological advances, population growth, and greater social complexity. Metates and manos continued to be used during this period, and mortars and pestles were added, indicating a reliance on a greater variety of plant foods, including acorns. There is also a significant increase in the quantity of projectile points (Glassow et al. 2007:197–199). Population densities and reliance on marine fish and mammals appear to have increased steadily from 3000 to 1000 B.C. (Glassow 1996). Settlement became more complicated with both large sites and smaller, less dense sites existed at the same time. The larger sites may have served as primary residential bases where a variety of specialized activities took place, while the smaller sites would have been occupied for much shorter periods. There is also an increase in the number of shell beads and ornaments found with burials, indicating greater social complexity (Glassow et al. 2007:197–199).

Marine and Terrestrial Transitions from the Middle to Late Holocene (2000 B.C.–A.D. 1)

Changes in technology, subsistence, and settlement during this period reflect an increasingly maritime orientation with intensified fishing and regional exchange. Contracting stemmed points, notched stone sinkers or net weights, and circular shell fishhooks all made their first appearance during this period, these directly transformed hunting, warfare, and fishing. There was a broadening of diet to include a diverse array of marine and terrestrial species. There also is evidence for increased sedentism at sites based on their increased size and/or high density of faunal remains and artifacts, floral assemblages indicative of year-round habitation, formal architecture, ceremonial structures, and formal cemeteries (Glassow et al. 2007:200–202). This resource diversification is associated with changes in social organization and ideology. Sites from this period have yielded ceremonial enclosures and formal cemeteries with a wide range and abundance of beads, ornaments, and ritual items. These changes were the basis for socioeconomic and political complexity in the region (Glassow et al. 2007:200–202).

Important Technological and Social Developments (A.D. 1–1000)

This era is considered to be a time of steady intensification of resource use to support increasing populations, reflected by increasing diversity of food sources taken from a wider range of

habitats (Erlandson 1993). This was enabled by technological changes that supported fishing and hunting. The most significant technological change is the introduction of the plank canoe, or *tomol*. The *tomol* was important in fishing and commerce between the mainland coast and the Channel Islands. The bow and arrow also was introduced during this period and influenced methods of hunting and warfare. Population growth and increased sedentism is reflected by larger midden deposits and the presence of well-developed cemeteries (Glassow et al. 2007:203–2004).

Complexity and Climatic Change (A.D. 1000–1542)

Late prehistory represents the height of Chumash population, craft specialization, and social complexity. Island populations manufactured millions of shell beads that were exchanged for mainland products (Glassow et al. 2007:207). This was supported by microlithic blade technology, linked with production of standardized microdrills for perforating shell beads, that emerged by circa A.D. 900. During the next 250 years, these island chert microdrills are found at both island and mainland villages. Later developments, beginning circa A.D. 1150, include the appearance of a technologically superior microblade form; increases in production scale, labor investment, and product standardization; and decreased failure rates (Arnold 2001). The distribution of artifacts from mortuary contexts also underwent notable alterations circa A.D. 1150. King (1990:100–101, 153–154, 196–197) has interpreted the newly ubiquitous distribution of certain shell bead forms in all types of mortuary contexts as signaling a profound change in Chumash social and political organization—the final emergence of a secular economy no longer controlled and orchestrated by political leaders but accessible to the full population. This mortuary artifact-based interpretation stands in contrast with Arnold’s model (based on data from habitation rather than mortuary contexts) of emerging chiefly status positions and sociopolitical complexity beginning circa A.D. 1150. Nevertheless, it appears clear that the period beginning at this time is marked by striking changes in Chumash society, economy, and political organization.

Regional Ethnographic Overview.

At the time of contact, the Chumash inhabited villages and towns in coastal and inland areas extending from the Santa Monica Mountains in the south to Paso Robles in the north as well as the Northern Channel Islands (Grant 1978a: 505; Milliken and Johnson 2003:144). The project area lies between zones of the Barbareño and Ynezeño Chumash. The Barbareño occupied the narrow coastal plain from Point Conception to Punta Gorda in Ventura County (Grant 1978b: 509). The Ynezeño Chumash occupied the Santa Ynez River watershed from the mouth of Zaca Creek eastward (Glassow 1979:155). Early Spanish expeditions to the Santa Barbara Channel area encountered heavily populated villages along the coast, some with as many as 800–1,000 residents. The inland areas were typically more sparsely populated, with villages of 100–200 individuals, although several larger communities existed in these areas as well (Johnson 1988; Glassow 1990:2-5). As with other inland groups, the Ynezeño appeared to have had lower population densities and greater seasonal mobility than coastal groups (Landberg 1965). Additionally, there were important differences in subsistence practices, social and political organization, and other cultural features between the different zones of Chumash territory. Ethnographic studies and early mission accounts indicate there were social and economic connections between Chumash villages in the Goleta area and settlements in the upper Santa Ynez Valley (Farris and Rivers 1992:12). The Chumash lived in semicircular houses that were covered by interwoven grasses. In every village there were one or more subterranean sweat houses (Grant 1978b:510). The abundant resources along the channel allowed the Barbareño Chumash leisure time to enjoy games, gambling, smoking tobacco, singing, and dancing (Grant 1978b:512). The Chumash were also skilled artisans who made a variety of objects. In addition to the shell beads, fishhooks, flaked tools, and *tomol* canoes described above, the Chumash also made spectacular stone bowls and pipes, baskets, and rock paintings (Grant 1978b:514–516). Chumash political traditions were centered on permanent, largely autonomous, named towns. Ethnohistoric accounts identify hereditary political leaders by village. The villages were composed of patrilineal descent groups and each village had three or four captains, one of whom would have been head chief (Grant 1978b:510). The strength of intervillage ties varied and apparently depended at least in part on the town’s size,

geographical position relative to trade routes and social networks, and the level of personal influence wielded by individual political leaders. Shifting patterns of intervillage animosities also are recorded, and the shifting patterns of alliances suggest that some political leaders had influence over multiple villages (Johnson and McLendon 1999:29–35). Causes of war among the Chumash include infringement on a village's hunting and gathering preserve, the refusal of a chief to accept an invitation to a feast or dance, or the avenging of witchcraft (Grant 1978b:513).

Record Search

Records at the Central Coast Information Center (CCIC) identified 13 previous surveys within 0.5 mile of Bridge 51C-214. These include studies for private parcel developments, roads/highways, power lines, and fire breaks. Other previous investigations include a UCSB archaeological class survey, and a description of the Mission/Fremont Trail. The CCIC records search identified four cultural resources within 0.5 mile of Bridge 51C-214. CA-SBA-2728/H is the trail established around 1800 to travel between Mission Santa Barbara and Mission Santa Ynez. Known as *El Arrastradero* (Hauling Road) in the mission era and also referred to as the Mission/Fremont Trail. CA-SBA-2685H is the stagecoach route over San Marcos Pass used between 1869 and the 1930s. Following the general course of the Mission/Fremont Trail, the road was constructed between 1868 and 1869, although a new route east of the original was built in 1889 and became County Road 80. The road has changed names and alignments over time, becoming State Route 80, Highway 150, and eventually Highway 154 (post-1951), but the segment passing through the project area is part of the original (1869–1880s) route. Two prehistoric sites are north of the project area near San Marcos Pass. CA-SBA-1310 is a diffuse scatter of chert lithic waste flakes and mussel shell fragments and CA-SBA-1311 is a sparse scatter of chert flakes found with a number of natural chert fragments. The Caltrans Historic Bridge Inventory lists Bridge 51C-214, constructed in 1968, as a Category 5 structure not eligible for inclusion in the National Register of Historic Places.

The record search did not identify any cultural resources in the project area during the survey. Kinevan Road has been repeatedly graded and filled, obscuring and altering its original alignment. No evidence of either of the two historic-era travel routes (CA-SBA-2728/H and -2685H) was found.

Field Investigation:

Applied Earthworks archaeologist Marc Linder conducted a pedestrian survey of areas proposed for construction on July 17, 2012. The pedestrian survey included the existing structure and extended up to 150 feet from either end of the bridge and up to 50 feet from the road shoulders; however, due to the steep terrain in most of the project area, the survey was limited to an area measuring 325 feet long by 53 feet wide (average), a total of 0.397 acres (17,300 square feet). Linder closely examined the steep slopes to be graded along the road approaching the bridge from the northeast, the road shoulders to the south and west, the adjacent creek-side terrace, and the incised bed of San Jose Creek beneath the structure. Ground surface visibility averaged 15–25 percent, limited by pavement, steep slopes, vegetation, and duff/ leaf litter. Where leaf litter or other material covered the ground surface, Linder cleared areas to expose underlying sediments. He photographed the project area and took detailed notes on vegetation and landform.

The current survey did not identify any cultural resources in the project area. Kinevan Road has been repeatedly graded and filled, obscuring and altering its original alignment. No evidence of either of the two historic-era travel routes (CA-SBA-2728/H and -2685H) was noted. Bridge 51C-214 was not recorded due to its age and evaluation as a Category 5 bridge ineligible for the National Register of Historic Places.

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted on July 2, 2012 to request pertinent cultural resources information available for the project area. On July 10, 2012 the NAHC replied that a search of their Sacred Lands Inventory failed to indicate the presence of Native American cultural resources in the immediate project area. The NAHC also provided contact information for individuals/organizations that may have knowledge of cultural resources in the project area. Applied Earthworks mailed a letter to each of the 20 individuals identified by the NAHC and followed up by attempting to contact each person by phone. Of the 20 individual contacts identified, one expressed concern about previously undisturbed areas that may be disturbed by the project and one recommended monitoring. The Chumash Elder's council representatives stated they had no problem with the project, two others stated they had no concerns with project, while 14 others did not response to voice mail messages or written correspondence.

Cumulative Impacts:

Since the project would not significantly impact archeological resources onsite, it would not have a cumulatively considerable effect on the County's archeological resources.

Impact Discussion:

(a-g) The potential for undiscovered cultural resources to exist onsite is low. However, in the event that previously unidentified cultural resources are discovered during site development, the standard archaeological discovery conditions, Mitigation Measures ARC-1 & ARC-2 would mitigate impacts to cultural resources to less than significant levels.

Mitigation and Residual Impact:

The following mitigation measure would reduce the project's cultural resource impacts to a less than significant level:

ARC-1 In the event archaeological remains are encountered during grading, work in the vicinity of the find shall be stopped immediately or redirected until a County qualified archaeologist and Native American representative are retained to evaluate the significance of the find pursuant to Phase 2 investigations of the County Archaeological Guidelines. If remains are found to be significant, they shall be subject to a Phase 3 mitigation program consistent with County Archaeological Guidelines and funded by the applicant.

ARC-2 If human remains are unearthed, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resource Code Section 5097.98. If the remains are determined to be of Native American decent, the coroner has 24 hours to notify the Native American Heritage Commission.

Plan Requirements/Timing: This condition shall be printed in the project specifics and included with the plans. **MONITORING:** A County qualified archeologist shall evaluate the significance of any archaeological remains and conduct the required investigation. The County senior environmental planner shall ensure compliance with this measure.

With the incorporation of this measure, residual impacts would be less than significant.

4.6 ENERGY

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Substantial increase in demand, especially during peak periods, upon existing sources of energy?				X	
b. Requirement for the development or extension of new sources of energy?				X	

Impact Discussion:

- The project consists of bridge replacement and would not consume energy, with the exception of the fossil fuels used in the construction equipment to build the structure. Overall, no increase in demand for energy would occur.
- The project would not require or induce new development or extension of existing sources of energy.

Cumulative Impacts:

Since the project would not impact County energy resources it would not have a cumulatively considerable effect on the County's energy resources.

Mitigation and Residual Impact:

No mitigation is required. Residual impacts would be less than significant.

4.7 FIRE PROTECTION

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Introduction of development into an existing high fire hazard area?				X	
b. Project-caused high fire hazard?		X			
c. Introduction of development into an area without adequate water pressure, fire hydrants or adequate access for fire fighting?				X	
d. Introduction of development that will hamper fire prevention techniques such as controlled burns or backfiring in high fire hazard areas?				X	
e. Development of structures beyond safe Fire Dept. response time?				X	

Setting:

The project site consists of the existing bridge footprint and portions of Kinevan Road. The Kinevan Road area has been mapped as a high fire area on the State Fire Hazard Severity Zone map for Santa Barbara County. The project location lies entirely within the Los Padres National Forest/Fire Protection Services Boundary.

The Los Padres National Forest maintains fire protection resources located at 3505 Paradise Road about 3.7 miles to the north east. The Los Prietos station houses two patrol units and has access to a Type 2 Helicopter with helitack crew at the Santa Ynez Airport and an air attack plane located at the Santa Barbara airport. According to the Los Padres National Forest, the project location within this area is considered at high risk for fire hazard, especially during the designated fire season. Fire season is typically from early May to late November, but varies depending on meteorological conditions for the year.

County Fire Department Station #12 is the closest fire station to serve the project area and is located at 5330 Calle Real, approximately 4 miles southwest of the project site. The San Marcos Pass Volunteer Fire Department located at 5593 West Camino Cielo, about .70 miles to the west is also able to respond to the project location.

Predictions about the long-term effects of global climate change in California include increased incidence of wildfires and a longer fire season, due to drier conditions and warmer temperatures. Any increase in the number or severity of wildfires has the potential to impact resources to fight fires when they occur, particularly when the state experiences several wildfires simultaneously. Such circumstances place greater risk on development in high fire hazard areas.

Cumulative Impacts:

Since the project would not add new development into an existing high fire hazard area and would not significantly impact fire protection resources, it would not have a cumulatively considerable effect on the County's fire resources.

Impact Discussion:

- a. The proposed project does not involve the construction of habitable structures, and would not directly or indirectly lead to any such structures that may increase the exposure of the public to increased fire hazard.
- b. Construction activities would occur in areas supporting potentially flammable vegetation and have the potential to significantly increase fire hazard to adjacent residential areas.
- c. The proposed project does not include any development.
- d. The proposed project does not include any development and would not hamper fire prevention activities.
- e. The proposed replacement bridge would be constructed of non-flammable materials such as Portland cement, steel and asphalt concrete and would not require fire protection.

Mitigation and Residual Impact:

The following mitigation measures would reduce the project's fire hazard impacts to a less than significant level:

FIRE-1. To minimize potential construction related fire hazards, a Fire Awareness and Avoidance Plan. The Plan shall include the following:

- Fire preventative measures addressing cutting, grinding and welding;
- Maintaining fire extinguishers in every vehicle on site;
- Maintaining a water truck on site if working during fire season;
- No construction activity during red flag alerts; and
- Communication with emergency response agencies.

FIRE-2. The contractor shall ensure adequate access to the driveways of immediately adjacent properties for emergency vehicles at all times

Plan Requirements/Timing: This condition shall be printed in the project specifics and included with the plans. **MONITORING:** The County on site resident engineer (RE) shall ensure compliance with this measure.

With the incorporation of these measures, residual impacts would be less than significant.

1.8 GEOLOGIC PROCESSES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Exposure to or production of unstable earth conditions such as landslides, earthquakes, liquefaction, soil creep, mudslides, ground failure (including expansive, compressible, collapsible soils), or similar hazards?			X		
b. Disruption, displacement, compaction or overcovering of the soil by cuts, fills or extensive grading?				X	
c. Exposure to or production of permanent changes in topography, such as bluff retreat or sea level rise?				X	
d. The destruction, covering or modification of any unique geologic, paleontologic or physical features?				X	
e. Any increase in wind or water erosion of soils, either on or off the site?				X	
f. Changes in deposition or erosion of beach sands or dunes, or changes in siltation, deposition or erosion which may modify the channel of a river, or stream, or the bed of the ocean, or any bay, inlet or lake?			X		
g. The placement of septic disposal systems in impermeable soils with severe constraints to disposal of liquid effluent?				X	
h. Extraction of mineral or ore?				X	
i. Excessive grading on slopes of over 20%?				X	
j. Sand or gravel removal or loss of topsoil?				X	
k. Vibrations, from short-term construction or long-term operation, which may affect adjoining areas?			X		
l. Excessive spoils, tailings or over-burden?				X	

Setting

Based on the Geologic Maps of the San Marcus Pass and the Goleta Quadrangles (Dibble 1987), the project site is underlain by Coldwater Sandstone (Tcw). This formation is described as hard, tan, bedded arkosic sandstone with minor imbeds of greenish-gray siltstone and shell; local oyster beds common in upper part. These deposits are from the Narizian Stage of the late middle Eocene age. The nearest mapped fault is the Santa Ynez Fault approximately 4 miles to the north. The Santa Ynez fault is considered active with an estimated magnitude

maximum credible earth quake at 7.2+. The project sites lies between the Brush Peak Anticline which is approximately ¼ mile to the south and the Laurel Canyon Syncline which is approximately 1 mile to the north. The Painted Cave Syncline lies 2.5 miles to the north from the project location. Approximately 2.5 mile to the south is the San Jose Fault, which is considered potentially active with an estimated magnitude maximum credible earth quake at 5.8. Approximately 3.5 miles south is the San Pedro Fault which is considered inactive.

Impact Discussion:

- a. Based on the Seismic Safety and Safety Element of the Santa Barbara County Comprehensive Plan, the project site is located in an area assigned low problem ratings for liquefaction, tsunami, expansive soils, soil creep, and compressible-collapsible soils and moderate problem ratings for slope stability and seismic-tectonic. The bridge site does not include slopes, such that landslides and slope stability is not an issue. The immediate project area has been assigned a low-moderate overall geologic problems index. The proposed replacement bridge would be designed to withstand anticipated seismic stresses according to established engineering practices. The proposed project would not include any habitable structures; therefore, no persons would be exposed to geologic hazards.
- b. Earthwork associated with the proposed project would include placement of engineered fill for the bridge approaches, as the new bridge would be constructed at a slightly higher elevation than the existing bridge. Cut and fill slopes would only be approximately one foot high and not subject to substantial soil displacement or disruption.
- c. The ground surface would be mostly restored following bridge replacement, with only minor, localized changes in topography associated with the new bridge.
- d. Based on the Seismic Safety and Safety Element of the Santa Barbara County Comprehensive Plan, no Areas of Special Geologic Interest occur in the project area. A search of the University of California Museum of Paleontology data base did not identify any fossils from the project area. Project-related ground disturbance would occur in the previously disturbed roadway, such that intact paleontological resources would not be present. Overall, no impacts to unique geologic, paleontological, or physical features would occur.
- e. The project does not involve extensive hillside grading or other components that would increase soil erosion. Potential erosion associated with storm water flows during the construction period is addressed in Section 4.16 Water Resources. Construction activities would avoid San Jose Creek, such that increased water-related erosion is not anticipated.
- f. Bridge replacement would not involve stream diversion or excavation within San Jose Creek. A water pollution control plan would be implemented during bridge construction to minimize discharge of silt-laden storm water to San Jose Creek. Therefore, increases in erosion or siltation are not anticipated.
- g. The proposed project would not involve the placement of septic systems.
- h. The proposed project does not involve the extraction or processing of minerals or ore.
- i. No excessive grading of slopes is proposed. Minor grading of the road cut on the northern side of Kinevan Road is required for the road way conform and to maintain access to an existing dirt road on private property.
- j. Excavation associated with bridge replacement would occur within previously disturbed areas and would not result in the loss of topsoil.

- k. Vibration would be generated by heavy equipment during bridge replacement activities, but will not be detected at nearest residences (which are approximately 200 to 250 feet away) during periods of high heavy equipment activity. However, due to the distance to the nearest residence, and the small number of persons affected, vibration impacts are considered less than significant.
- l. No spoils would be generated and any material excavated would be used on-site.

Cumulative Impacts:

Since the project would not result in significant geologic impacts, it would not have a cumulatively considerable effect on geologic hazards within the County.

Mitigation and Residual Impact:

Mitigation for potentially significant erosion and siltation impacts are addressed under Water Resources (Section 4.16). Residual impacts would be less than significant.

With the incorporation of these measures, residual impacts would be less than significant.

4.9 HAZARDOUS MATERIALS/RISK OF UPSET

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. In the known history of this property, have there been any past uses, storage or discharge of hazardous materials (e.g., fuel or oil stored in underground tanks, pesticides, solvents or other chemicals)?				X	
b. The use, storage or distribution of hazardous or toxic materials?			X		
c. A risk of an explosion or the release of hazardous substances (e.g., oil, gas, biocides, bacteria, pesticides, chemicals or radiation) in the event of an accident or upset conditions?				X	
d. Possible interference with an emergency response plan or an emergency evacuation plan?				X	
e. The creation of a potential public health hazard?				X	
f. Public safety hazards (e.g., due to development near chemical or industrial activity, producing oil wells, toxic disposal sites, etc.)?				X	
g. Exposure to hazards from oil or gas pipelines or oil well facilities?				X	
h. The contamination of a public water supply?				X	

Setting:

The project area supports residential and recreational land uses. No industrial land uses are located in the immediate area. Based on review of the GeoTracker (State Water Resources Control Board), ENVIROSTOR (California Department of Toxic Substances Control) and Enviromapper for Envirofacts

(United States Environmental Protection Agency) data bases no hazardous material sites or leaking underground storage tank cases are in the immediate area.

Impact Discussion:

- a. The project site does not have a history of hazardous materials production, use or storage. Therefore, project implementation would not result in exposure of persons or the local environment to hazardous materials.
- b. Excluding fuels used by construction equipment and vehicles, the project does not involve the use, storage or distribution of hazardous or toxic materials. Equipment and vehicles associated with the project would be fueled from a maintenance vehicle located away from drainages and residences. No storage of fuel is proposed at or near the project site.
- c. No risk of explosion is expected as a result of project-related activities.
- d. The proposed project would not interfere with any emergency response plan. All traffic across San Jose Creek would be prohibited during construction. Residences on each side of the project location have vehicle access to and from their residences. Traffic control would be provided on Kinevan Road during construction, and would ensure emergency vehicles can safely transit the work area.
- e. The proposed project does not involve the creation, storage or handling of any hazardous materials, and would not create any potential health hazard.
- f. The proposed project does not include any new development near hazardous materials.
- g. No oil or gas wells or other oil production facilities, or oil or gas pipelines occur at the project site. Therefore, project implementation would not result in exposure of persons or property to these hazards.
- h. The proposed project does not include any activities that would affect public water supplies.

Cumulative Impacts:

Since the project would not create significant impacts with respect to hazardous materials and/or risk of upset, it would not have a cumulatively considerable effect on safety within the County.

Mitigation and Residual Impact: No impacts are identified. No mitigations are necessary. Residual impacts are less than significant.

4.10 HISTORIC RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Adverse physical or aesthetic impacts on a structure or property at least 50 years old and/or of historic or cultural significance to the community, state or nation?				X	
b. Beneficial impacts to an historic resource by providing rehabilitation, protection in a conservation/open easement, etc.?				X	

Impact Discussion:

Setting:

Historic Period Overview. The following overview is part of the Archeological Study Report and Historic Property Survey Report prepared for the project by Marc Linder of Applied Earth Works, Inc. Kinevan Road likely follows part of a route established around 1800 for travel between Mission Santa Barbara and Mission Santa Ynez. *El Arrastradero* (Hauling Road), as it was called in the mission era, may have followed a trail used prehistorically by native people to cross San Marcos Pass. The same route was reportedly used by John C. Fremont as he marched over the pass into Santa Barbara in 1846; hence, it was also referred to as the Mission/Fremont Trail. Established around 1869, a stagecoach route over San Marcos Pass followed the general course of the Mission/Fremont Trail (Costello 1994).

Irish Immigrant, Patrick Kinevan arrived in the area in 1868 and was hired by the Flint and Bixby stagecoach line to serve as station agent and stock tender. In 1870 a stagecoach station was established on the south side of the San Marcos Pass summit. Summit House, as it came to be known, was located on the Mission/Fremont Trail along the west side of San Jose Creek, where a bridge and toll gate was erected. Kinevan acquired an adjacent 160-acre homestead, where he planted apple and pear orchards. Together with his wife, Nora, Kinevan served toll paying travelers and raised 10 children at Summit House, two whom lived there until 1956 (Tompkins 1982:65–71).

A new stagecoach route east of the original was built in 1889 and became County Road 80 in 1898. Automobiles replaced stagecoaches by 1901, and the road changed names and alignments over time, becoming State Route 80, Highway 150, and eventually Highway 154 (post-1951). The segment passing through the project area is part of the original (1869–1880s) route.

Kinevan Road has been repeatedly graded and filled, obscuring and altering its original alignment. No evidence of either of the two historic-era travel routes (CA-SBA-2728/H and -2685H) was found.

Historic Records Search Applied Earth Works, Inc. contacted several local historical societies and other groups to solicit pertinent historical resource information available for the project area. The groups consulted are listed below.

- Anita Hodosy, Secretary to the Santa Barbara County Historical Landmarks, Advisory Commission
- Donald G. Sharpe, Director, Santa Barbara Conservancy
- Mike Imwalle, Archaeologist, Santa Barbara Trust for Historic Preservation
- Michael Redmon, Director of Research, Santa Barbara Historical Society
- Santa Ynez Valley Historical Society

A summary of historic identification efforts includes: National Register of Historic Places, California Register of Historical Resources, California Inventory of Historic Resources, California Historical Landmarks, California Points of Historical Interest, Caltrans Historic Highway Bridge Inventory and the Central Coast Information Center.

Bridge Evaluation. The Caltrans Historic Bridge Inventory lists Bridge 51C-214, constructed in 1968, as a Category 5 structure not eligible for inclusion in the National Register of Historic Places.

Impact Discussion:

- a. The proposed development does not include the demolition or alteration of structures in excess of 50 years in age. The project would not alter the contextual nature of the site in a manner which would significantly degrade the historical significance of the existing area. As a result, no impacts to historic resources are anticipated.
- b. The project does not offer any opportunities for rehabilitation or protection of historic resources.

Cumulative Impacts:

Since the project would not result in any substantial change in the historic character of the site, it would not have any cumulatively considerable effect on the region's historic resources.

Mitigation and Residual Impact: No impacts are identified. No mitigations are necessary. Residual impacts are less than significant.

4.11 LAND USE

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Structures and/or land use incompatible with existing land use?				X	
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?				X	
c. The induction of substantial growth or concentration of population?				X	
d. The extension of sewer trunk lines or access roads with capacity to serve new development beyond this proposed project?				X	
e. Loss of existing affordable dwellings through demolition, conversion or removal?				X	
f. Displacement of substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X	
g. Displacement of substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X	
h. The loss of a substantial amount of open space?				X	

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
i. An economic or social effect that would result in a physical change? (i.e. Closure of a freeway ramp results in isolation of an area, businesses located in the vicinity close, neighborhood degenerates, and buildings deteriorate. Or, if construction of new freeway divides an existing community, the construction would be the physical change, but the economic/social effect on the community would be the basis for determining that the physical change would be significant.)				X	
j. Conflicts with adopted airport safety zones?				X	

Existing Setting:

The project site is located approximately in an existing developed rural neighborhood of the San Marcos Pass region. The area is bounded by the Los Padres National Forest. Onsite resources and development are characterized by a rural mountain road with a small bridge along a creek within a riparian corridor.

Impact Discussion:

- a. The proposed project is a bridge replacement, with the same number of traffic lanes and same basic configuration, and is entirely compatible with surrounding land uses
- b. The proposed project is consistent with all applicable plans and policies of the Santa Barbara General Plan.
- c. The proposed project does not involve any new development, and would not result in population growth or spatial reconfiguration of the existing population.
- d. The proposed project does not include the extension of sewer lines or roadways.
- e. The proposed project would not displace any dwellings.
- f. See e.
- g. See e.
- h. No loss of open space would occur as a result of the proposed project.
- i. No social or economic effect would occur that would result in a physical change in the local community. Temporary lane closures on Kinevan Road may occur during construction and the road will be closed at the bridge location but it would not result in isolation of any land uses.
- j. The project site is located approximately 5 miles south-west of the Santa Barbara Airport. The project would not conflict with any airport safety zones.

Cumulative Impacts:

The implementation of the project is not anticipated to result in any substantial change to the site's conformance with environmentally protective policies and standards. Thus, the project would not cause a cumulatively considerable effect on land use.

Mitigation and Residual Impact: No impacts are identified. No mitigations are necessary. Residual impacts are less than significant.

12 NOISE

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Long-term exposure of people to noise levels exceeding County thresholds (e.g. locating noise sensitive uses next to an airport)?				X	
b. Short-term exposure of people to noise levels exceeding County thresholds?		X			
c. Project-generated substantial increase in the ambient noise levels for adjoining areas (either day or night)?		X			

Existing setting:

Noise sensitive receptors in the immediate of the project include rural residences; the closest of these residences are approximately 200 to 250 feet away on each side of the bridge. The project site is approximately 1380 feet from State Highway 154 which is the only ambient noise source in the vicinity. The proposed project site is located outside of 65 dB (A) noise contours for roadways, public facilities, and airport approach and take-off zones. No measurements have been taken of the ambient noise levels at the project location.

Impact Discussion:

- The proposed project involves the replacement of the existing Kinevan Road bridge at the same location and in the same general configuration. The project would not affect traffic volumes or long term noise increases on Kinevan Road.
- Heavy equipment activity would occur at various times at the site during the projected 85 day construction window. Short term construction noise is expected to be below 65dB (A) CNEL for exterior noise exposure at the nearest residences during peak construction due to the distance of the residences and the general topography. Santa Barbara County has not developed any short-term noise thresholds. However, since construction activities within 1600 feet of a residence are considered to generally result in a potentially significant impact, implementation of Mitigation Measure Noise-1 would ensure short term noise impacts are reduced to less than significant levels.
- Any project generated substantial increase in the ambient noise levels for adjoining areas would be mitigated with the implementation of Mitigation Measure Noise-1. No project construction activities will occur at night or on weekends. No pile driving is proposed therefore no project generated substantial increase in the ambient noise level for adjoining areas would occur.

Cumulative Impacts:

The implementation of the project is not anticipated to result in any substantial noise effects. Therefore, the project would not contribute in a cumulatively considerable manner to noise impacts.

Mitigation and Residual Impact: The following mitigation measures would reduce the project's noise effects to a less than significant level:

Noise-1. To minimize potentially significant construction-related noise impacts to adjacent residences the following measure shall be implemented.

- Construction activities involving heavy equipment or heavy-duty truck traffic shall be limited from 7:00 a.m. to 5:00 p.m., Monday through Friday. No construction shall occur on State holidays (e.g., Thanksgiving, Labor Day). Construction equipment maintenance shall be limited to the same hours. Non-noise generating construction activities are not subject to these restrictions.

Plan Requirements: Three signs stating these restrictions shall be provided by the contractor and posted on site. **MONITORING:** The County on site resident engineer (RE) shall ensure compliance with this measure.

With the incorporation of these measures, residual impacts would be less than significant.

4.13 PUBLIC FACILITIES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. A need for new or altered police protection and/or health care services?				X	
b. Student generation exceeding school capacity?				X	
c. Significant amounts of solid waste or breach any national, state, or local standards or thresholds relating to solid waste disposal and generation (including recycling facilities and existing landfill capacity)?				X	
d. A need for new or altered sewer system facilities (sewer lines, lift-stations, etc.)?				X	
e. The construction of new storm water drainage or water quality control facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X	

Impact Discussion:

The proposed project would not result in the increase of new homes within the area. The proposed new bridge would not have a significant impact on existing police protection or health care services. Existing service levels would be maintained by the proposed project. The proposed project would not generate solid waste in excess of County thresholds. The project would not cause the need for new or altered sewer system facilities. No additional drainages or water quality control facilities would be necessary to serve the proposed bridge project. Therefore, the project would have no impact to public facilities.

- The proposed project does not include any new development or any facilities that would require police protection or health care services.
- The project does not include any residential land uses, and would not generate demand for school capacity.
- Only the existing bridge wood deck would be demolished, and the project is not anticipated to exceed the 350 ton County solid waste CEQA threshold for construction and demolition. Wood from the old bridge will be recycled.

- d. The proposed project does not include any residential or commercial development, and would not generate demand for sewage collection or related facilities.
- e. The proposed project would not require the construction of any storm drain or water quality control facilities.

Mitigation and Residual Impact: No impacts are identified. No mitigation is necessary. Residual impacts are less than significant.

4.14 RECREATION

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Conflict with established recreational uses of the area?				X	
b. Conflict with biking, equestrian and hiking trails?				X	
c. Substantial impact on the quality or quantity of existing recreational opportunities (e.g., overuse of an area with constraints on numbers of people, vehicles, animals, etc. which might safely use the area)?				X	

Setting:

Public recreation facilities in the vicinity are located in the Los Padres National Forest Santa Ynez River recreation area approximately 3.5 miles to the north east. East and West Camino Cielo Roads also offer access into the Los Padres National Forest at several roadside locations. Painted Cave State Park lies approximately 2.15 miles to the east on Painted Cave Road.

Impact Discussion:

- a. Project implementation would not limit access or otherwise conflict with existing recreational uses. No adverse impacts would result.
- b. The project site is not located in the immediate vicinity of any trails; use of Kinevan Road would be impeded during bridge construction but residents on each side of the proposed will still have access to their residences. Bicycle riders will have a viable detour along State Highway 154 when the road is closed. Detour routes will be posted with signs throughout construction.
- c. The project does not include residential land uses; therefore, it would not generate demand for recreational facilities or result in associated overuse.

Mitigation and Residual Impact: No mitigation is required. No cumulatively considerable or residual impacts are anticipated.

4.15 TRANSPORTATION/CIRCULATION

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Generation of substantial additional vehicular movement (daily, peak-hour, etc.) in relation to existing traffic load and capacity of the street system?				X	
b. A need for private or public road maintenance, or need for new road(s)?				X	
c. Effects on existing parking facilities, or demand for new parking?				X	
d. Substantial impact upon existing transit systems (e.g. bus service) or alteration of present patterns of circulation or movement of people and/or goods?				X	
e. Alteration to waterborne, rail or air traffic?				X	
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians (including short-term construction and long-term operational)?				X	
g. Inadequate sight distance?				X	
ingress/egress?				X	
general road capacity?				X	
emergency access?				X	
h. Impacts to Congestion Management Plan system?				X	

Setting:

The proposed project is limited to replacement of the Kinevan Road bridge 51C-214 and, as such, would not increase vehicular traffic to or from the site nor would it affect roadways; parking facilities; pedestrian, bicycle, or transit access; or any other type of transportation facility.

The alignment of Kinevan Road approaching the bridge has both a non-standard vertical profile and is configured with a reverse super elevation. The profile is very steep and appears to have a non-standard transition as it approaches the bridge. The reverse super-elevation is transitioning from around 9% to 2% as it crosses over the bridge which is not ideal for safety. The bridge location has a low design speed and a low average daily traffic (ADT) count of 37. The County is proposing to correct the existing super-elevation condition at the bridge and approaches. To correct the existing roadway deficiencies of Kinevan Road would be cost prohibitive and result in excessive impacts to the creek and surrounding oak and riparian woodland.

Impact Discussion:

- Project short-term construction related traffic would not substantially increase additional vehicular movement. In addition Kinevan Road will be closed and local traffic re-routed.
- The proposed project involves roadway improvements and would not result in a need for new roads or maintenance of existing roads.
- Parking facilities do not occur in the project area. Construction equipment and worker vehicles will park in the closed sections of Kinevan Road.
- The proposed project would not create a demand for transit or interfere with the exiting transit system or circulation of people and goods.

- e. The proposed project would not affect waterborne or rail traffic and is not located in either clear zones or approaches of any airport.
- f. Kinevan Road will be closed and local traffic detoured eliminating any potential hazards to motor vehicles, bicyclists or pedestrians.
- g. The proposed project would not affect sight distance.
- h. Kinevan Road will be closed and local traffic detoured. The proposed project would not significantly affect ingress/egress to and from Stage Coach Road and Highway 154.
- i. The proposed project would not affect roadway capacity.
- j. The proposed project would not affect emergency access.
- k. Roadways and intersections in the project area operate at acceptable levels of service and are not subject to Congestion Management Plan requirements.

Mitigation and Residual Impact: No mitigation is required. No cumulatively considerable or residual impacts are anticipated.

4.16 WATER RESOURCES/FLOODING

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Changes in currents, or the course or direction of water movements, in either marine or fresh waters?			X		
b. Changes in percolation rates, drainage patterns or the rate and amount of surface water runoff?			X		
c. Change in the amount of surface water in any water body?			X		
d. Discharge, directly or through a storm drain system, into surface waters (including but not limited to wetlands, riparian areas, ponds, springs, creeks, streams, rivers, lakes, estuaries, tidal areas, bays, ocean, etc) or alteration of surface water quality, including but not limited to temperature, dissolved oxygen, turbidity, or thermal water pollution?		X			
e. Alterations to the course or flow of flood water or need for private or public flood control projects?				X	
f. Exposure of people or property to water related hazards such as flooding (placement of project in 100 year flood plain), accelerated runoff or tsunamis, sea level rise, or seawater intrusion?			X	X	
g. Alteration of the direction or rate of flow of groundwater?				X	
h. Change in the quantity of groundwater, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations or recharge interference?				X	

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
i. Overdraft or over-commitment of any groundwater basin? Or, a significant increase in the existing overdraft or over-commitment of any groundwater basin?				X	
j. The substantial degradation of groundwater quality including saltwater intrusion?				X	
k. Substantial reduction in the amount of water otherwise available for public water supplies?				X	
l. Introduction of storm water pollutants (e.g., oil, grease, pesticides, nutrients, sediments, pathogens, etc.) into groundwater or surface water?			X		

Setting:

Surface waters:

San Jose Creek is located in the Goleta area of coastal Santa Barbara County. The watershed extends from the Santa Ynez Mountains to the Pacific Ocean, encompassing all tributaries to San Jose Creek and traversing approximately 8 miles before draining into the Goleta Slough. The headwaters of San Jose Creek originate at an elevation of 2,760 feet at the coastal side of the Santa Ynez Mountains. The San Jose Creek watershed serves to drain approximately 9.5 miles of urban, suburban, and rural land.

The United States Geologic Survey maintains two stream gauges along San Jose Creek. The uppermost gauge is identified as gauge number 11120500 and is referred to as “San Jose Creek near Goleta”. The lower gauge is identified as gauge number 11120510 and is referred to as San Jose Creek at Goleta. The upper gauge is located northeast of Goleta, near the base of the Santa Ynez Mountains and records runoff from the upper 5.54 miles of the San Jose Creek drainage basin. Continuous historical stream gauge records are available from 1941 to 2001 for the upper gauge and from 1970 to 2000 for the lower gauge.

During the period of record, mean monthly creek flow levels varied from a low of zero during several dry seasons at both stations, to 308 cubic feet per second (cfs) at the upper station and 174 cfs at the lower station during the peak of the rainy season (February 1998). After the rainy season, creek flow decreased considerably, and remained at low levels throughout ensuing summer and fall. Peak flows in a given year at the upper gauge station have varied from a peak of 5.2 cfs during 1951 to a peak of 2,520 cfs during 2001. Peak flows in a given year at the lower gauge station have varied from a peak of 112 cfs during 1987 to a peak of 2,470 cfs during 1998.

San Jose Creek is classified by the California State Regional Water Quality Control Board (RWQCB) as a fully appropriated stream system, which means that all available surface water from San Jose Creek is legally allocated for domestic use, irrigation, or water storage (SWRCB, 2000). According to the RWQCB Basin Plan, designated uses of San Jose Creek water include municipal and domestic supply, agricultural supply, cold fresh water habitat, water fresh water habitat, and spawning reproduction and/or early development. As of November 7, 2002, legal year-round water diversions from San Jose Creek exceeded 6,546 gallons per day (gpd), with an additional 577,501 gpd of seasonally restricted diversions (SWRCB, 2002).

Floodplain:

The project site is depicted on the National Flood Insurance Program Flood Insurance Rate Map Panel 06083C1140F; however, a regulatory floodplain has not been identified for San Jose Creek in the project area.

Groundwater:

Kinevan Road bridge 51C-214 lies outside of the South Coast ground water basins which lie between the Santa Ynez Mountains and the Pacific Ocean. In general these basins are composed of the unconsolidated material that accumulated as a result of the uplift and erosion of the ancestral Santa Ynez mountains.

Impact Discussion:

- a) Proposed new bridge construction would not involve placement of fill or other materials in the creek, or otherwise disturb the San Jose Creek channel. Flow diversion during construction would not be required. Therefore, the project would not affect water movement.
- b) No changes in creek or storm drain locations, dimensions or hydraulic characteristics would occur. The new bridge would be constructed over the existing, and the San Jose Creek channel would not be disturbed. Therefore, no change in percolation rates or surface runoff would occur.
- c) As discussed in a. and b. above, temporary stream diversion would not be required and no change in run-off patterns would occur. Therefore, no change in the amount of surface water present in any water body would occur as a result of the project.
- d) Storm run-off from the project site during construction may cause increased turbidity and siltation, and discharge of hydrocarbons and other pollutants. This impact is considered potentially significant. Any groundwater discharged to San Jose Creek (see h. below) would meet water quality standards, and would not result in significant impacts to surface water quality.
- e) Temporary stream diversion would not be required, and no changes to storm drains would occur. The new bridge would be constructed above the existing bridge; therefore, the new bridge would not impede floodwaters. Overall, no changes in the course or flow of flood waters would occur, and no new flood control facilities would be required.
- f) The existing bridge soffit is within the predicted 100-year peak flow water surface elevation. The new bridge would be constructed slightly above the existing bridge. Therefore, the new bridge would not meet Federal Highway Administration (FHWA) and California Department of Transportation (Caltrans) criterion of passing the 100-year and 50-year design discharge with 2 feet of freeboard to allow passage of drift and debris that could be carried to the site during an extreme storm event. The proposed bridge will have the capacity to pass approximately 910 cfs under the structure. This flow rate corresponds to the 25 year clear water flow under the soffit of the proposed bridge (Drake Haglan & Associates, 2012). Overtopping of the bridge would occur during a 36 year clear flow event and would also overtop the surrounding roadway approaches. The county will receive a design exception to address the situation. The design exception can be granted due to the rural nature of the single lane road with a very low daily traffic volume of 37 vehicles per day passing over the bridge. The new bridge will not increase the existing exposure of persons or property to flooding hazards.
- g) The project site is not located within an identified groundwater basin area. The proposed project would not affect groundwater flow as project-related groundwater pumping would not occur, and recharge from San Jose Creek would not be affected.

- h) Groundwater may be encountered during drilling of holes for bridge abutment piles. A very small amount of this groundwater may be pumped from the hole, clarified and discharged to San Jose Creek. The project does not involve substantial or long-term extraction of groundwater, excavation of aquifers or interference with recharge.
- i) The project would not involve groundwater pumping. Therefore, the proposed project would not contribute to overdraft of any groundwater basin.
- j) The proposed project would not contribute to seawater intrusion.
- k) The project would not require water and would not affect public water supplies.
- l) Storm run-off from Kinevan Road and adjacent land uses likely contributes pollutants to San Jose Creek. Proposed bridge replacement would not affect the type or volume of these pollutants generated, or substantially increase the discharge of these pollutants to San Jose Creek.

Mitigation Measures and Residual Impacts:

Water Quality-1. The project would require a Water Pollution Control Plan (WPCP) be prepared, which would include best management practices to be implemented and a monitoring program. The following Best Management Practices shall be incorporated into the WPCP to minimize potential water quality impacts. Impacts to water quality would be mitigated to a less than significant level with the implementation of these measures.

- a) All ground disturbance shall be limited to the dry season or periods when rainfall is not predicted, to minimize erosion and sediment transport to surface waters;
- b) Disturbed areas shall be stabilized or re-vegetated prior to the start of the rainy season;
- c) Impacts to vegetation within and adjacent to creeks and storm drains shall be minimized. The work area shall be flagged to identify its limits. Vegetation shall not be removed or intentionally damaged beyond these limits.
- d) Construction materials and soil piles shall be placed in designated areas where they could not enter creeks or storm drains due to spillage or erosion.
- e) Waste and debris generated during construction shall be stored in designated waste collection areas and containers away from watercourses, and shall be disposed of regularly.
- f) During construction, washing of concrete trucks, paint, equipment, or similar activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the site. Wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands. Concrete washout area shall be isolated from the creek, wash water and waste shall be removed from project site. The location of the washout area shall be clearly noted at the construction site with signs.
- g) All fueling of heavy equipment shall occur in a designated area removed from San Jose Creek and other drainages, such that any spillage would not enter surface waters. The designated refueling area shall include a drain pan or drop cloth and absorbent materials to clean up spills.
- h) Vehicles and equipment shall be maintained properly to prevent leakage of hydrocarbons and coolant, and shall be examined for leaks on a daily basis. All

maintenance shall occur in a designated offsite area. The designated area shall include a drain pan or drop cloth and absorbent materials to clean up spills.

- i) Any accidental spill of hydrocarbons or coolant that may occur on the construction site shall be cleaned immediately. Absorbent materials shall be maintained on the construction site for this purpose.

Plan Requirements/Timing: These measures shall be included in the project specifications and WPCP. **MONITORING:** The County resident engineer (RE) shall ensure the measures are fully implemented.

Mitigation measures are provided in letter sequence above.

With the incorporation of these measures, residual impacts of construction-related water quality impacts will be reduced to a level of less than significant.

5.0 INFORMATION SOURCES

5.1 County Departments Consulted

Police, Fire, Public Works, Flood Control, Parks, Environmental Health, Special Districts, Regional Programs, Other : _____

5.2 Comprehensive Plan

<u> X </u>	Seismic Safety/Safety Element	<u> X </u>	Conservation Element
<u> X </u>	Open Space Element	<u> X </u>	Noise Element
<u> </u>	Coastal Plan and Maps	<u> X </u>	Circulation Element
<u> </u>	ERME	<u> </u>	Agricultural Element

5.3 Other Sources

<u> X </u>	Field work	<u> </u>	Ag Preserve maps
<u> </u>	Calculations	<u> X </u>	Flood Control maps
<u> X </u>	Project plans	<u> X </u>	Other technical references
<u> </u>	Traffic studies		(reports, survey, etc.)
<u> </u>	Records	<u> </u>	Planning files, maps, reports
<u> </u>	Grading plans	<u> X </u>	Zoning maps
<u> </u>	Elevation, architectural renderings	<u> X </u>	Soils maps/reports
<u> X </u>	Published geological map/reports	<u> X </u>	Plant maps
<u> X </u>	Topographical maps	<u> X </u>	Archaeological maps and reports
		<u> X </u>	Other
		<u> </u>	FEMA Floodplain maps
		<u> </u>	

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6.0 PROJECT SPECIFIC (*short- and long-term*) AND CUMULATIVE IMPACT SUMMARY

6.1 Significant Unavoidable Impacts

None Identified.

6.2 Significant but Mitigable Impacts.

Biological Resources. The project may result in:

- Critical root zone impacts one coast live oak tree protected under the County Grading Ordinance and several other native riparian trees protected by CDF&W.
- Construction related impacts to habitat of Species of Special Concern.

Cultural Resources. The project may result in:

- Potential disturbance of unanticipated buried cultural resources in the area.

Fire Protection. The project may result in:

- Increased fire hazard to adjacent rural residential development associated with construction activities in a high fire area with potentially flammable vegetation.

Noise. The project may result in:

- Exposure of adjacent residences to temporary noise generated by heavy equipment and heavy duty truck traffic.

Water Resource/Flooding. The project may result in:

- Temporary degradation of surface water quality associated with discharge of storm water from the project construction area.

6.3 Cumulative Impacts

Cumulative impacts are defined as two or more individual effects which, when considered together are considerable, or which compound or increase other environmental impacts. Under Section 15064 of the State CEQA Guidelines, the lead agency (Santa Barbara County Public Works Department) must identify cumulative impacts, determine their significance and determine if the effects of the project are cumulatively considerable.

6.3.1 Air Quality

Other land development projects would generate both short-term construction emissions and long-term vehicle emissions. The proposed project would not contribute to cumulative long term vehicle emissions, but may contribute to cumulative construction emissions, should construction of these projects occur at the same time as the proposed project. However, construction emissions of both the proposed project and other projects would be mitigated by standard measures required by the Santa Barbara County APCD. Implementation of these measures is considered to prevent significant project-specific and cumulative air quality impacts from construction. Therefore, the incremental air quality impact associated with project construction would not be cumulatively considerable.

6.3.2 Water Resources

Most other projects would require potable water service and may affect groundwater supplies. The proposed project would not require a water supply and would not contribute to this impact. Cumulative development would increase pollutant concentrations in storm run-off and may adversely affect surface water quality. During the construction period, the proposed project may contribute to cumulative surface water quality impacts. However, mitigation measures are provided to avoid and minimize impacts to surface water quality. Similar to the proposed project, some of the cumulative projects are located near drainages and inadvertent spills of fuel or lubricants could occur and percolate into groundwater supplies. The proposed project would contribute to this cumulative impact; however, mitigation measures are provided to avoid and minimize impacts to groundwater quality. The project's contribution to groundwater impacts would not be considerable.

6.3.3 Biological Resources

Protected Trees.

Coast live oak trees are common in the project area, and other projects may result in removal of these trees. Therefore, the proposed project would contribute to a cumulative impact to this species.

Southern California Steelhead

There is no suitable steelhead habitat in the project area due to the creek maintaining water levels that are too low to accommodate fish for most of the year. This species is not expected to occur in the project area due to upgradient barriers to fish passage. Although steelhead critical habitat occurs in San Jose Creek, it is substantially downgradient of the project area. The proposed project is not anticipated to substantially contribute to a cumulative impact to the Southern California Steelhead.

Least Bell's vireo and Southwestern willow flycatcher – migratory habitat.

Critical habitat for both of these species does not occur in the project area and no habitat for both of these species occurs in the project impact area. Because no take of individuals and little or no impacts to migratory habitat for this species are expected the proposed project is not anticipated to substantially contribute to a cumulative impact the Least Bell's vireo and Southwestern willow flycatcher.

California Red-Legged frog.

This species occurs in other drainages in the region, including the Santa Ynez River. Other proposed or recently approved projects may result in habitat loss and/or indirect impacts (such as water quality degradation) to California red-legged frog. The proposed project is not anticipated to substantially contribute to cumulative impacts to this species.

Foothill yellow-legged frog.

This species appears to be extirpated from the region has not been reported in about 80 years, even though habitat exists in some reaches of streams such as San Jose Creek. The proposed project is not anticipated to substantially contribute to a cumulative impact to the foothill yellow-legged frog.

Southwestern Pond Turtle, Two-Striped Garter Snake and South Coast newt.

These species occur in several drainages in the region, including the Santa Ynez River, and it is likely that other projects may adversely affect suitable habitat. However, the proposed project is not anticipated

to substantially contribute to a cumulative impact to southwestern pond turtle and two-striped garter snake or the South Coast newt.

Western mastiff bat and Big free-tailed bat – foraging habitat.

Both of these bat species occur in the region and forage in the oak woodland and riparian habitat along Kinevan Road. The proposed project is not anticipated to substantially contribute to a cumulative impact to the foraging habitat of the Western mastiff bat and Big free-tail bat.

Cooper's Hawk, Yellow Warbler and Yellow-breasted Chat.

These species occur in other riparian corridors in the region, and other projects may result in loss of suitable habitat. However, project-related loss of habitat would be minimal and would not substantially contribute to a cumulative impact to Cooper's hawk, yellow warbler and yellow-breasted chat.

6.3.4 Cultural Resources

Most cumulative projects summarized in Section 3.2 are located in previously developed areas and are unlikely to adversely affect intact archeological resources. However, some projects are located in potentially sensitive areas that may result in disturbance of known or unknown cultural resources. The proposed project may impact unknown cultural resources along San Jose Creek under Kinevan Road, and could contribute to a cumulative impact. However, mitigation measures are provided to avoid and minimize potential impacts to archeological resources. The project's contribution to cumulative cultural resources impacts would not be considerable.

6.3.5 Noise

Other projects would generate both short-term construction noise and long-term traffic noise. The proposed project would not contribute to cumulative long-term traffic noise, but may contribute to cumulative construction noise. However, the proposed project is not located in close proximity to other projects and/or would not be implemented at the same time, and would not have a considerable contribution to cumulative impacts at noise sensitive receptors affected by these projects.

7.0 MANDATORY FINDINGS OF SIGNIFICANCE

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
1. Does the project have the potential to substantially 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, contribute significantly to greenhouse gas emissions or significantly increase energy consumption, or eliminate important examples of the major periods of California history or prehistory?		X			
2. Does the project have the potential to achieve short-term to the disadvantage of long-term environmental goals?				X	
3. 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.)			X		
4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X			
5. Is there disagreement supported by facts, reasonable assumptions predicated upon facts and/or expert opinion supported by facts over the significance of an effect which would warrant investigation in an EIR ?				X	

Impact Discussion:

1. The proposed project does not have the potential to substantially degrade the quality of the environment. Implementation of the mitigation measures Bio-1 through Bio-5 will ensure there is no substantial reduction in the habitat of a fish or wildlife species, will not cause a fish or wildlife population to drop below self-sustaining levels or threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal. The proposed project will not contribute significantly to greenhouse gas emissions or significantly increase energy consumption, or eliminate important examples of the major periods of California history or prehistory.
2. The proposed project does not have the potential to achieve short-term to the disadvantage of long-term environmental goals. The proposed project is designed to achieve the goal of the Public Works Department to replace all structurally deficient bridges with the County owned roadway system.
3. The proposed project does have impacts that are individually limited to the project location, but are cumulatively considerable. There are no proposed bridge projects in the area or other projects in the

vicinity that may create cumulative impacts which when considered together would be considerable, or which compound or increase other environmental impacts.

4. The proposed project will not create environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. Construction equipment will generate short term noise. Construction noise impacts will be minimized with the implementation of mitigation measure Noise-1.
5. Is there no disagreement supported by facts or any reasonable assumptions predicated upon facts and/or expert opinion supported by facts over the significance of an effect which would warrant investigation in an EIR.

8.0 PROJECT ALTERNATIVES

No significant, adverse unmitigable impacts were identified; therefore, no project alternatives were considered

9.0 INITIAL REVIEW OF PROJECT CONSISTENCY WITH APPLICABLE SUBDIVISION, ZONING AND COMPREHENSIVE PLAN REQUIREMENTS

An analysis of the consistency of the proposed project with applicable policies of the Comprehensive Plan is provided below. The proposed project, with incorporated mitigation measures is expected to be consistent with all land use and development policies.

HILLSIDE AND WATERSHED PROTECTION POLICIES

1. Plans for development shall minimize cut and fill operations. Plans requiring excessive cutting and filling may be denied if it is determined that the development could be carried out with less alteration of the natural terrain.

Consistency: The proposed new bridge structure minimizes cut and fill by retaining the old abutments and wing walls in the creek bed. The construction of the new bridge limits alternation of the natural terrain.

2. All developments shall be designed to fit the site topography, soils, geology, hydrology, and any other existing conditions and be oriented so that grading and other site preparation is kept to an absolute minimum. Natural features, landforms, and native vegetation, such as trees, shall be preserved to the maximum extent feasible. Areas of the site which are not suited to development because of known soil, geologic, flood, erosion or other hazards shall remain in open space.

Consistency: The proposed new bridge structure fits to the site topography and limits grading and impacts to the surrounding natural features.

7. Degradation of the water quality of groundwater basins, nearby streams, or wetlands shall not result from development of the site. Pollutants, such as chemicals, fuels, lubricants, raw sewage,

harmful waste, shall not be discharged into or alongside coastal streams or wetlands either during or after construction.

Consistency: Mitigation measures for the proposed project protect the nearby stream from pollutants and prohibit discharge of fuels, lubricants and cement washout into San Jose Creek.

STREAMS AND CREEKS POLICIES

1. All permitted construction and grading within stream corridors shall be carried out in such a manner as to minimize impacts from increased runoff, sedimentation, biochemical degradation, or thermal pollution.

Consistency: Mitigation measures for the proposed project protect the nearby stream from sedimentation and erosion into San Jose Creek.

FLOOD HAZARD AREA POLICIES

1. All development, including construction, excavation, and grading, except for flood control projects and non-structural agricultural uses, shall be prohibited in the floodway unless off-setting improvements in accordance with federal regulations are provided. If the proposed development falls within the floodway fringe, development may be permitted, provided creek setback requirements are met and finished floor elevations are two feet above the projected 100-year flood elevation, and the other requirements regarding materials and utilities as specified in the Flood Plain Management Ordinance are in compliance.

Consistency: The new bridge is proposed to be constructed within a portion the floodway as are most bridges supporting public transportation facilities. The proposed bridge will be within the 100-year flood plain elevation of San Jose Creek. The County will receive a design exception to achieve policy consistency. The design exception can be granted due to the rural nature of the single lane road with a very low daily traffic volume of 37 vehicles per day passing over the bridge.

HISTORICAL AND ARCHAEOLOGICAL SITES POLICIES

1. All available measures, including purchase, tax relief, purchase of development rights, etc., shall be explored to avoid development on significant historic, prehistoric, archaeological, and other classes of cultural sites.

Consistency: The proposed bridge location was thoroughly studied and documented with a Historic Property Survey Report and an Archaeology Survey report that determined no archaeological or historic resources would be impacted. Mitigation measures for the proposed project are in place in the unlikely event that cultural materials are found during excavation of the roadway.

5. Native Americans shall be consulted when development proposals are submitted which impact significant archaeological or cultural sites.

Consistency: Native Americans were notified and consulted during the drafting of the Historic Property Survey Report and an Archaeology Survey Reports.

10.0 RECOMMENDATION BY P&D STAFF

On the basis of the Initial Study, the staff of Planning and Development:

- ☐ Finds that the proposed project WILL NOT have a significant effect on the environment and, therefore, recommends that a Negative Declaration (ND) be prepared.
- ☒ Finds that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures incorporated into the REVISED PROJECT DESCRIPTION would successfully mitigate the potentially significant impacts. Staff recommends the preparation of an ND. The ND finding is based on the assumption that mitigation measures will be acceptable to the applicant; if not acceptable a revised Initial Study finding for the preparation of an EIR may result.
- ☐ Finds that the proposed project MAY have a significant effect on the environment, and recommends that an EIR be prepared.
- ☐ Finds that from existing documents (previous EIRs, etc.) that a subsequent document (containing updated and site-specific information, etc.) pursuant to CEQA Sections 15162/15163/15164 should be prepared.

Potentially significant unavoidable adverse impact areas:

☐ With Public Hearing ☒ Without Public Hearing

PREVIOUS DOCUMENT: N/A

PROJECT EVALUATOR: Morgan M. Jones

DATE: March 15, 2013

11.0 DETERMINATION BY ENVIRONMENTAL HEARING OFFICER

- ☒ I agree with staff conclusions. Preparation of the appropriate document may proceed.
- ☐ I DO NOT agree with staff conclusions. The following actions will be taken:
- ☐ I require consultation and further information prior to making my determination.

SIGNATURE: _____

INITIAL STUDY DATE: _____

SIGNATURE: [Signature]

NEGATIVE DECLARATION DATE: 7/18/13

SIGNATURE: _____

REVISION DATE: _____

SIGNATURE: [Signature]

FINAL NEGATIVE DECLARATION DATE: 5/1/13

12.0 Appendices

12.1 Appendices A list of all plant species observed during the surveys.

Common Name	Scientific Name	Habit ¹	Habitat ²	I/N ³
Unidentified shrub		S	H	I
Big-leaf maple	<i>Acer macrophyllum</i>	T	Ri	N
White alder	<i>Alnus rhombifolia</i>	T	Ri	N
Madrone	<i>Arbutus menziesii</i>	T	H, OW	N
Alum root	<i>Arecaceae (cf. Arum)</i>	P	Ru	I
Coyote brush	<i>Baccharis pilularis</i>	S	OW	N
Beggar ticks	<i>Bidens pilosa</i>	A	Ru	I
Incense cedar	<i>Calocedrus decurrens</i>	T	H	Calif.
Italian thistle	<i>Carduus pycnocephalus</i>	A	Ru	I
Cedar	<i>Cedrus spp.</i>	T	H	I
California thistle	<i>Cirsium cf. californica</i>	A	Ru	N
Orchard grass	<i>Dactylis glomerata</i>	A	Ru	N
Foxglove	<i>Digitalis purpurea</i>	P	Ru	I
Coastal wood fern	<i>Dryopteris arguta</i>	P	Ri	N
California fuchsia	<i>Epilobium canum</i>	P	OW	N
Green everlasting	<i>Gnaphalium californicum</i>	A	OW	N
Algerian ivy	<i>Hedera canariensis</i>	V	H, OW	I
Summer mustard	<i>Hirschfeldia incana</i>	P	Ru	I
Black walnut	<i>Juglans californica</i>	T	Ri	N
Prickly lettuce	<i>Lactuca serriola</i>	A	Ru	I
Wild rye	<i>Leymus triticoides</i>	P	Ru	N
California honeysuckle	<i>Lonicera hispidula vacillans</i>	S	OW, Ri	N
Apple	<i>Malus domestica</i>	T	F	I
White sweet-clover	<i>Melilotus albus</i>	A	Ru	I
Sticky monkeyflower	<i>Mimulus aurantiacus</i>	S	OW	N
Split-leafed philodendron	<i>Monstera deliciosa</i>	P	OW, Ri	I
Rock phacelia	<i>Phacelia imbricata</i>	P	OW	N
Smilo grass	<i>Piptatherum mileaceum</i>	P	OW, Ri, Ru	I
English plantain	<i>Plantago lanceolata</i>	P	Ru	N
Cherry plum	<i>Prunus cf. cerasifera</i>	T	H	I
Bracken	<i>Pteridium aquilinum</i>	P	OW	N
Coast live oak	<i>Quercus agrifolia</i>	T	OW	N
Basket bush	<i>Rhus trilobata</i>	S	OW	N
Fuchsia-flowered gooseberry	<i>Ribes speciosum</i>	S	OW	N
Himalaya blackberry	<i>Rubus cf. discolor</i>	V	H, Ri	I
California blackberry	<i>Rubus ursinus</i>	V	Ri	N
Curly dock	<i>Rumex crispus</i>	P	Ri	I
White sage	<i>Salvia apiana</i>	S	OW	N
Hummingbird sage	<i>Salvia spathacea</i>	P	OW	N
Panicled rush	<i>Scirpus microcephala</i>	P	Ri	N
Sow thistle	<i>Sonchus oleraceus</i>	A	Ru	I
Globe mallow	<i>Sphaeralcea malvaefolia</i>	P	OW	N
Knotted hedge parsley	<i>Torilis nodosa</i>	A	OW, Ru	I
Poison oak	<i>Toxicodendron diversilobum</i>	V	OW, Ri	N

Common Name	Scientific Name	Habit ¹	Habitat ²	I/N ³
California bay	<i>Umbellularia californica</i>	T	OW, Ri	N
Giant creek nettle	<i>Urtica dioica</i> ssp. <i>holosericea</i>	P	Ri	N
Periwinkle	<i>Vinca major</i>	V	OW, Ri	I
Grape	<i>Vitis cf. vinifera</i>	V	OW, Ri	I

¹ **A** = Annual
P = Perennial
S = Shrub
T = Tree
V = Vine

² **H** = Historic Landscape
OW = Coast Live Oak Woodland
Ri = Riparian
Ru = Ruderal

³ **I** = Introduced species
N = Native species
Calif. = native to California, but not to the BSA

12.2 Appendices B List of all wildlife species observed during surveys

Common Name	Scientific Name	Comments
Northern Pacific treefrog	<i>Pseudacris regilla</i>	Late-stage larvae in pools
Western fence lizard	<i>Sceloporus occidentalis</i>	
Turkey vulture	<i>Cathartes aura</i>	Soaring overhead
Red-tailed hawk	<i>Buteo jamaicensis</i>	Flying overhead
Cooper's hawk	<i>Accipiter cooperii</i>	Flying overhead, possible inactive nest platform in BSA
White-throated swift	<i>Aeronautes saxatalis</i>	
Anna's hummingbird	<i>Calypte anna</i>	
Nuttall's woodpecker	<i>Picoides nuttallii</i>	
Hairy woodpecker	<i>Picoides villosus</i>	
Northern flicker	<i>Colaptes auratus</i>	
Black phoebe	<i>Sayornis nigricans</i>	Inactive nests under bridge
Pacific-slope flycatcher	<i>Empidonax difficilis</i>	
Cassin's vireo	<i>Vireo cassinii</i>	
Warbling vireo	<i>Vireo gilvus</i>	
Hutton's vireo	<i>Vireo huttonii</i>	
Steller's jay	<i>Cyanocitta stelleri</i>	
Western scrub-jay	<i>Aphelocoma californicus</i>	
American crow	<i>Corvus brachyrhynchos</i>	
Oak titmouse	<i>Baeolophus inornatus</i>	
Bushtit	<i>Psaltiriparus minimus</i>	
House wren	<i>Troglodytes aedon</i>	
Wrentit	<i>Chamaea fasciata</i>	
Yellow warbler	<i>Setophaga petechia</i>	
Orange-crowned warbler	<i>Oreothlypis celata</i>	

Spotted towhee	<i>Pipilo maculatus</i>	
Dark-eyed junco	<i>Junco hyemalis</i>	
Purple finch	<i>Carpodacus purpureus</i>	
Lesser goldfinch	<i>Carduelis psaltria</i>	
Botta's pocket gopher	<i>Thomomys bottae</i>	Burrows
Brush rabbit	<i>Sylvilagus bachmani</i>	
Coyote	<i>Canis latrans</i>	Scat, tracks
Mule deer	<i>Odocoileus hemionus</i>	

12.3 Appendices C 65% Preliminary Construction Plans

COUNTY OF SANTA BARBARA
STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

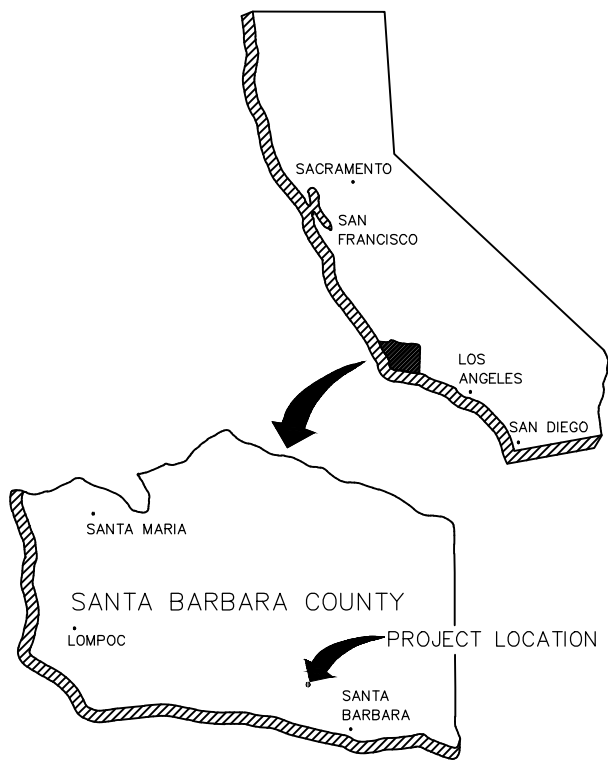
PLANS FOR THE CONSTRUCTION OF

KINEVAN ROAD BRIDGE NO. 51C-0372 OVER SAN JOSE CREEK

FEDERAL PROJECT NO. BRLO-5951(138)
COUNTY PROJECT NO. 862328

TO BE SUPPLEMENTED BY THE STATE OF CALIFORNIA DEPARTMENT OF
TRANSPORTATION STANDARD PLANS, 2010 EDITION (UNLESS OTHERWISE INDICATED)

95% PLANS - NOT FOR CONSTRUCTION



DIALERT

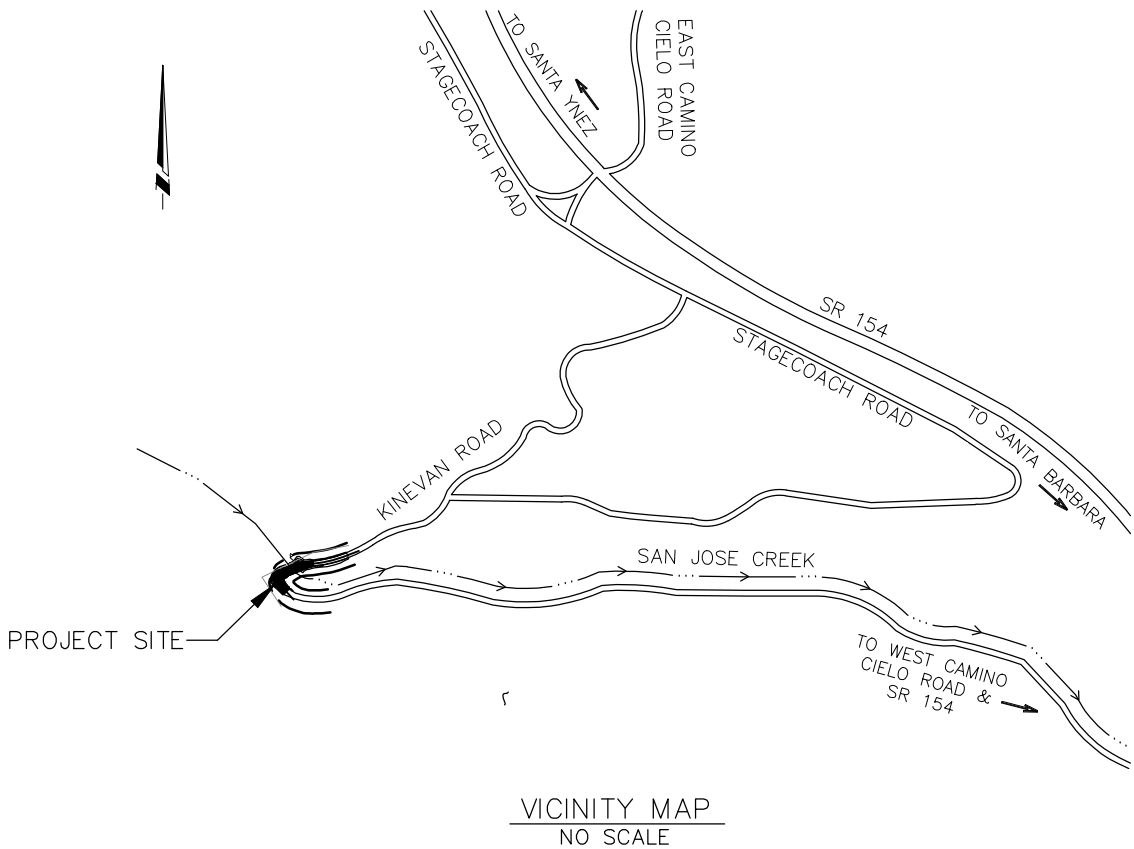
DIAL TOLL FREE
1-800-422-4133

AT LEAST TWO DAYS
BEFORE YOU DIG

UNDERGROUND SERVICE ALERT
OF SOUTHERN CALIFORNIA

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL CALL
"UNDERGROUND SERVICE ALERT" (USA)
AT 800-227-2600 AT LEAST 2 WORKING DAYS
PRIOR TO PERFORMING ANY EXCAVATION



APPROVED — CHAIRMAN, BOARD OF SUPERVISORS _____ DATE _____

APPROVED — DIRECTOR OF PUBLIC WORKS _____ DATE _____

APPROVAL RECOMMENDED — ENGINEERING SECTION MANAGER _____ DATE _____

INDEX TO SHEETS

SHEET NO.	DWG. NO.	TITLE
1	TS-1	TITLE SHEET
2	X-1	TYPICAL CROSS SECTION
3	PC-1	PROJECT CONTROL PLAN
4-5	L-1, L-2	LAYOUT
6	P-1	PROFILE
7	SE-1	SUPER ELEVATION DIAGRAM
8-9	CD-1, CD-2	CONSTRUCTION DETAILS
10-11	CG-1, CG-2	CONTOUR GRADING
12	WPC-1	WATER POLLUTION CONTROL PLAN
13	EC-1	EROSION CONTROL PLAN
14	CS-1	CONSTRUCTION AREA SIGNS
15	SC-1	STAGE CONSTRUCTION — STAGE 1
16	SC-2A	STAGE CONSTRUCTION — STAGE 2A
17	SC-2B	STAGE CONSTRUCTION — STAGE 2B
18	ST-1	GENERAL PLAN
19	ST-2	DECK CONTOURS
20	ST-3	FOUNDATION PLAN
21	ST-4	BRIDGE REMOVAL DETAILS
22	ST-5	ABUTMENT 1 LAYOUT
23	ST-6	ABUTMENT 2 LAYOUT
24-25	ST-7, ST-8	ABUTMENT DETAILS
26	ST-9	TYPICAL SECTION
27	ST-10	PRECAST SLAB LAYOUT
28-29	ST-11, ST-12	PRECAST SLAB DETAILS
30-31	ST-13, ST-14	STEEL TUBE RAIL DETAILS
32-35	ST-15 TO ST-18	LOG OF TEST BORINGS

TITLE SHEET
TS-1

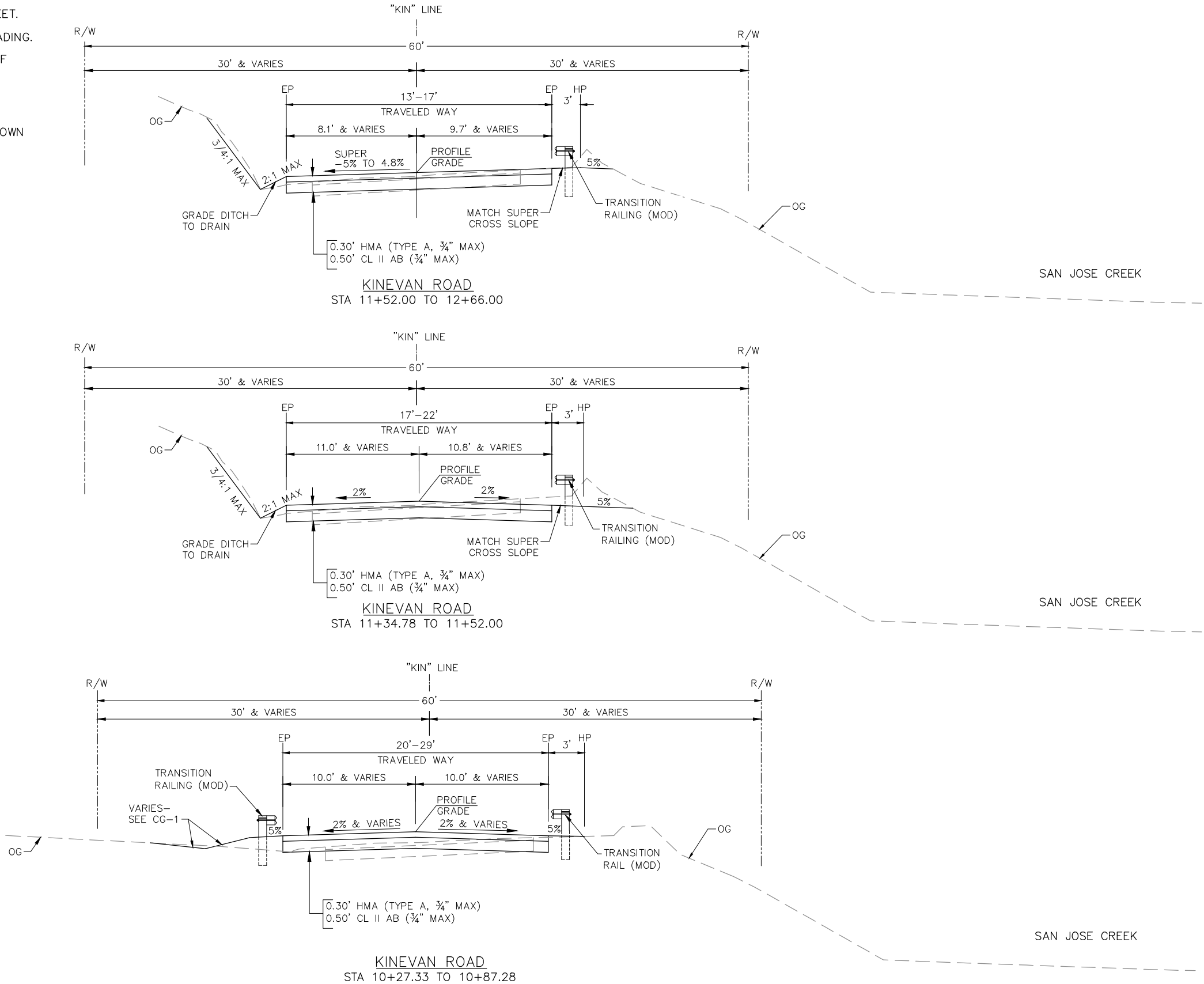
CONSTRUCTION STARTED:		PROJECT ENGINEER:	KEVIN ROSS No. C49652 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA	DESIGN BY:	CHECKED BY:	SCALE	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET NO.		
CONSTRUCTION COMPLETED:		PRELIMINARY		S. JONES	D. MELIS	NO SCALE	862328		1 OF 35		
RECORD DRAWING APPROVED BY:		DATE		DRAWN BY:	CONSTRUCTABILITY REVIEW BY:				FILE NO.		
SURVEY CHECKED BY:				S. JONES	*				*		
FOR REDUCED PLANS ORIGINAL SCALE IN INCHES						0 1 2 3		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	
								12/15/12			

KINEVAN ROAD BRIDGE NO. 51C-0372 OVER SAN JOSE CREEK
FEDERAL PROJECT NO. BRLO-5951(138) COUNTY PROJECT NO. 862328

COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

NOTES

1. FOR ROADWAY CROSS SLOPES, SEE "SUPERELEVATION DIAGRAM" SHEET.
2. REFER TO CONTOUR GRADING SHEETS FOR DITCH AND CONFORM GRADING.
3. REFER TO LAYOUT SHEET AND CONSTRUCTION DETAILS FOR LIMITS OF TRANSITION RAILING (MOD).
4. TRAFFIC INDEX = 5, "R" VALUE = 51, DESIGN SPEED < 10MPH
5. EXISTING STRUCTURAL SECTION: 0.1'± AC, AB SECTION DEPTH UNKNOWN



TYPICAL CROSS SECTION
X-1

95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

CONSTRUCTION STARTED:		PROJECT ENGINEER:		COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DESIGN BY:	CHECKED BY:	SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET NO.
CONSTRUCTION COMPLETED:					S. JONES	D. MELIS	NTS	862328		2 OF 35
RECORD DRAWING APPROVED BY:		DATE			S. JONES	* CONSTRUCTABILITY REVIEW BY:				FILE NO.
								REVISION DATES (PRELIMINARY STAGE ONLY)		
FOR REDUCED PLANS ORIGINAL SCALE IN INCHES								DISREGARD PRINTS BEARING EARLIER REVISION DATES		

SURVEYOR'S NOTES:
HORIZONTAL POSITIONS WERE DERIVED FROM GPS OBSERVATION HOLDING CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS), COPR, ORES AND OZST BY HOLDING THE CALIFORNIA COORDINATE SYSTEM 1983 (CCS83) ZONE 5, 2007.0 EPOCH PUBLISHED CALIFORNIA SPATIAL REFERENCE CENTER (CSRC) VALUES.

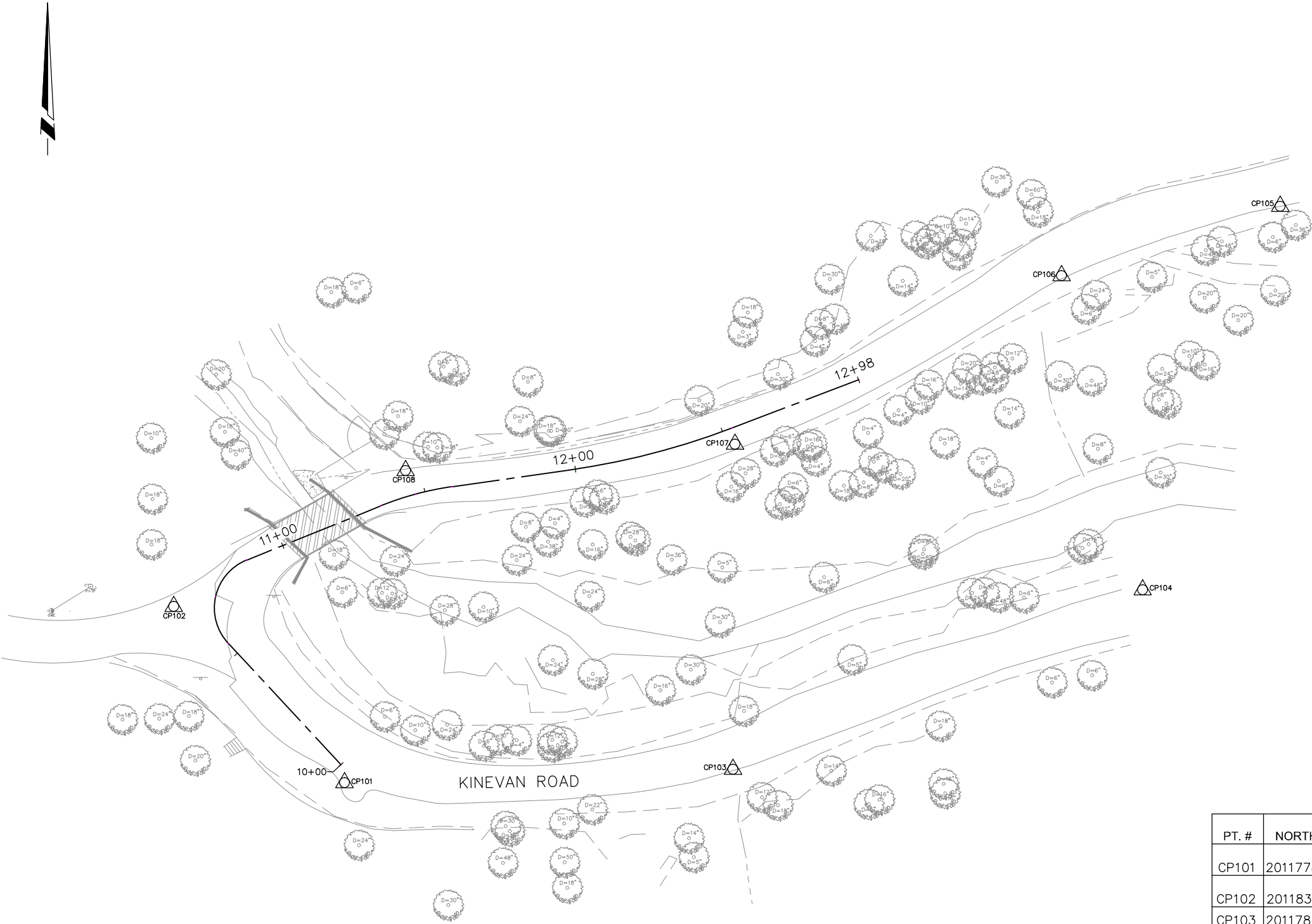
ELEVATIONS (ORTHOMETRIC HEIGHTS) WERE DERIVED BY GPS OBSERVATION AND CONVERTED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88) USING THE NATIONAL GEODETIC SURVEY'S PROGRAM GEOID09 HOLDING CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS) COPR, ORES AND OZST BY HOLDING THE PUBLISHED CSRC ELIPSOID HEIGHTS.

ALL COORDINATE VALUES SHOWN ARE GRID VALUES. ALL DISTANCES ARE BASED ON THE U.S. SURVEY FOOT
(ONE SURVEY FOOT = 1200/3937 METERS).

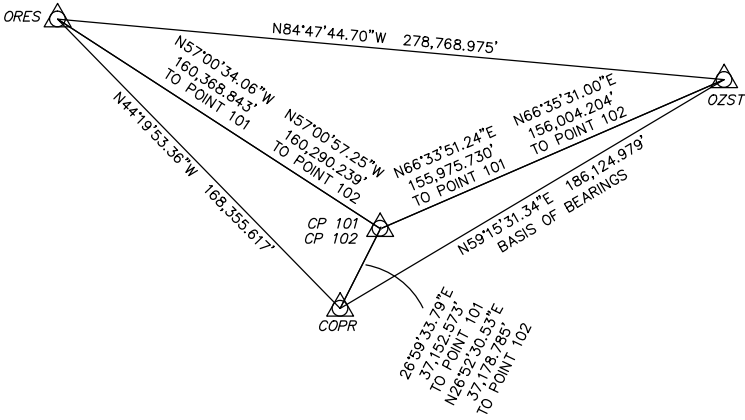
BASIS OF BEARINGS:
THE BASIS OF BEARINGS IS BETWEEN CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS) COPR AND OZST BY HOLDING THE CALIFORNIA COORDINATE SYSTEM 1983 (CCS83) ZONE 5, 2007.0 EPOCH PUBLISHED CALIFORNIA SPATIAL REFERENCE CENTER (CSRC) VALUES, CALCULATED AND MEASURED AS N59°15'31.34"E 186,124.979'.

BOUNDARY NOTE:
NO RIGHT-OF-WAY BOUNDARY LINES ARE SHOWN. FOR RIGHT OF WAY INFORMATION, SEE RECORDS AT COUNTY OFFICE.

NOTE:
FOR COMPLETE PROJECT CONTROL AND MONUMENTATION DATA, SEE THE SURVEY RECORDS ON FILE IN THE SURVEYOR DIVISION AT THE COUNTY OFFICE.



BASIS OF BEARINGS



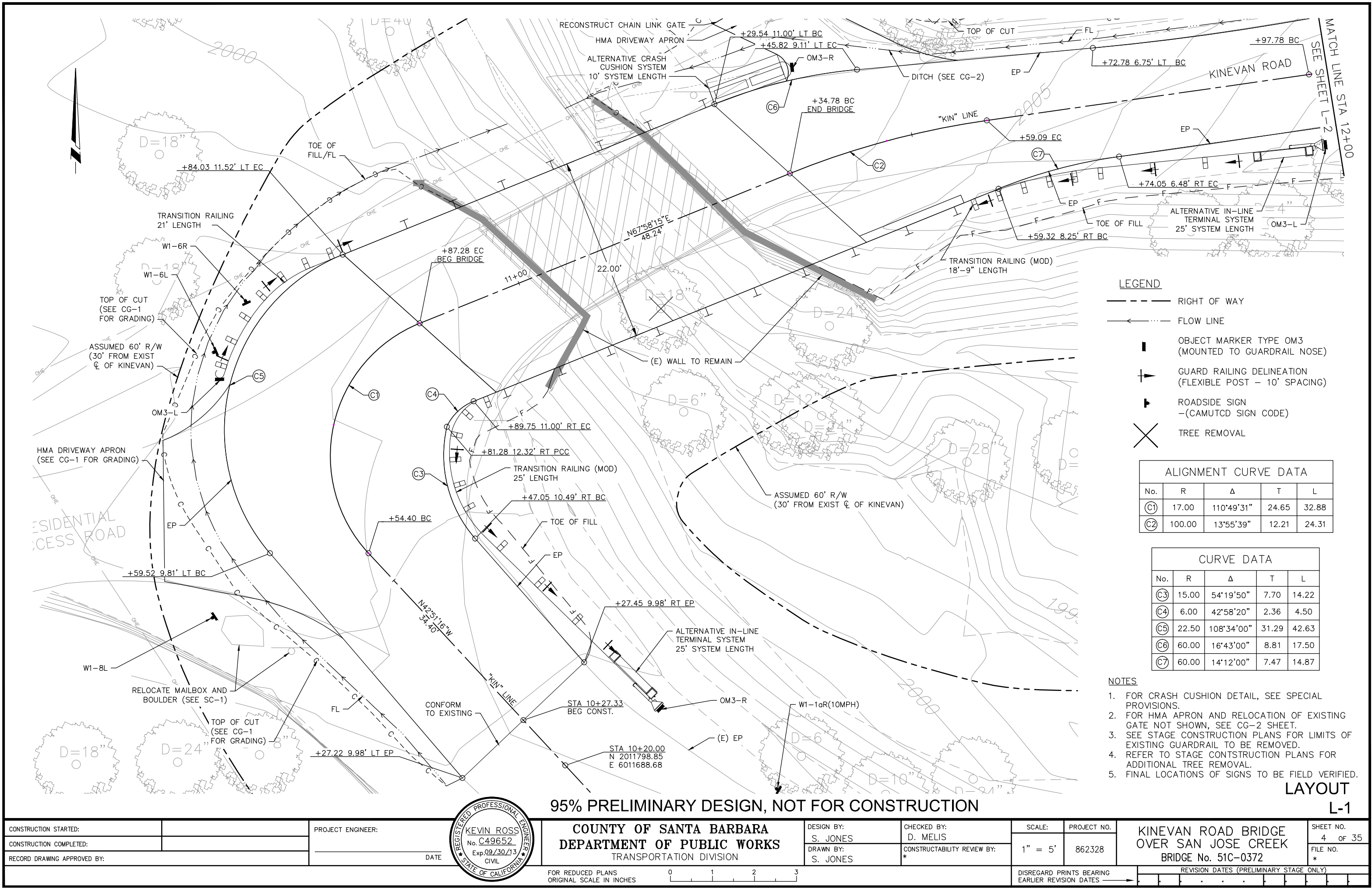
CONTROL FOR DESIGN AND CONSTRUCTION

PT. #	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP101	2011778.243	6011703.448	2004.76	SET 1" IRON PIPE W/PLASTIC PLUG "HZ CONTROL"
CP102	2011836.157	6011647.328	2002.56	SET 1" IRON PIPE W/PLASTIC PLUG "HZ CONTROL"
CP103	2011782.620	6011831.148	1999.40	SET MAG NAIL
CP104	2011841.663	6011965.765	1990.39	SET MAG NAIL
CP105	2011967.711	6012010.979	2029.37	SET MAG NAIL
CP106	2011944.894	6011939.141	2022.15	SET MAG NAIL
CP107	2011889.490	6011831.804	2012.59	SET MAG NAIL
CP108	2011880.809	6011723.538	2003.71	SET MAG NAIL

95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

PROJECT CONTROL PLAN
PC-1

CONSTRUCTION STARTED:		PROJECT ENGINEER:	REGISTERED PROFESSIONAL ENGINEER KEVIN ROSS No. C49652 Exp. 09/30/13 CIVIL STATE OF CALIFORNIA	COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DESIGN BY:	CHECKED BY:	SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET NO.		
CONSTRUCTION COMPLETED:					S. JONES	D. MELIS	1" = 20'	862328		3 OF 35		
RECORD DRAWING APPROVED BY:		DATE			DRAWN BY:	CONSTRUCTABILITY REVIEW BY:				FILE NO.		
					FOR REDUCED PLANS ORIGINAL SCALE IN INCHES	0 1 2 3		DISREGARD PRINTS BEARING EARLIER REVISION DATES			REVISION DATES (PRELIMINARY STAGE ONLY)	



LEGEND

- RIGHT OF WAY
- FLOW LINE
- OBJECT MARKER TYPE OM3 (MOUNTED TO GUARDRAIL NOSE)
- GUARD RAILING DELINEATION (FLEXIBLE POST - 10' SPACING)
- ROADSIDE SIGN (CAMUTCD SIGN CODE)
- TREE REMOVAL

ALIGNMENT CURVE DATA				
No.	R	Δ	T	L
C1	17.00	110°49'31"	24.65	32.88
C2	100.00	13°55'39"	12.21	24.31

CURVE DATA				
No.	R	Δ	T	L
C3	15.00	54°19'50"	7.70	14.22
C4	6.00	42°58'20"	2.36	4.50
C5	22.50	108°34'00"	31.29	42.63
C6	60.00	16°43'00"	8.81	17.50
C7	60.00	14°12'00"	7.47	14.87

- NOTES
- FOR CRASH CUSHION DETAIL, SEE SPECIAL PROVISIONS.
 - FOR HMA APRON AND RELOCATION OF EXISTING GATE NOT SHOWN, SEE CG-2 SHEET.
 - SEE STAGE CONSTRUCTION PLANS FOR LIMITS OF EXISTING GUARDRAIL TO BE REMOVED.
 - REFER TO STAGE CONSTRUCTION PLANS FOR ADDITIONAL TREE REMOVAL.
 - FINAL LOCATIONS OF SIGNS TO BE FIELD VERIFIED.

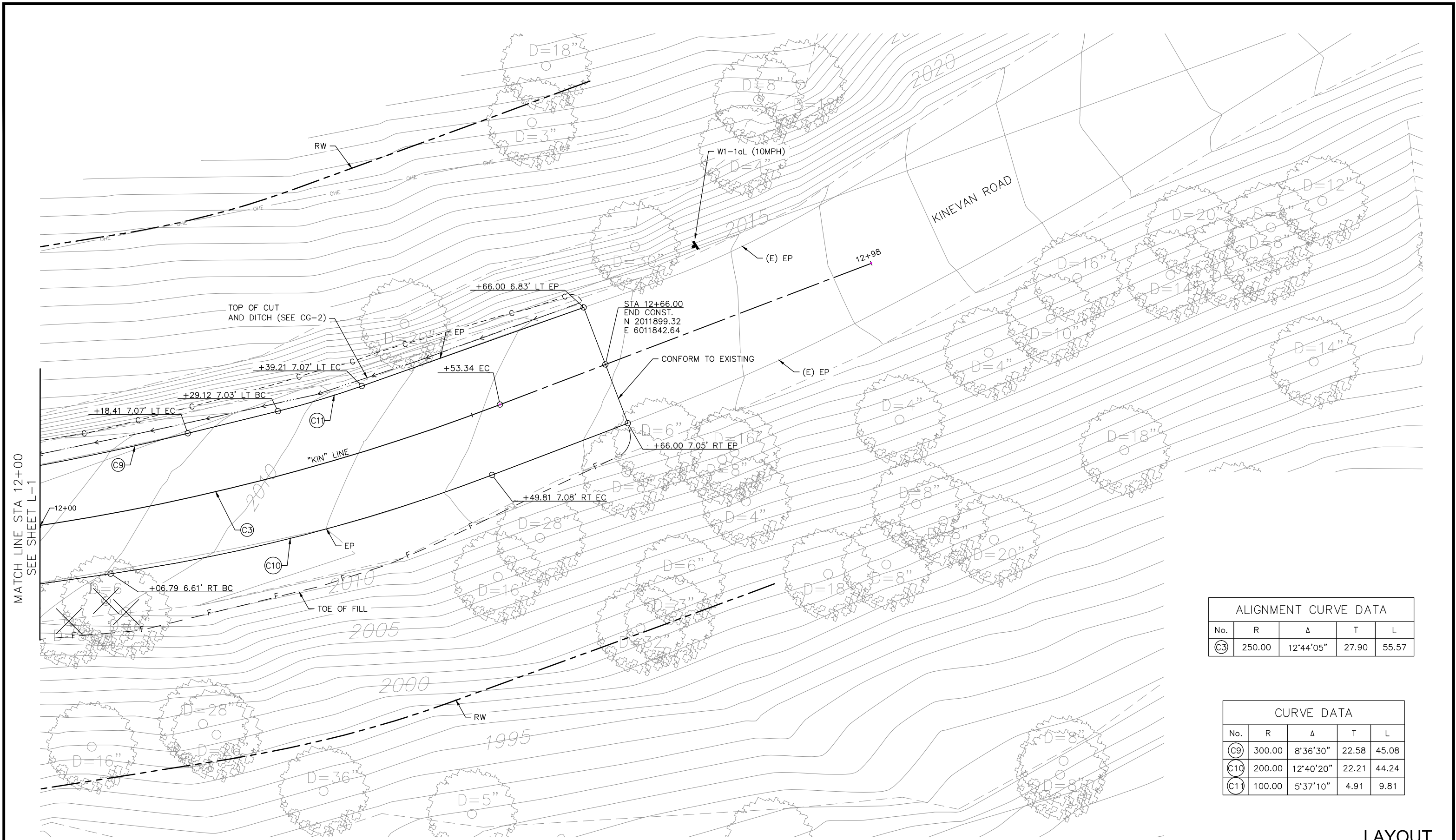
LAYOUT
L-1

CONSTRUCTION STARTED:	PROJECT ENGINEER:		COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DESIGN BY: S. JONES	CHECKED BY: D. MELIS	SCALE: 1" = 5'	PROJECT NO. 862328	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET NO. 4 OF 35
CONSTRUCTION COMPLETED:	DATE			DRAWN BY: S. JONES	CONSTRUCTABILITY REVIEW BY: *				FILE NO. *
RECORD DRAWING APPROVED BY:									

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

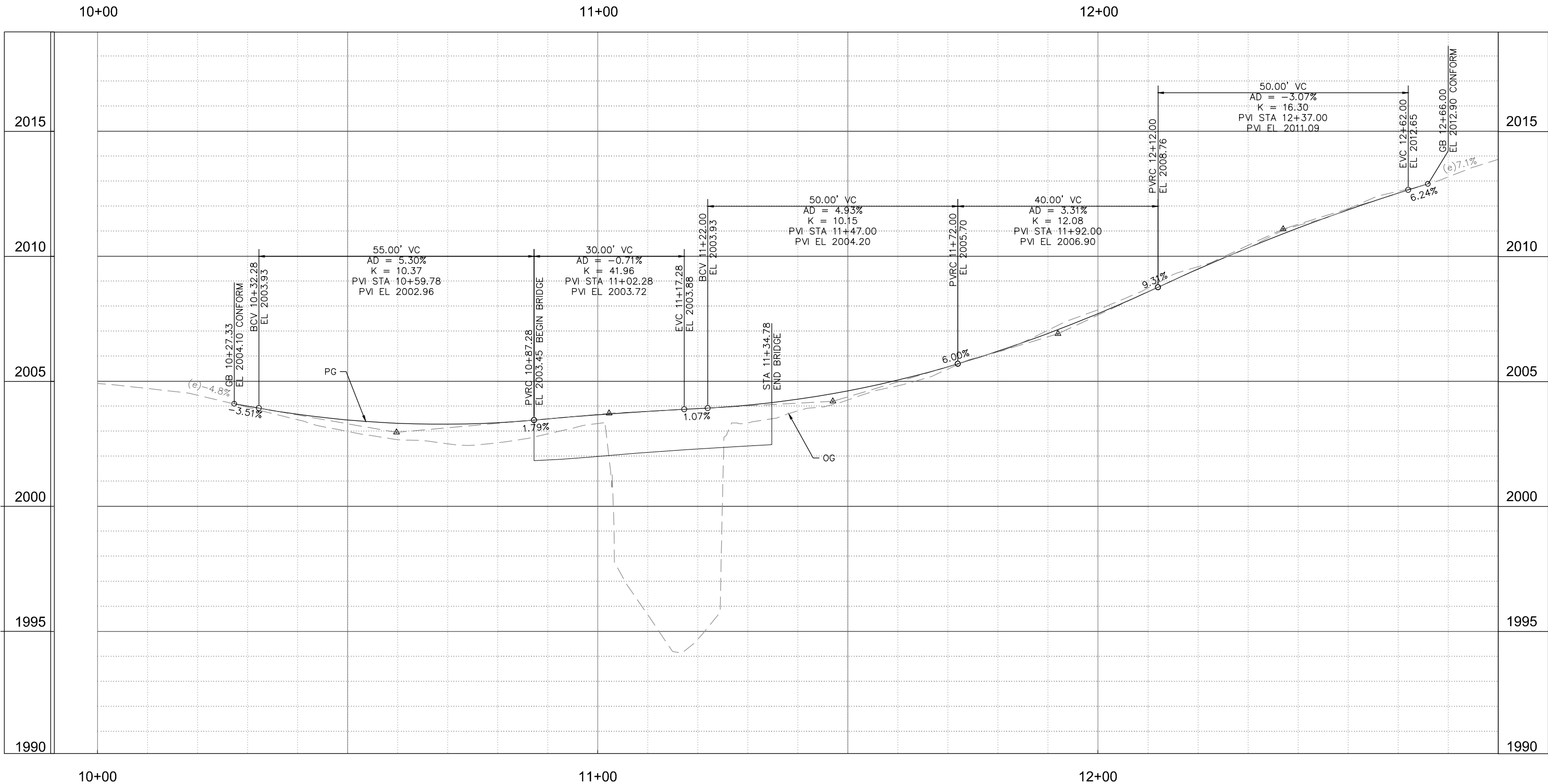


ALIGNMENT CURVE DATA				
No.	R	Δ	T	L
(C3)	250.00	12°44'05"	27.90	55.57

CURVE DATA				
No.	R	Δ	T	L
(C9)	300.00	8°36'30"	22.58	45.08
(C10)	200.00	12°40'20"	22.21	44.24
(C11)	100.00	5°37'10"	4.91	9.81

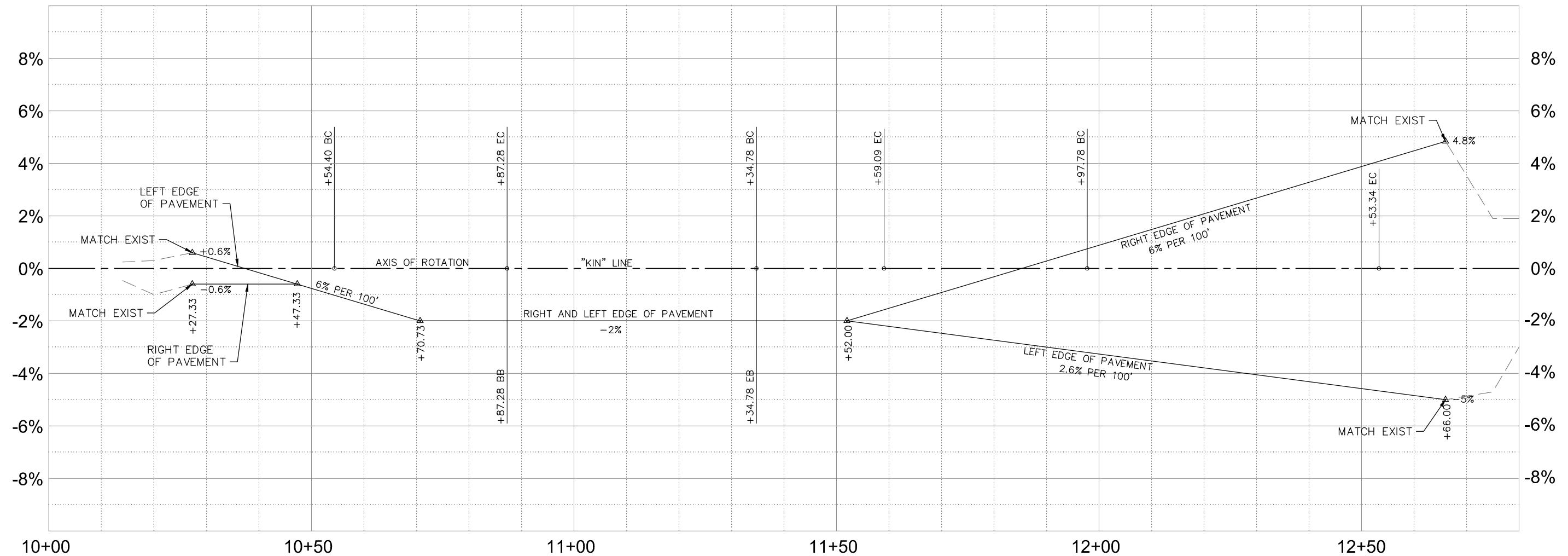
LAYOUT
L-2

CONSTRUCTION STARTED:		PROJECT ENGINEER:		95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION		DESIGN BY:	CHECKED BY:	SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET NO. 5 OF 35 FILE NO. *		
CONSTRUCTION COMPLETED:				COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DRAWN BY:	CONSTRUCTABILITY REVIEW BY:	1" = 5'	862328					
RECORD DRAWING APPROVED BY:		DATE			S. JONES	*							
FOR REDUCED PLANS ORIGINAL SCALE IN INCHES										DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	



PROFILE
P-1

CONSTRUCTION STARTED:		PROJECT ENGINEER:		95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION		DESIGN BY:	CHECKED BY:	SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372		SHEET NO.		
CONSTRUCTION COMPLETED:				COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DRAWN BY:	CONSTRUCTABILITY REVIEW BY:	1"=10' HORZ 1"=2' VERT	862328	6 OF 35					
RECORD DRAWING APPROVED BY:		DATE			S. JONES	*			*					
FOR REDUCED PLANS ORIGINAL SCALE IN INCHES								0 1 2 3		DISREGARD PRINTS BEARING EARLIER REVISION DATES			REVISION DATES (PRELIMINARY STAGE ONLY)	

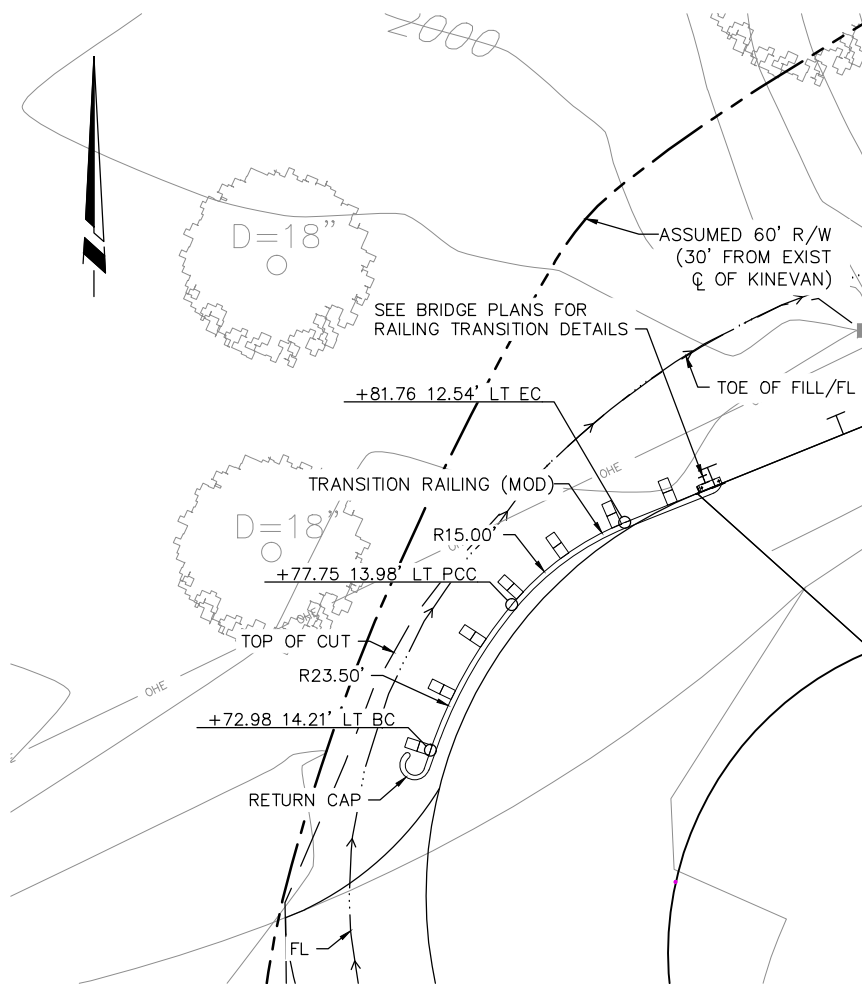


SUPERELEVATION DIAGRAM
SE-1

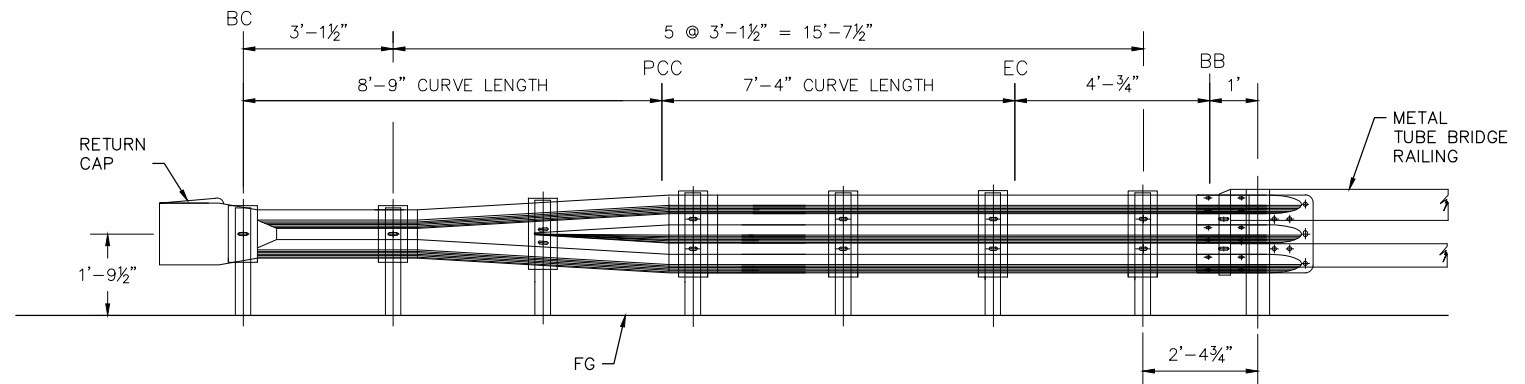
CONSTRUCTION STARTED:		PROJECT ENGINEER:		95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION		DESIGN BY:	CHECKED BY:	SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372		SHEET NO.
CONSTRUCTION COMPLETED:				COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DRAWN BY:	CONSTRUCTABILITY REVIEW BY:	1" = 10'	862328	7 OF 35			
RECORD DRAWING APPROVED BY:		DATE			S. JONES	*			FILE NO.			
							DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)			

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES

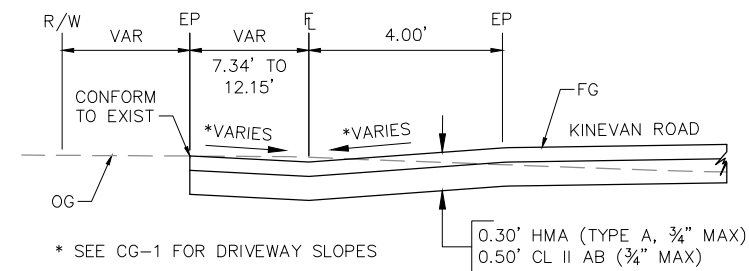
0 1 2 3



NORTHWEST MBGR DETAIL
SCALE: 1"=5'



NORTHWEST TRANSITION RAILING (MOD) ELEVATION
NO SCALE



HMA DRIVEWAY APRON DETAIL
NO SCALE

CONSTRUCTION DETAILS
CD-1

CONSTRUCTION STARTED:		PROJECT ENGINEER:	
CONSTRUCTION COMPLETED:			
RECORD DRAWING APPROVED BY:		DATE	



95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

DESIGN BY:
S. JONES
DRAWN BY:
S. JONES

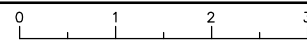
CHECKED BY:
D. MELIS
CONSTRUCTABILITY REVIEW BY:
*

SCALE:
AS SHOWN
PROJECT NO.
862328

KINEVAN ROAD BRIDGE
OVER SAN JOSE CREEK
BRIDGE No. 51C-0372

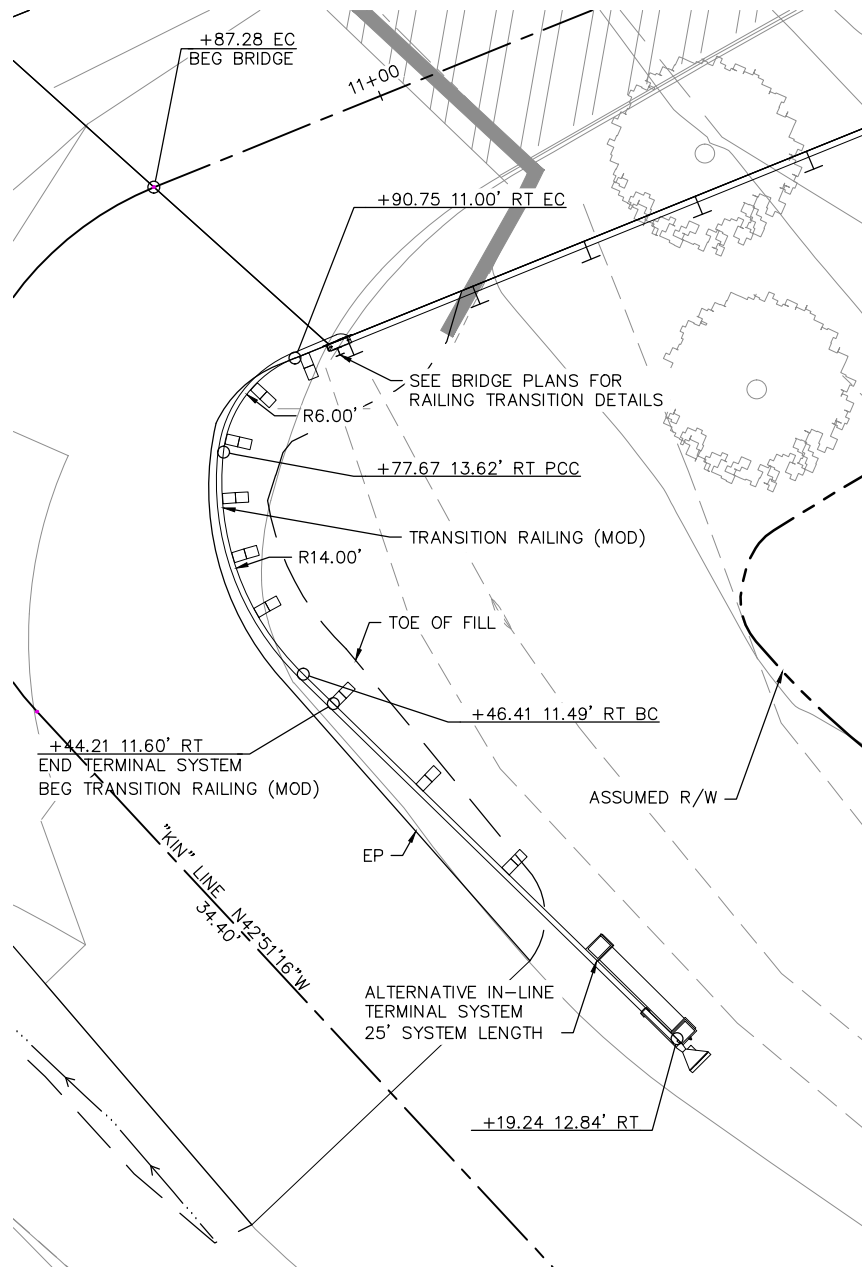
SHEET NO.
8 OF 35
FILE NO.
*

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES

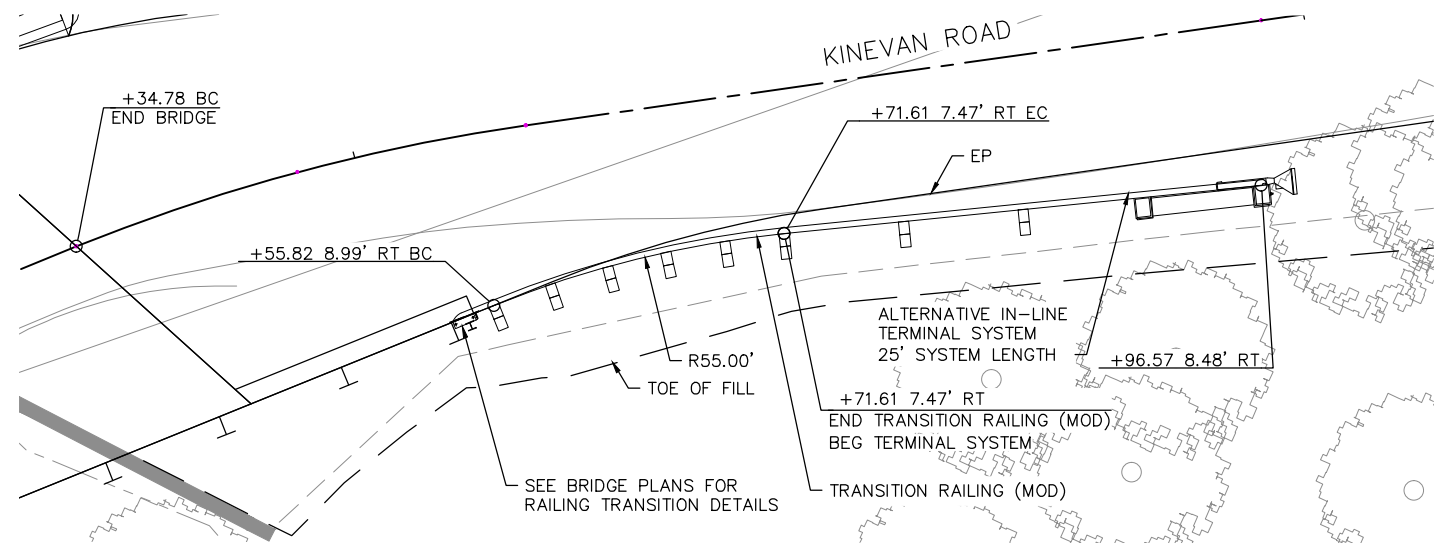


DISREGARD PRINTS BEARING
EARLIER REVISION DATES

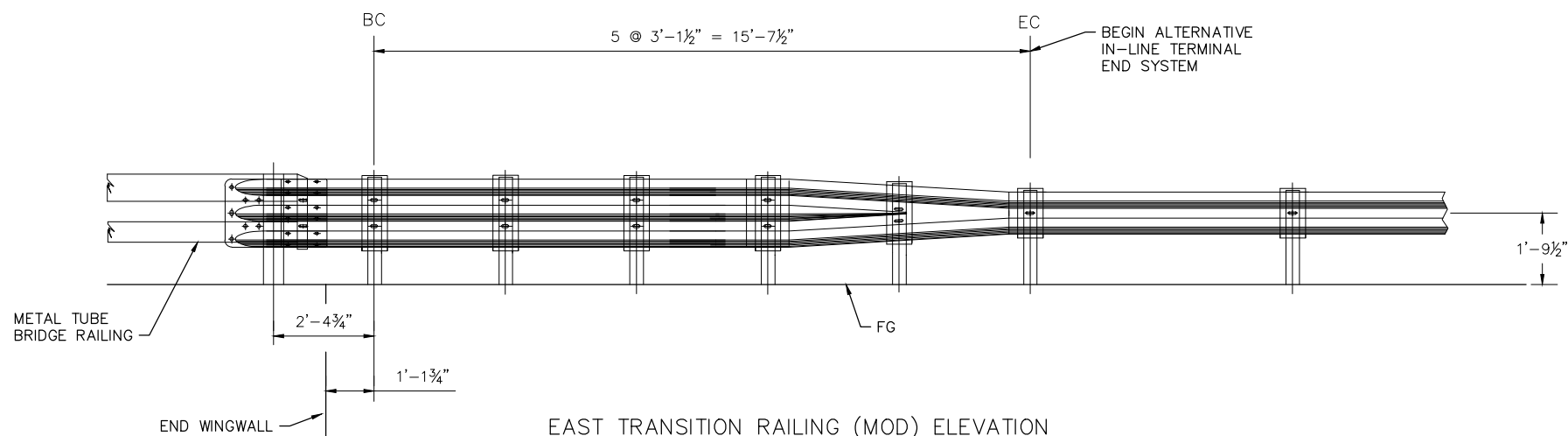
REVISION DATES (PRELIMINARY STAGE ONLY)



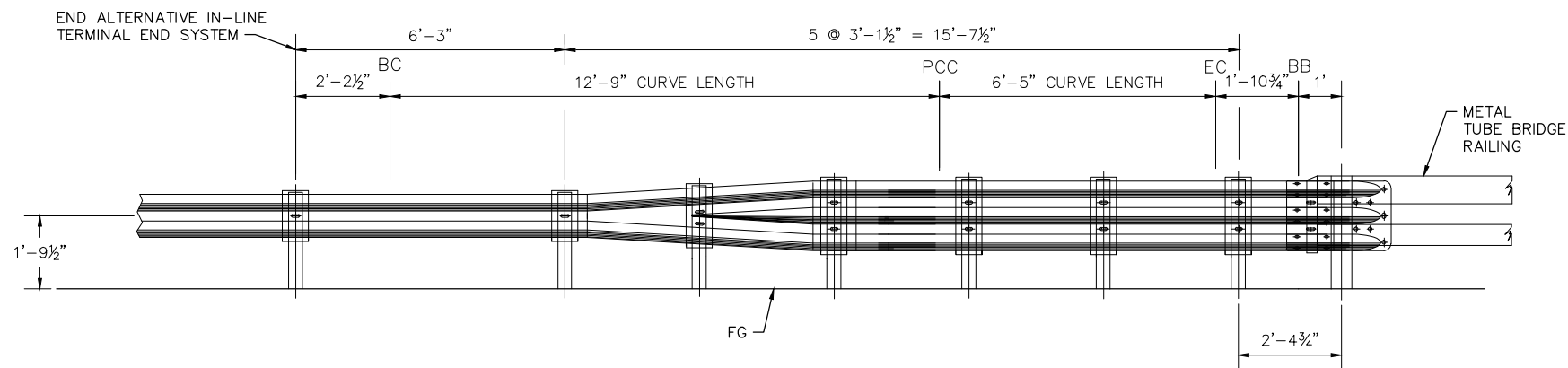
SOUTHWEST MBGR DETAIL
SCALE: 1"=5'



EAST MBGR DETAIL
SCALE: 1"=5'



EAST TRANSITION RAILING (MOD) ELEVATION
NO SCALE



SOUTHWEST TRANSITION RAILING (MOD) ELEVATION
NO SCALE

CONSTRUCTION DETAILS
CD-2

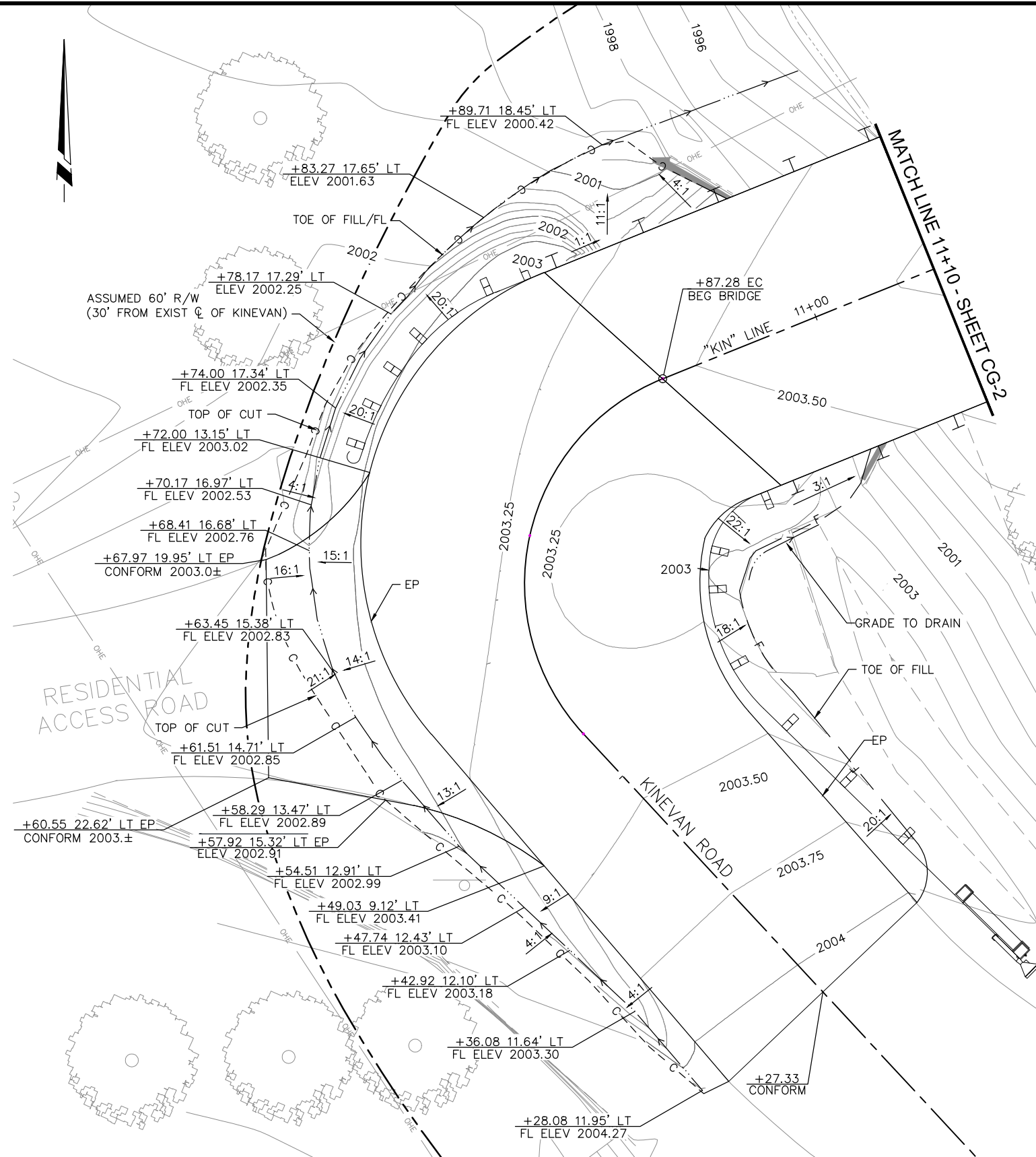
95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

CONSTRUCTION STARTED:	PROJECT ENGINEER:		COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DESIGN BY:	CHECKED BY:	SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET NO.	
CONSTRUCTION COMPLETED:	DATE			S. JONES	D. MELIS	AS SHOWN	862328		9 OF 35	
RECORD DRAWING APPROVED BY:				S. JONES	CONSTRUCTABILITY REVIEW BY:				FILE NO.	
								REVISION DATES (PRELIMINARY STAGE ONLY)		

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES

0 1 2 3

DISREGARD PRINTS BEARING
EARLIER REVISION DATES



RESIDENTIAL
ACCESS ROAD

KINEVAN ROAD

WEST DRIVEWAY AND DITCH DETAIL

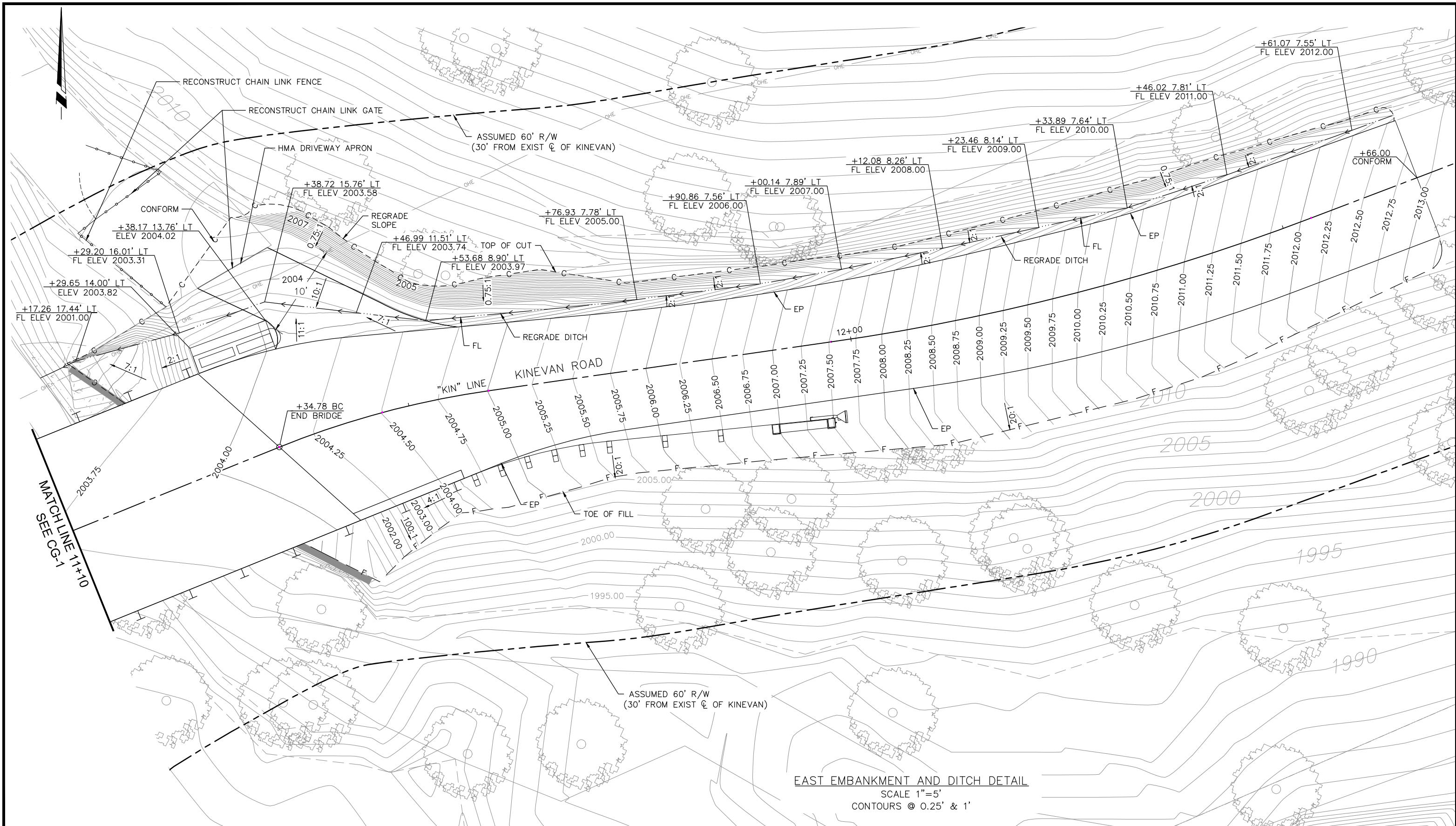
SCALE 1"=5'
CONTOURS @ 0.25' & 1'

THIS PLAN ACCURATE FOR CONTOUR GRADING ONLY

95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

CONTOUR GRADING
CG-1

CONSTRUCTION STARTED:		PROJECT ENGINEER:		COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DESIGN BY:	CHECKED BY:	SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET NO.	
CONSTRUCTION COMPLETED:					S. JONES	D. MELIS	1" = 5'	862328		10 OF 35	
RECORD DRAWING APPROVED BY:		DATE			S. JONES	* CONSTRUCTABILITY REVIEW BY:				FILE NO.	
										REVISION DATES (PRELIMINARY STAGE ONLY)	
										DISREGARD PRINTS BEARING EARLIER REVISION DATES	



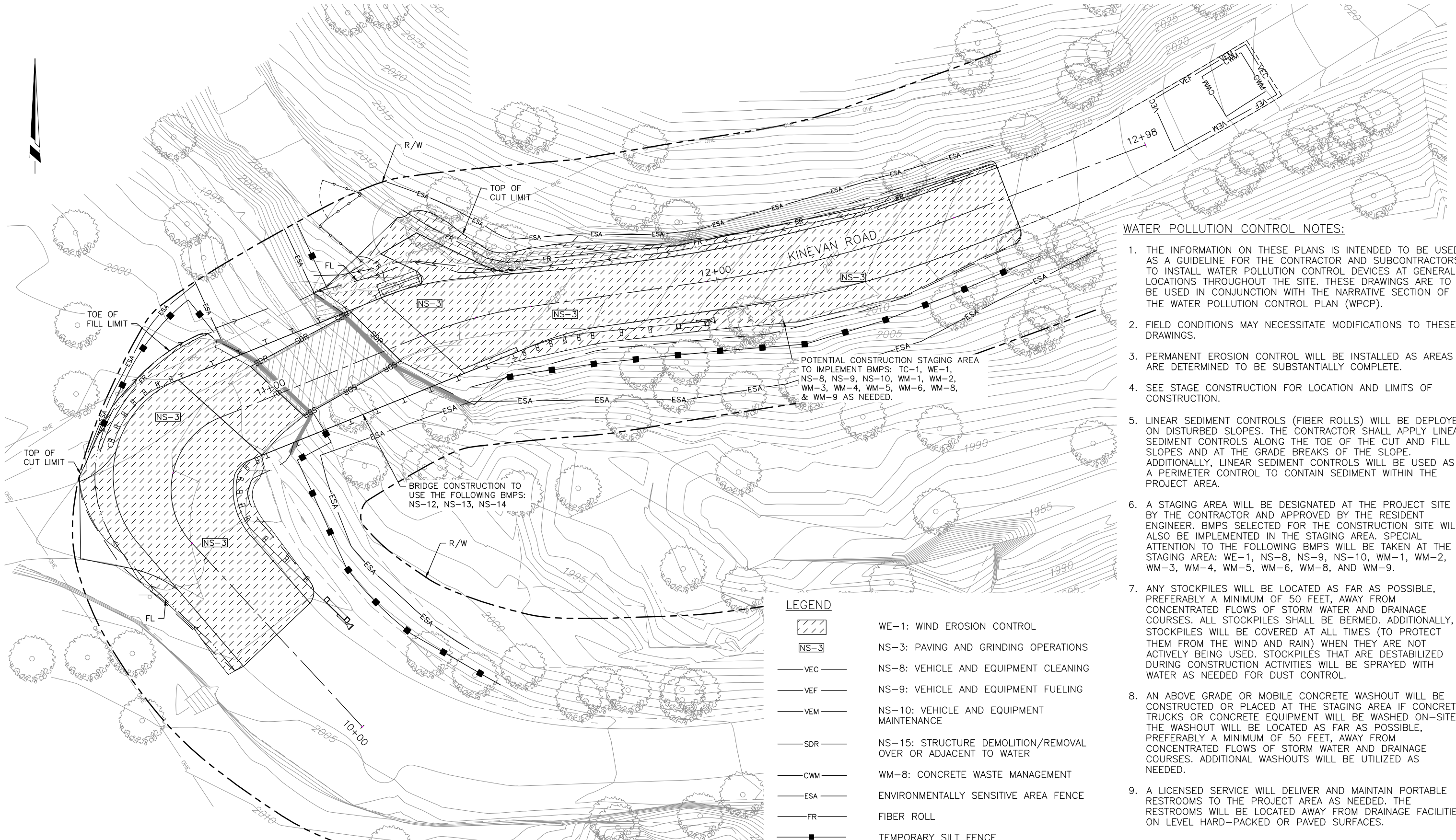
THIS PLAN ACCURATE FOR CONTOUR GRADING ONLY

95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

CONTOUR GRADING

CG-2

CONSTRUCTION STARTED:		PROJECT ENGINEER: DATE	REGISTERED ENGINEER STATE OF CALIFORNIA KEVIN ROSS No. C49652 Exp. 09/30/13 CIVIL	COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DESIGN BY: S. JONES	CHECKED BY: D. MELIS	SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET NO. 11 OF 35			
CONSTRUCTION COMPLETED:					DRAWN BY: S. JONES	CONSTRUCTABILITY REVIEW BY: *	1" = 5'	862328		FILE NO. *			
RECORD DRAWING APPROVED BY:													
					FOR REDUCED PLANS ORIGINAL SCALE IN INCHES	0123		DISREGARD PRINTS BEARING EARLIER REVISION DATES →			REVISION DATES (PRELIMINARY STAGE ONLY)		



WATER POLLUTION CONTROL NOTES:

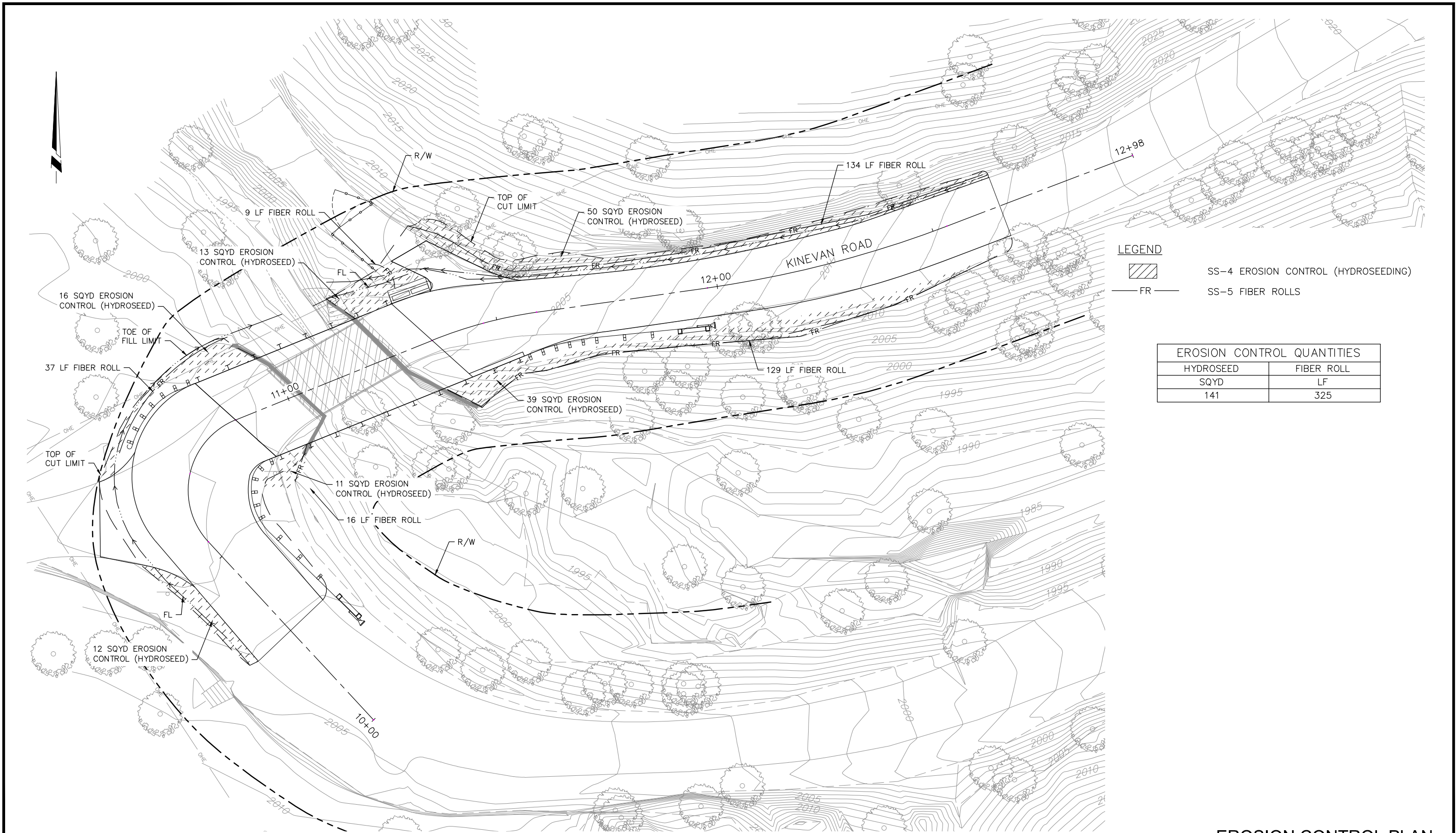
1. THE INFORMATION ON THESE PLANS IS INTENDED TO BE USED AS A GUIDELINE FOR THE CONTRACTOR AND SUBCONTRACTORS TO INSTALL WATER POLLUTION CONTROL DEVICES AT GENERAL LOCATIONS THROUGHOUT THE SITE. THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE NARRATIVE SECTION OF THE WATER POLLUTION CONTROL PLAN (WPCP).
2. FIELD CONDITIONS MAY NECESSITATE MODIFICATIONS TO THESE DRAWINGS.
3. PERMANENT EROSION CONTROL WILL BE INSTALLED AS AREAS ARE DETERMINED TO BE SUBSTANTIALLY COMPLETE.
4. SEE STAGE CONSTRUCTION FOR LOCATION AND LIMITS OF CONSTRUCTION.
5. LINEAR SEDIMENT CONTROLS (FIBER ROLLS) WILL BE DEPLOYED ON DISTURBED SLOPES. THE CONTRACTOR SHALL APPLY LINEAR SEDIMENT CONTROLS ALONG THE TOE OF THE CUT AND FILL SLOPES AND AT THE GRADE BREAKS OF THE SLOPE. ADDITIONALLY, LINEAR SEDIMENT CONTROLS WILL BE USED AS A PERIMETER CONTROL TO CONTAIN SEDIMENT WITHIN THE PROJECT AREA.
6. A STAGING AREA WILL BE DESIGNATED AT THE PROJECT SITE BY THE CONTRACTOR AND APPROVED BY THE RESIDENT ENGINEER. BMPs SELECTED FOR THE CONSTRUCTION SITE WILL ALSO BE IMPLEMENTED IN THE STAGING AREA. SPECIAL ATTENTION TO THE FOLLOWING BMPs WILL BE TAKEN AT THE STAGING AREA: WE-1, NS-8, NS-9, NS-10, WM-1, WM-2, WM-3, WM-4, WM-5, WM-6, WM-8, AND WM-9.
7. ANY STOCKPILES WILL BE LOCATED AS FAR AS POSSIBLE, PREFERABLY A MINIMUM OF 50 FEET, AWAY FROM CONCENTRATED FLOWS OF STORM WATER AND DRAINAGE COURSES. ALL STOCKPILES SHALL BE BERMED. ADDITIONALLY, STOCKPILES WILL BE COVERED AT ALL TIMES (TO PROTECT THEM FROM THE WIND AND RAIN) WHEN THEY ARE NOT ACTIVELY BEING USED. STOCKPILES THAT ARE DESTABILIZED DURING CONSTRUCTION ACTIVITIES WILL BE SPRAYED WITH WATER AS NEEDED FOR DUST CONTROL.
8. AN ABOVE GRADE OR MOBILE CONCRETE WASHOUT WILL BE CONSTRUCTED OR PLACED AT THE STAGING AREA IF CONCRETE TRUCKS OR CONCRETE EQUIPMENT WILL BE WASHED ON-SITE. THE WASHOUT WILL BE LOCATED AS FAR AS POSSIBLE, PREFERABLY A MINIMUM OF 50 FEET, AWAY FROM CONCENTRATED FLOWS OF STORM WATER AND DRAINAGE COURSES. ADDITIONAL WASHOUTS WILL BE UTILIZED AS NEEDED.
9. A LICENSED SERVICE WILL DELIVER AND MAINTAIN PORTABLE RESTROOMS TO THE PROJECT AREA AS NEEDED. THE RESTROOMS WILL BE LOCATED AWAY FROM DRAINAGE FACILITIES ON LEVEL HARD-PACKED OR PAVED SURFACES.

THIS PLAN ACCURATE FOR WATER POLLUTION CONTROL ONLY

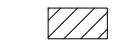
95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

WATER POLLUTION CONTROL PLAN
WPC-1

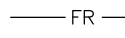
CONSTRUCTION STARTED:		PROJECT ENGINEER:		COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION		DESIGN BY: S. JONES	CHECKED BY: D. MELIS	SCALE: 1" = 10'	PROJECT NO. 862328	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET NO. 12 OF 35
CONSTRUCTION COMPLETED:						DRAWN BY: S. JONES	CONSTRUCTABILITY REVIEW BY: *			FILE NO. *	
RECORD DRAWING APPROVED BY:		DATE									
FOR REDUCED PLANS ORIGINAL SCALE IN INCHES						0 1 2 3		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	



LEGEND



SS-4 EROSION CONTROL (HYDROSEEDING)



SS-5 FIBER ROLLS

EROSION CONTROL QUANTITIES	
HYDROSEED	FIBER ROLL
SQYD	LF
141	325

THIS PLAN ACCURATE FOR EROSION CONTROL ONLY

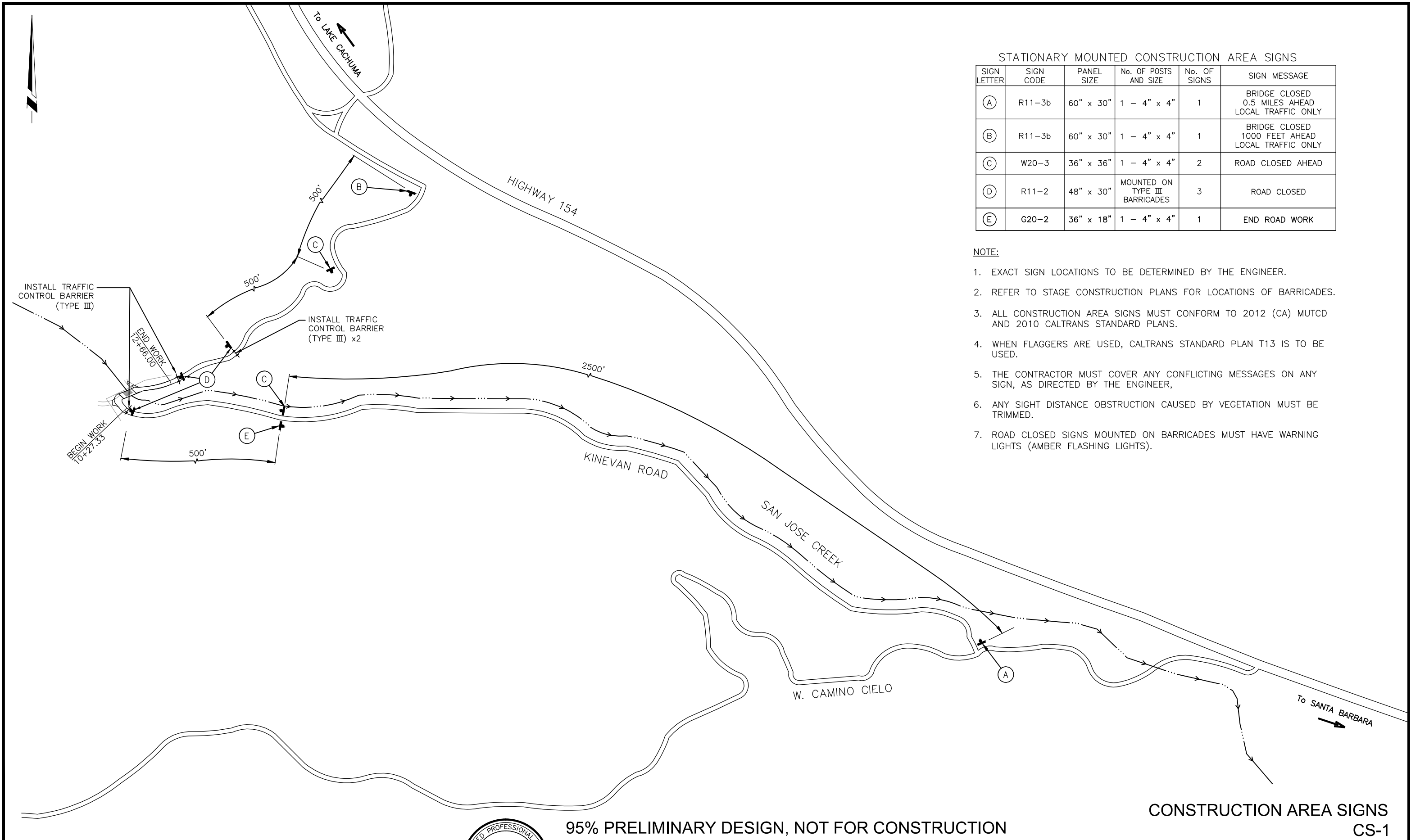
95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

EROSION CONTROL PLAN
EC-1

CONSTRUCTION STARTED:		PROJECT ENGINEER:		COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DESIGN BY:	CHECKED BY:	SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET NO.	
CONSTRUCTION COMPLETED:					S. JONES	D. MELIS	1" = 10'	862328		13 OF 35	
RECORD DRAWING APPROVED BY:		DATE			S. JONES	CONSTRUCTABILITY REVIEW BY:		*		FILE NO.	
										DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES

0 1 2 3



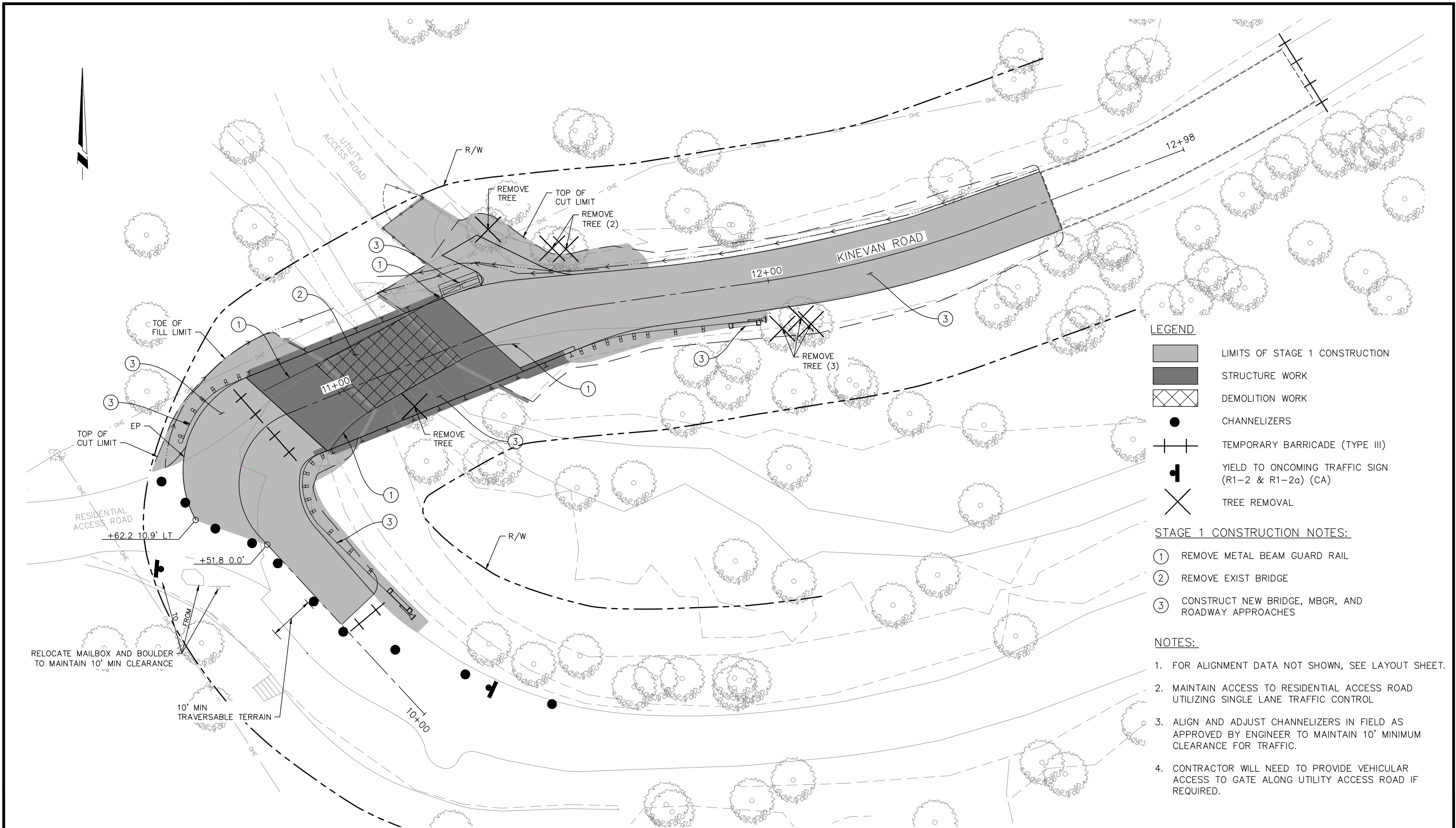
STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE	PANEL SIZE	No. OF POSTS AND SIZE	No. OF SIGNS	SIGN MESSAGE
(A)	R11-3b	60" x 30"	1 - 4" x 4"	1	BRIDGE CLOSED 0.5 MILES AHEAD LOCAL TRAFFIC ONLY
(B)	R11-3b	60" x 30"	1 - 4" x 4"	1	BRIDGE CLOSED 1000 FEET AHEAD LOCAL TRAFFIC ONLY
(C)	W20-3	36" x 36"	1 - 4" x 4"	2	ROAD CLOSED AHEAD
(D)	R11-2	48" x 30"	MOUNTED ON TYPE III BARRICADES	3	ROAD CLOSED
(E)	G20-2	36" x 18"	1 - 4" x 4"	1	END ROAD WORK

- NOTE:
- EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.
 - REFER TO STAGE CONSTRUCTION PLANS FOR LOCATIONS OF BARRICADES.
 - ALL CONSTRUCTION AREA SIGNS MUST CONFORM TO 2012 (CA) MUTCD AND 2010 CALTRANS STANDARD PLANS.
 - WHEN FLAGGERS ARE USED, CALTRANS STANDARD PLAN T13 IS TO BE USED.
 - THE CONTRACTOR MUST COVER ANY CONFLICTING MESSAGES ON ANY SIGN, AS DIRECTED BY THE ENGINEER,
 - ANY SIGHT DISTANCE OBSTRUCTION CAUSED BY VEGETATION MUST BE TRIMMED.
 - ROAD CLOSED SIGNS MOUNTED ON BARRICADES MUST HAVE WARNING LIGHTS (AMBER FLASHING LIGHTS).

95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

CONSTRUCTION AREA SIGNS
CS-1



THIS PLAN ACCURATE FOR STAGE CONSTRUCTION ONLY

REGISTERED PROFESSIONAL ENGINEER

KEVIN ROSS

No. C49652

Exp. 09/30/13

CIVIL

STATE OF CALIFORNIA

95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

COUNTY OF SANTA BARBARA

DEPARTMENT OF PUBLIC WORKS

TRANSPORTATION DIVISION

DESIGN BY:

S. JONES

DRAWN BY:

S. JONES

CHECKED BY:

D. MELIS

CONSTRUCTABILITY REVIEW BY:

*

SCALE:

1" = 10'

PROJECT NO.

862328

KINEVAN ROAD BRIDGE

OVER SAN JOSE CREEK

BRIDGE No. 51C-0372

SHEET NO.

15 OF 35

FILE NO.

*

DISREGARD PRINTS BEARING

EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

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CONSTRUCTION STARTED:

CONSTRUCTION COMPLETED:

RECORD DRAWING APPROVED BY:

PROJECT ENGINEER:

DATE

FOR REDUCED PLANS

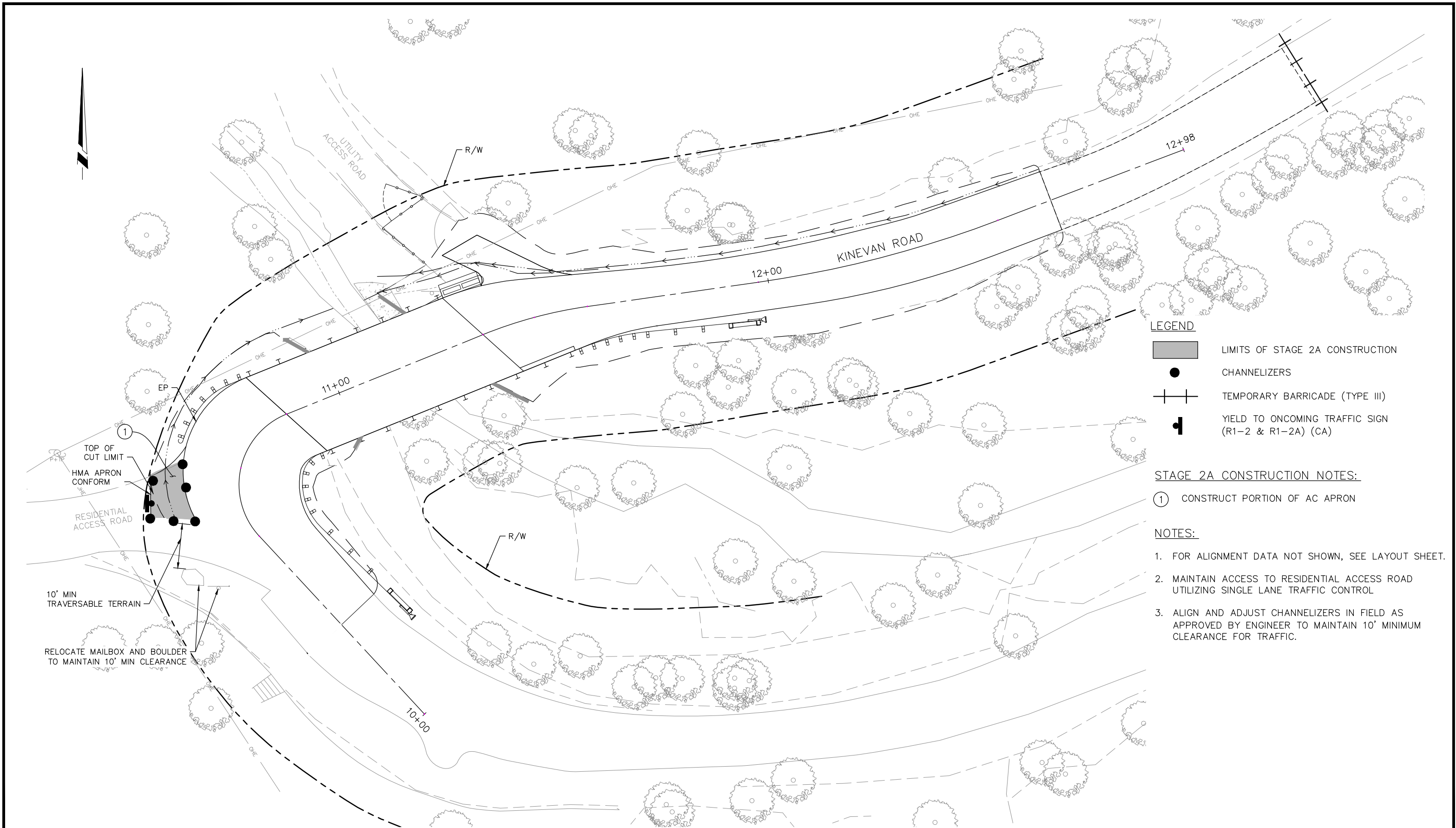
ORIGINAL SCALE IN INCHES

0

1

2

3



LEGEND

- [Shaded Area] LIMITS OF STAGE 2A CONSTRUCTION
- [Black Dot] CHANNELIZERS
- [Cross Symbol] TEMPORARY BARRICADE (TYPE III)
- [Yield Sign Symbol] YIELD TO ONCOMING TRAFFIC SIGN (R1-2 & R1-2A) (CA)

STAGE 2A CONSTRUCTION NOTES:

- ① CONSTRUCT PORTION OF AC APRON

NOTES:

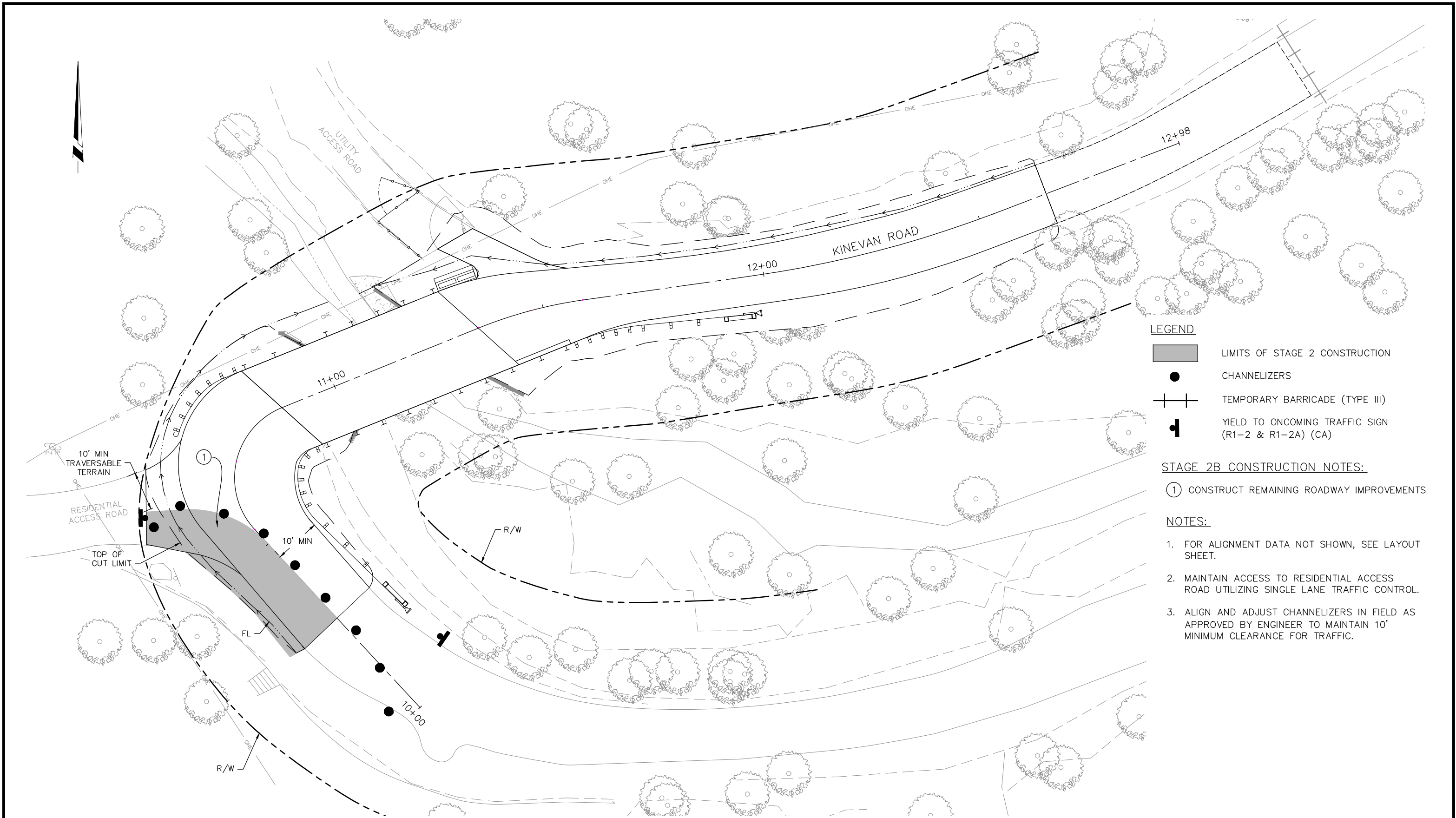
- FOR ALIGNMENT DATA NOT SHOWN, SEE LAYOUT SHEET.
- MAINTAIN ACCESS TO RESIDENTIAL ACCESS ROAD UTILIZING SINGLE LANE TRAFFIC CONTROL
- ALIGN AND ADJUST CHANNELIZERS IN FIELD AS APPROVED BY ENGINEER TO MAINTAIN 10' MINIMUM CLEARANCE FOR TRAFFIC.

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION ONLY

95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

STAGE CONSTRUCTION - STAGE 2A
SC-2A

CONSTRUCTION STARTED:		PROJECT ENGINEER:		COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DESIGN BY:	CHECKED BY:	SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET NO.	
CONSTRUCTION COMPLETED:					S. JONES	D. MELIS	1" = 10'	862328		16 OF 35	
RECORD DRAWING APPROVED BY:		DATE			S. JONES	CONSTRUCTABILITY REVIEW BY:				*	FILE NO.
										REVISION DATES (PRELIMINARY STAGE ONLY)	
										DISREGARD PRINTS BEARING EARLIER REVISION DATES	



LEGEND

- LIMITS OF STAGE 2 CONSTRUCTION
- CHANNELIZERS
- TEMPORARY BARRICADE (TYPE III)
- YIELD TO ONCOMING TRAFFIC SIGN (R1-2 & R1-2A) (CA)

STAGE 2B CONSTRUCTION NOTES:

- ① CONSTRUCT REMAINING ROADWAY IMPROVEMENTS

NOTES:

- 1. FOR ALIGNMENT DATA NOT SHOWN, SEE LAYOUT SHEET.
- 2. MAINTAIN ACCESS TO RESIDENTIAL ACCESS ROAD UTILIZING SINGLE LANE TRAFFIC CONTROL.
- 3. ALIGN AND ADJUST CHANNELIZERS IN FIELD AS APPROVED BY ENGINEER TO MAINTAIN 10' MINIMUM CLEARANCE FOR TRAFFIC.

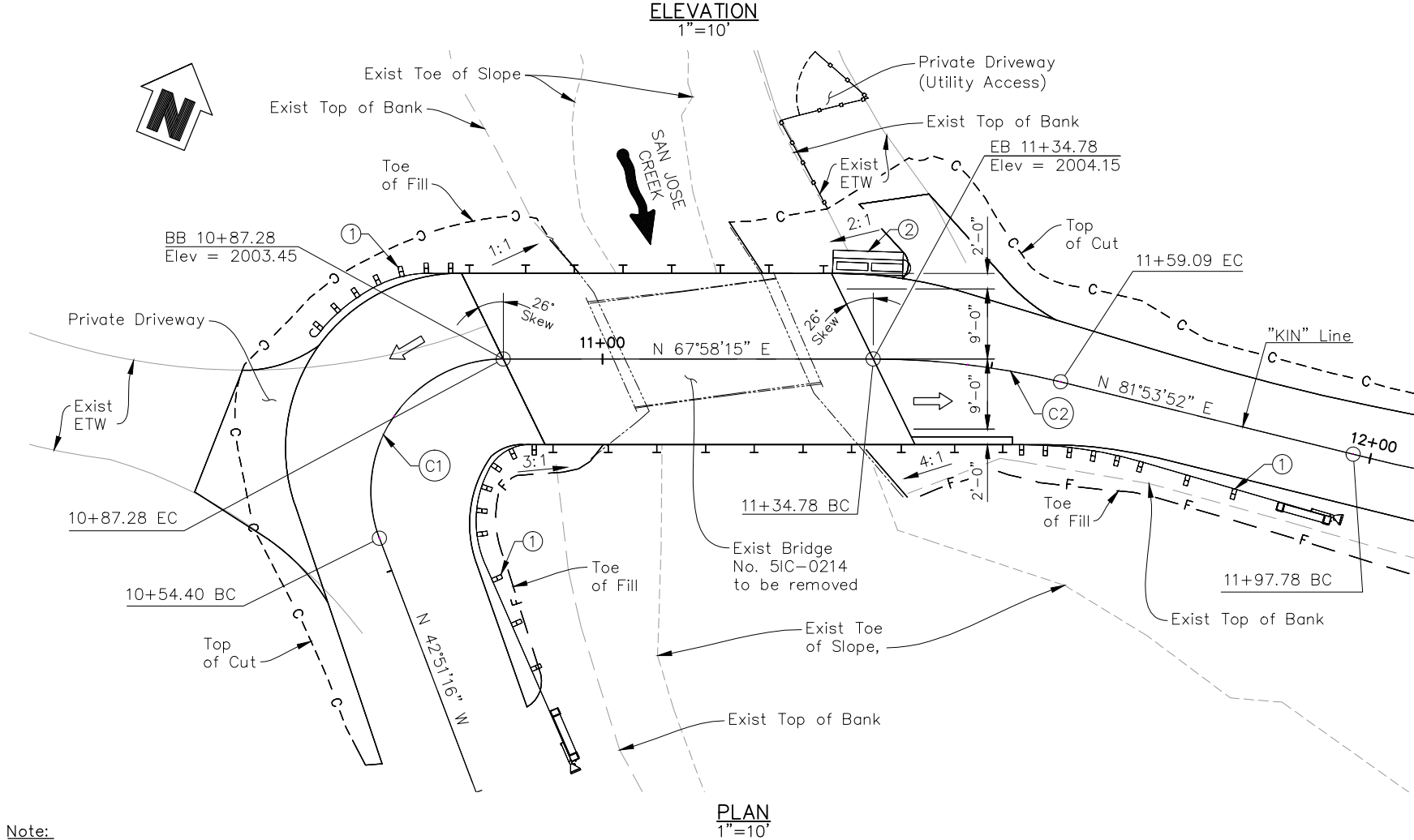
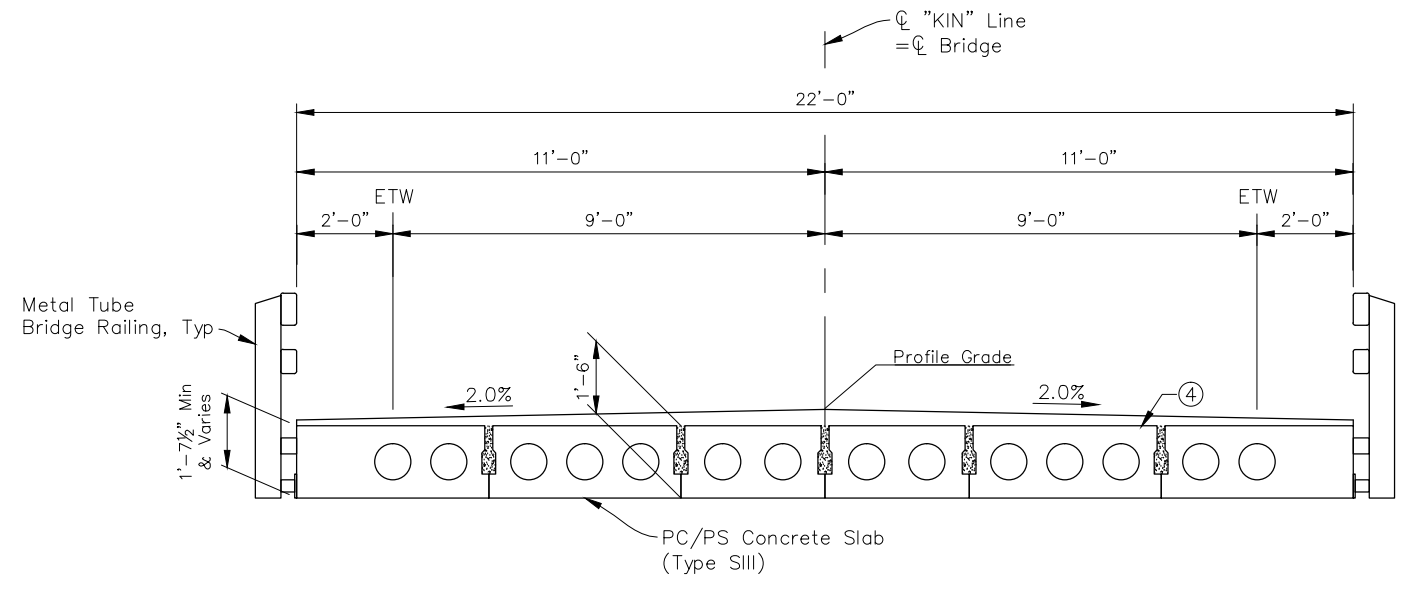
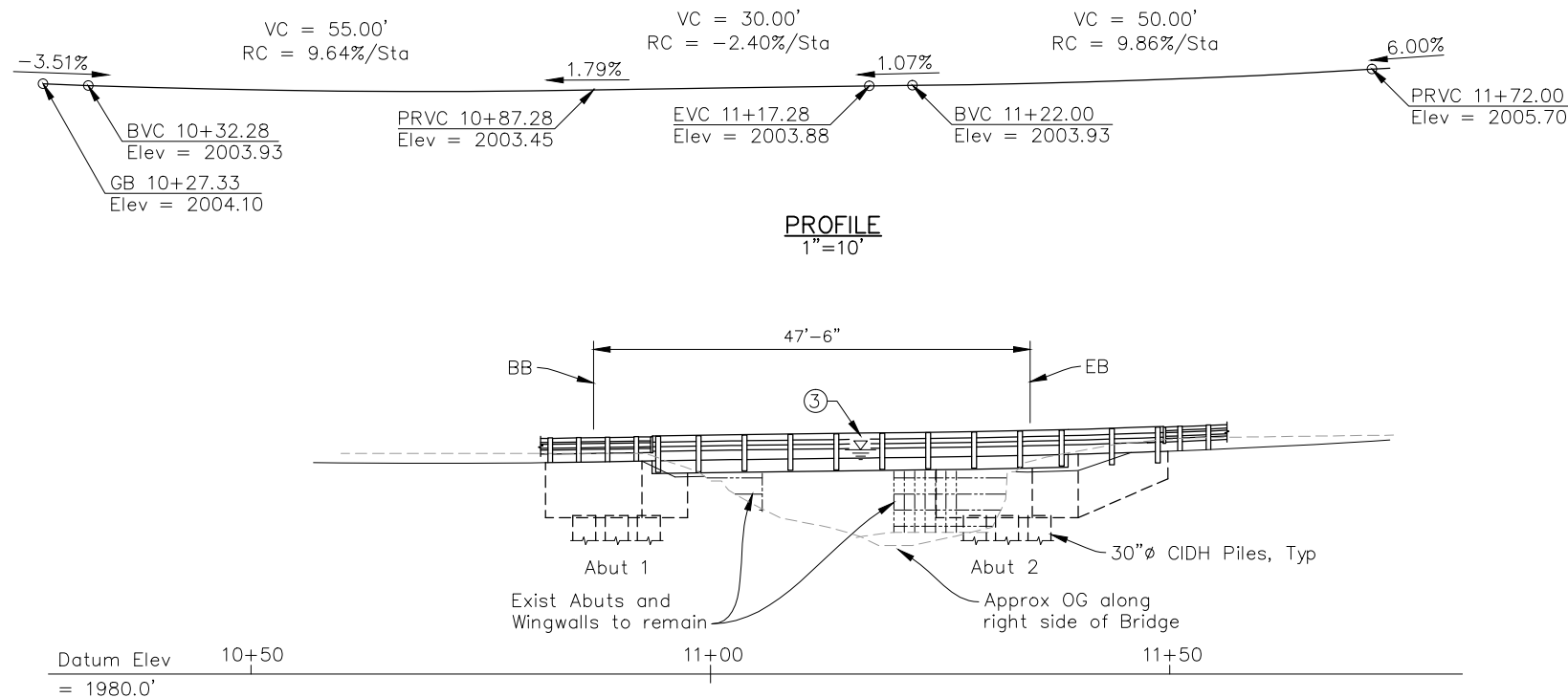
THIS PLAN ACCURATE FOR STAGE CONSTRUCION ONLY

95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

STAGE CONSTRUCTION - STAGE 2B
SC-2B

CONSTRUCTION STARTED:		PROJECT ENGINEER:			COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION		DESIGN BY:	CHECKED BY:	SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET NO.		
CONSTRUCTION COMPLETED:					S. JONES	D. MELIS	1" = 10'	862328	17 OF 35					
RECORD DRAWING APPROVED BY:		DATE			DRAWN BY:	CONSTRUCTABILITY REVIEW BY:		FILE NO.						
					FOR REDUCED PLANS ORIGINAL SCALE IN INCHES			0 1 2 3		DISREGARD PRINTS BEARING EARLIER REVISION DATES			REVISION DATES (PRELIMINARY STAGE ONLY)	

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- LEGEND:**
- Indicates Direction of Traffic
 - Indicates Direction of Water Flow
 - Indicates Existing Structure

- NOTES:**
- ① MBGR, see "Construction Details" on Roadway Plans.
 - ② Crash Cushion, See "Construction Details" on Roadway Plans.
 - ③ High Water Elevation = See Hydrologic Summary on Foundation Plan
 - ④ Polyester Concrete Overlay

CURVE DATA				
No.	R	Δ	T	L
C1	17.00'	110°49'32"	24.65'	32.88'
C2	100.00'	13°55'39"	12.21'	24.31'

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.



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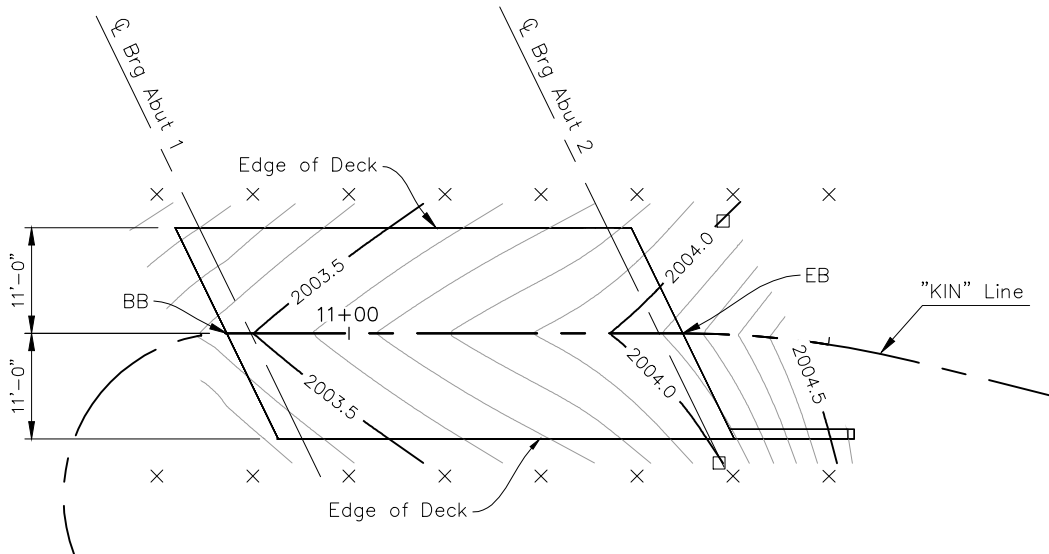
**GENERAL PLAN
ST-1**

CONSTRUCTABILITY REVIEW BY: *		PROJECT ENGINEER:		COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DESIGN BY: J. GRANT	CHECKED BY: *	SCALE: AS SHOWN	PROJECT NO. 862328	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET No. 18 OF 35
LAYOUT BY: *		DATE			DETAILS BY: A. BARBA	CHECKED BY: *				FILE No. *
SPECIFICATIONS BY: *		CHECKED BY: *			QUANTITIES BY: J. GRANT	CHECKED BY: *				
FLOOD CONTROL CHECK BY: *		PLANS & SPECS COMPARED BY: *			LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD		DISREGARD PRINTS BEARING EARLIER REVISION DATES			REVISION DATES (PRELIMINARY STAGE ONLY)

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

09/24/12 01/24/13 04/24/13

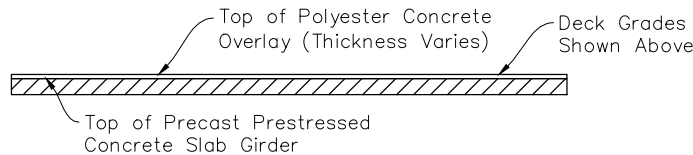
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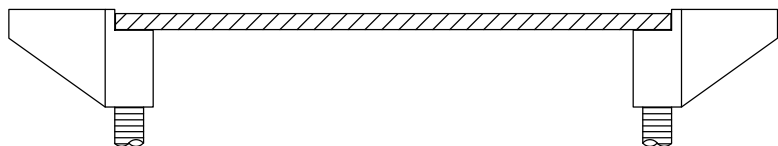
PLAN
1"=10'

Notes:

1. Contours shown are at the Top of Polyester Overlay.
2. Contours do not include Camber.
3. X = 10' intervals along Station Line.
4. □ = Even 1' Contours.
5. Contour interval is 0.1'.



DECK LONGITUDINAL SECTION
No Scale

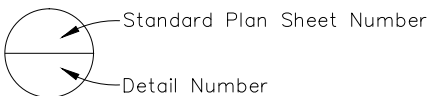


- Precast Prestressed Concrete Slab
(See "Precast Slab Details No. 2" for strength required)
- Structural Concrete, Bridge (3600 psi @ 28 days)
- Cast-in-Drilled-Hole Pile (4000 psi @ 28 days)

CONCRETE STRENGTH AND TYPE LIMITS
No Scale

STANDARD PLANS: DATED MAY 2010

Sheet No.	Title
A10A	Acronyms & Abbreviations (Sheet 1 of 2)
A10B	Acronyms & Abbreviations (Sheet 2 of 2)
A10C	Lines and Symbols (Sheet 1 of 3)
A10D	Lines and Symbols (Sheet 2 of 3)
A10E	Lines and Symbols (Sheet 3 of 3)
A62C	Limits of Payment for Excavation and Backfill-Bridge
B0-13	Bridge Details
B6-21	Joint Seals (Maximum Movement Rating = 2")

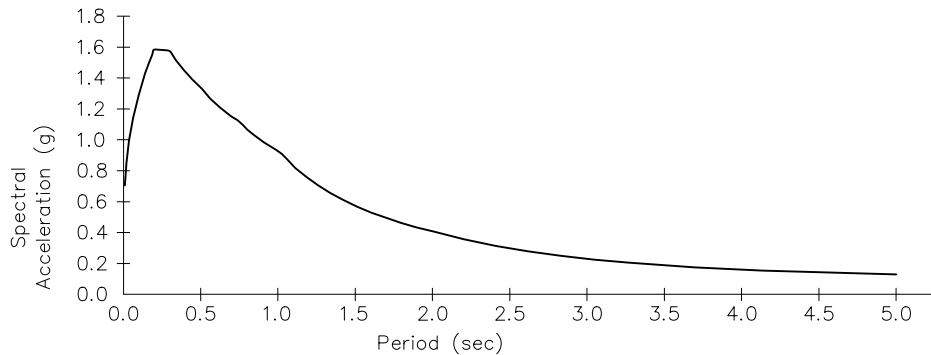


INDEX TO PLANS

Drawing	Title
ST-1	General Plan
ST-2	Deck Contours
ST-3	Foundation Plan
ST-4	Bridge Removal Details
ST-5	Abutment 1 Layout
ST-6	Abutment 2 Layout
ST-7	Abutment Details No. 1
ST-8	Abutment Details No. 2
ST-9	Typical Section
ST-10	Precast Slab Layout
ST-11	Precast Slab Details No. 1
ST-12	Precast Slab Details No. 2
ST-13	Metal Tube Bridge Railing Details No. 1
ST-14	Metal Tube Bridge Railing Details No. 2
ST-15	Log of Test Borings No. 1
ST-16	Log of Test Borings No. 2
ST-17	Log of Test Borings No. 3
ST-18	Log of Test Borings No. 4

GENERAL NOTES
LOAD RESISTANCE FACTOR DESIGN

DESIGN:	AASHTO LRFD Bridge Design Specifications, Fourth Edition, 2007 and the California Amendments, preface dated November 2011
SEISMIC DESIGN:	Caltrans Seismic Design Criteria (SDC), V1.6, November 2010
DEAD LOAD:	Includes 35 psf for future wearing surface and 100 lb/ft for future utilities
LIVE LOADING:	HL-93 and permit design loading
SEISMIC LOADING:	Soil Profile: Type C Vs30 = 427 m/s Moment Magnitude = 7.1 Peak Ground Acceleration = 0.71g



REINFORCED CONCRETE:	fy = 60,000 psi f'c = see "Concrete Strength and Type Limits" n = 8
PRESTRESSED CONCRETE:	See "Prestressing Notes" on "Precast Slab Details No. 2" sheet

DECK CONTOURS
ST-2

Note:

The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

CONSTRUCTABILITY REVIEW BY: *		PROJECT ENGINEER:		DESIGN BY:		CHECKED BY:		SCALE:		PROJECT NO.		SHEET No.	
LAYOUT BY:				J. GRANT		*		AS SHOWN		862328		19 OF 35	
SPECIFICATIONS BY:		CHECKED BY:		DETAILS BY:		CHECKED BY:						FILE No.	
*		*		K. DRESBACH		*						*	
FLOOD CONTROL CHECK BY:		PLANS & SPECS COMPARED BY:		LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD		QUANTITIES BY:		CHECKED BY:		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	
*		*				J. GRANT		*				09/24/12 01/24/13 04/26/13	

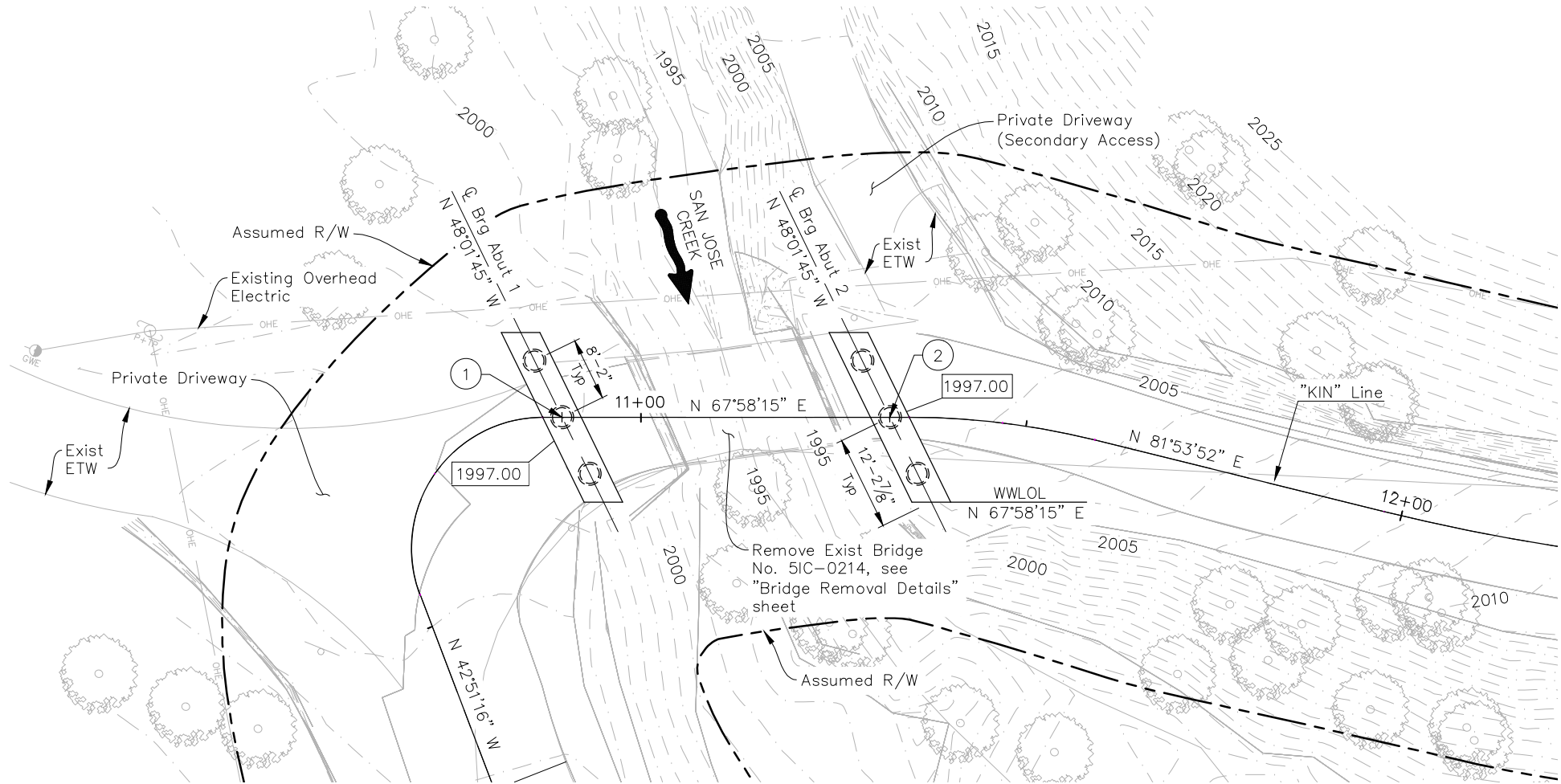


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COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES





BEARING LOCATIONS	
☉ Brg Abut 1	☉ Brg Abut 2
① Sta 10+89.78 N 2011852.3236 E 6011673.6833	② Sta 11+32.28 N 2011868.2702 E 6011713.0949

HYDROLOGIC SUMMARY							
Drainage Area = 1.1 square miles							
	Design Flood ²		Base Flood		Overtopping Flood ³		Flood of Record
	Clear-water	Bulked flow	Clear-water	Bulked flow	Clear-water	Bulked	
Frequency (Years)	6	2	100	100	36	7	N/A
Discharge (Cubic feet per second)	470	470	1,080	1,805	850	850	N/A
Water Surface Elevation, ft (Elevation at bridge)	2,000	2,000	2,004	2,005	2,003	2,003	N/A

1. Flood plain data is based upon information available when the plans were prepared and are shown to meet federal requirements. The accuracy of said information is not warranted by the State, County or City and interested or affected parties should make their own investigation.
2. Provide 2'-0" of freeboard within the existing channel walls.
3. Overtopping of the roadway.

BENCHMARK:
See "Road Plans"

- LEGEND:**
- Indicates Bottom of Footing Elevation
 - Indicates 30"Ø CIDH Pile with 36"Ø Isolation Casing

PILE DATA – CIDH PILES						
Location	Pile Type	Cut off Elev (ft)	Compression (k)	Tension (k)	Design * Tip Elev (ft)	Specified Tip Elev (ft)
Abut 1	30" CIDH	1997.25	270	0	1967.00(1); 1967.00(2)	1967.00
Abut 2	30" CIDH	1997.25	280	0	1967.00(1); 1967.00(2)	1967.00

* Design Tip Elevation is controlled by the following demands; (1) Compression; (2) Lateral Loads

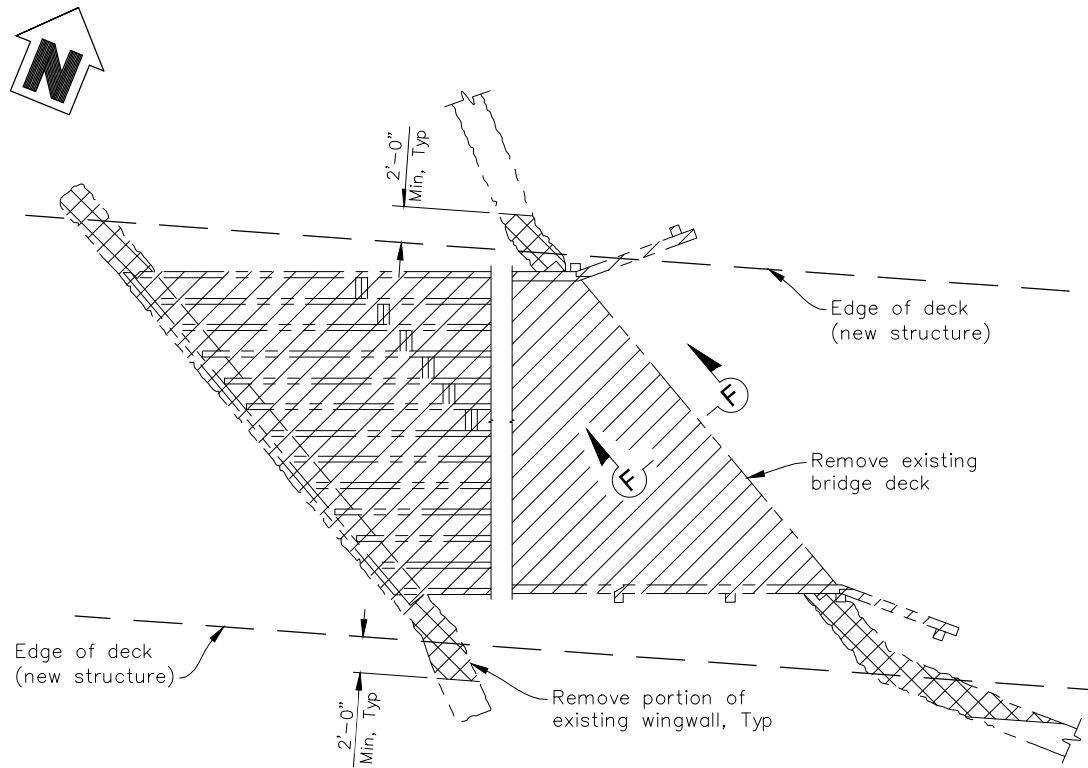
Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

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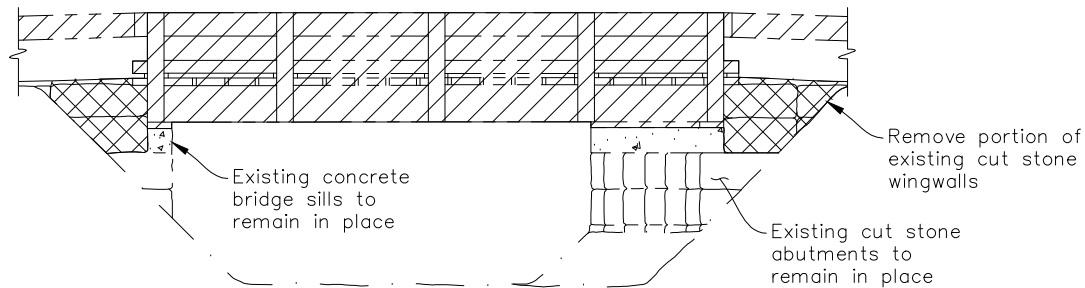
FOUNDATION PLAN
ST-3

CONSTRUCTABILITY REVIEW BY: *		PROJECT ENGINEER:			DESIGN BY: J. GRANT		CHECKED BY:		SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET No. 20 OF 35
LAYOUT BY:					DETAILS BY: K. DRESBACH		CHECKED BY:		AS SHOWN	862328		FILE No. *
SPECIFICATIONS BY:		CHECKED BY:			QUANTITIES BY: J. GRANT		CHECKED BY:		DISREGARD PRINTS BEARING EARLIER REVISION DATES			REVISION DATES (PRELIMINARY STAGE ONLY)
FLOOD CONTROL CHECK BY:		PLANS & SPECS COMPARED BY:		LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD		FOR REDUCED PLANS ORIGINAL SCALE IN INCHES		0 1 2 3				

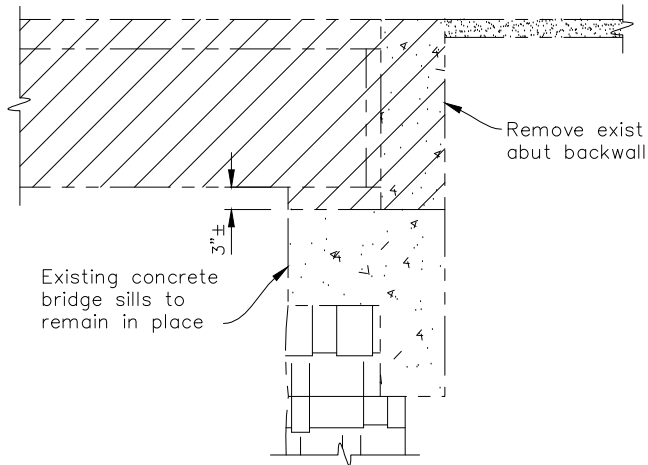
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PLAN



ELEVATION



SECTION F-F

LEGEND:

- Indicates Bridge Removal
- Indicates Limits of Remove Cut Stone Wall

BRIDGE REMOVAL DETAILS
No Scale

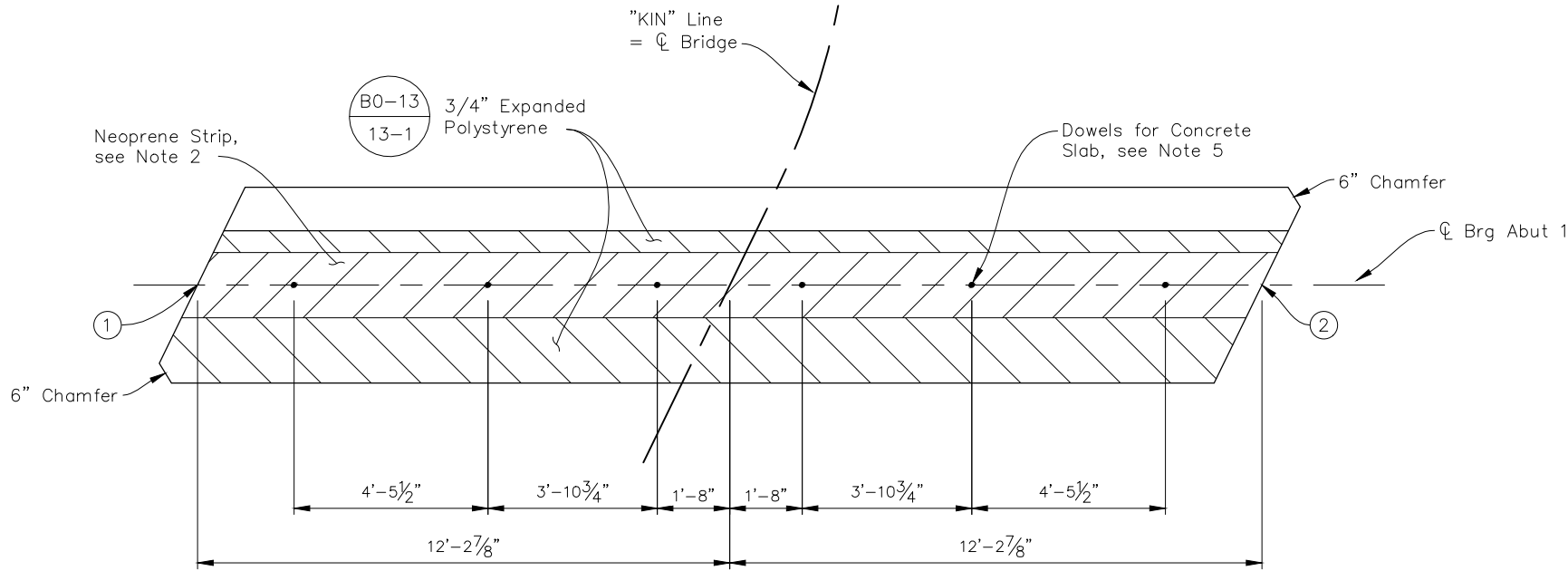
Note:

The Contractor shall verify all contracting field dimensions before ordering or fabricating any material.

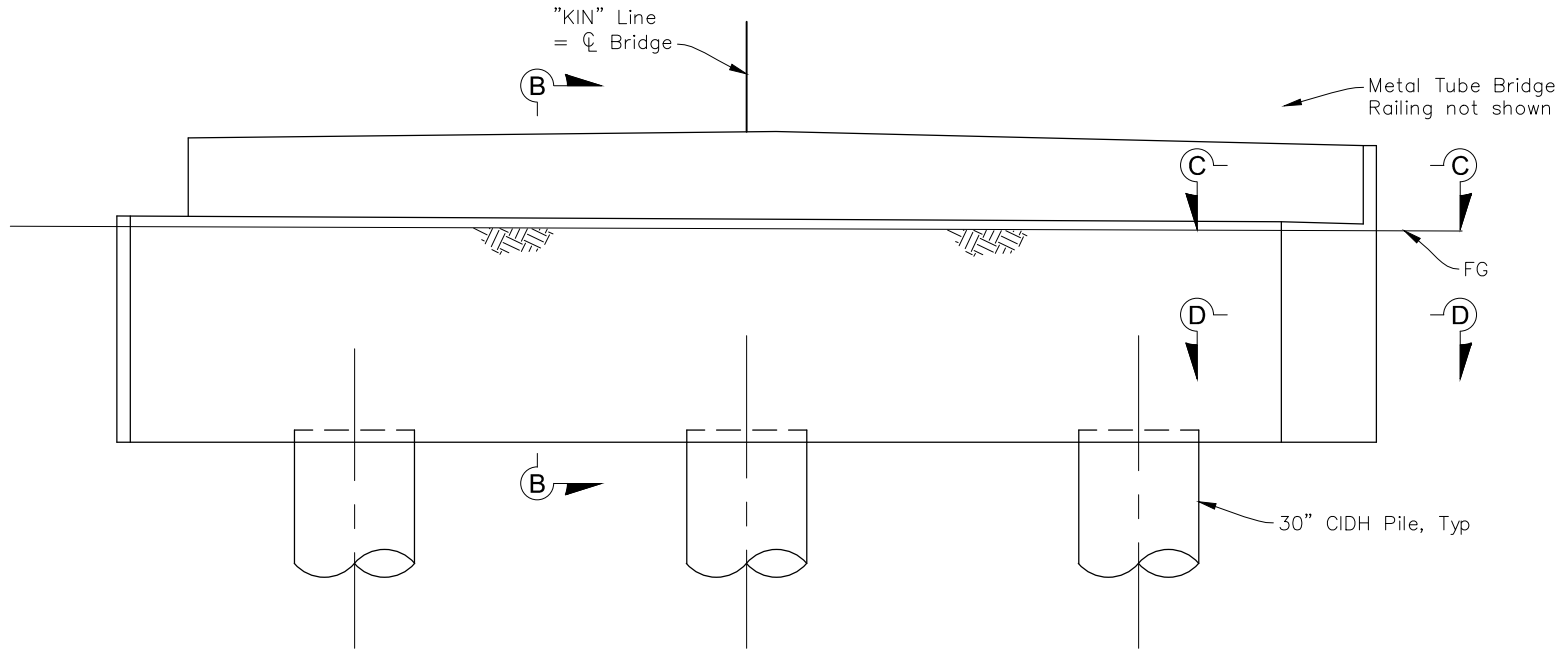
BRIDGE REMOVAL DETAILS
ST-4

CONSTRUCTABILITY REVIEW BY: *		PROJECT ENGINEER: DATE 	COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION		DESIGN BY:	CHECKED BY:	SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372		SHEET No.	
LAYOUT BY:					J. GRANT	*	AS SHOWN	862328			21 OF 35	
SPECIFICATIONS BY:	CHECKED BY:				DETAILS BY:	CHECKED BY:					FILE No.	
*	*				K. DRESBACH	*					*	
FLOOD CONTROL CHECK BY:	PLANS & SPECS COMPARED BY:	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	FOR REDUCED PLANS ORIGINAL SCALE IN INCHES		QUANTITIES BY:	CHECKED BY:	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)			
*	*		01" = 10'-0" 0 1 2 3		J. GRANT	*	09/20/12 01/21/13 04/26/13 • • • • •		• • • • •			

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ABUTMENT 1 PLAN
1/2"=1'-0"



ABUTMENT 1 ELEVATION
1/2"=1'-0"

ABUTMENT SEAT ELEVATIONS AT BRG (Note 4)	
Location	Elevation
①	2001.69
②	2001.56

LEGEND:

Indicates Limits of Neoprene Strip

NOTES:

- For Section B-B, see "Abutment Details No. 1" sheet.
- For Neoprene Strip Detail, see "Detail 1" on "Abutment Details No. 1" sheet.
- For Section C-C and Section D-D, see "Abutment Details No. 2" sheet.
- Abutment seat elevations are based on 3/4" thick neoprene strip.
- For dowel details, see "Precast Slab Details No. 1" sheet.

Note:

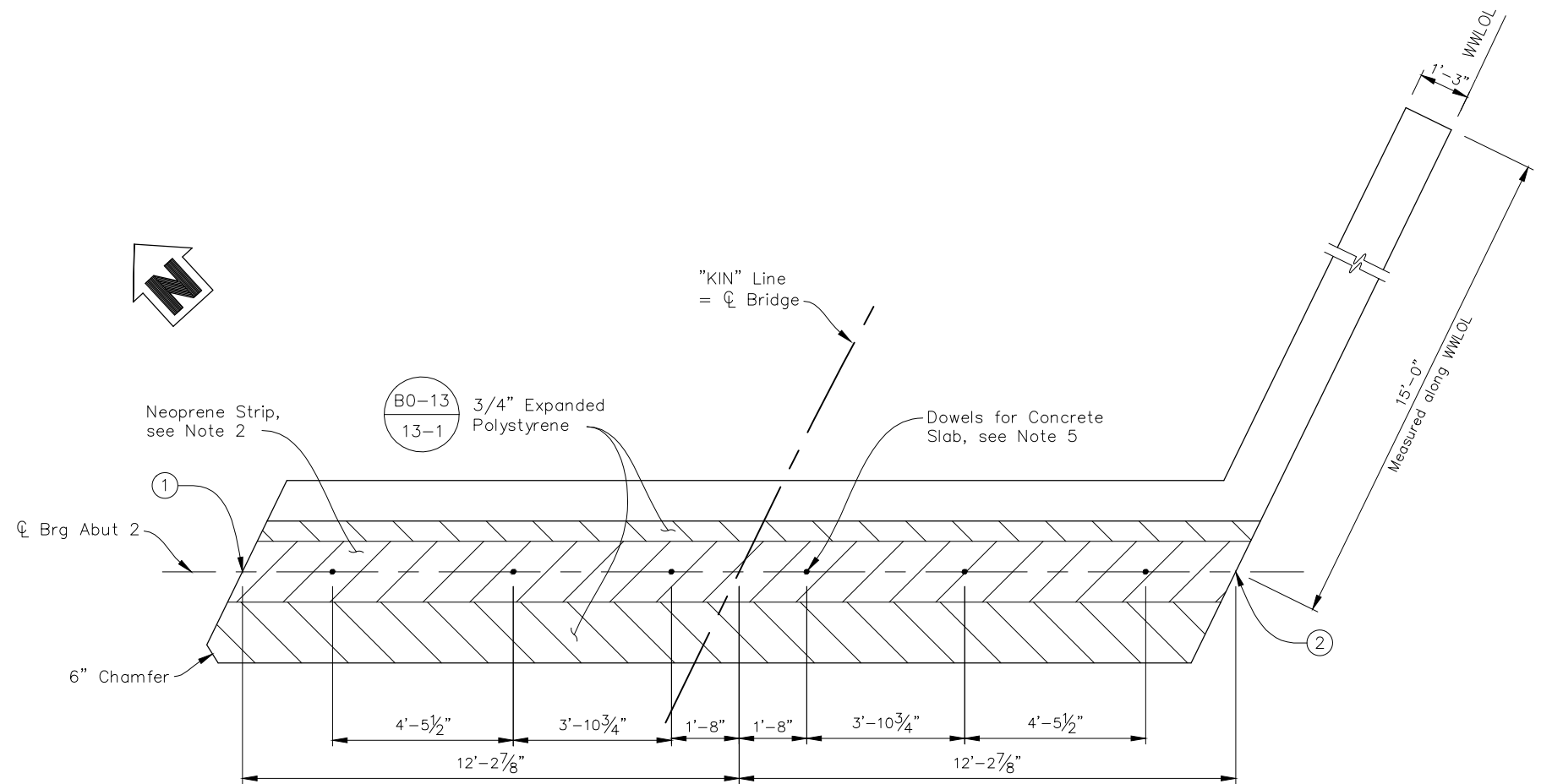
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

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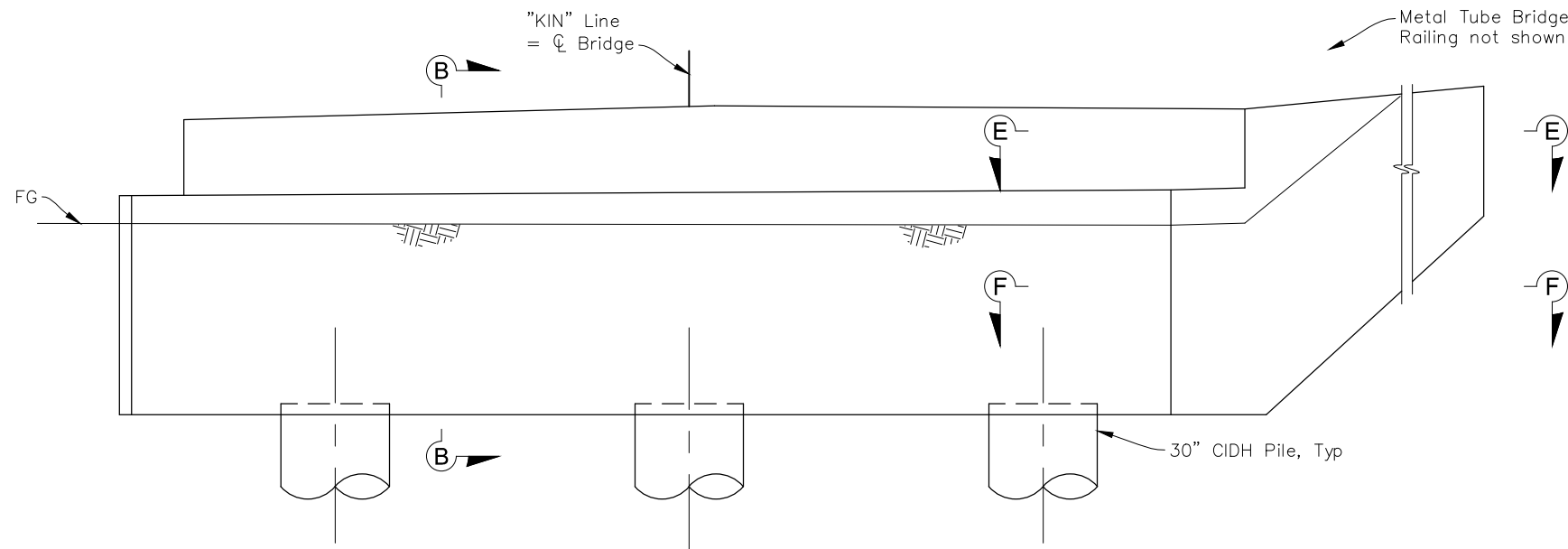
ABUTMENT 1 LAYOUT
ST-5

CONSTRUCTABILITY REVIEW BY: *		PROJECT ENGINEER:			DESIGN BY: J. GRANT		CHECKED BY: *		SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET No. 22 OF 35		
LAYOUT BY: *					DETAILS BY: K. DRESBACH		CHECKED BY: *		AS SHOWN	862328		FILE No. *		
SPECIFICATIONS BY: *		CHECKED BY: *												
FLOOD CONTROL CHECK BY: *		PLANS & SPECS COMPARED BY: *			LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD		QUANTITIES BY: J. GRANT		CHECKED BY: *			DISREGARD PRINTS BEARING EARLIER REVISION DATES		
													REVISION DATES (PRELIMINARY STAGE ONLY)	
													09/24/12 01/21/13 04/26/13	

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ABUTMENT 2 PLAN
1/2"=1'-0"



ABUTMENT 2 ELEVATION
1/2"=1'-0"

ABUTMENT SEAT ELEVATIONS AT BRG (Note 4)	
Location	Elevation
①	2002.07
②	2002.21

LEGEND:

Indicates Limits of Neoprene Strip

NOTES:

- For Section B-B, see "Abutment Details No. 1" sheet.
- For Neoprene Strip Detail, see "Detail 1" on "Abutment Details No. 1" sheet.
- For Sections E-E and F-F, see "Abutment Details No. 2" sheet.
- Abutment seat elevations are based on 3/4" thick neoprene strip.
- For dowel details, see "Precast Slab Details No. 1" sheet.

Note:

The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

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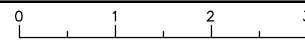
ABUTMENT 2 LAYOUT
ST-6

CONSTRUCTABILITY REVIEW BY: *		PROJECT ENGINEER:		DESIGN BY:		CHECKED BY:		SCALE:		PROJECT NO.		SHEET No.	
LAYOUT BY:				J. GRANT		*		AS SHOWN		862328		23 OF 35	
SPECIFICATIONS BY:		CHECKED BY:		DETAILS BY:		CHECKED BY:						FILE No.	
*		*		K. DRESBACH		*						*	
FLOOD CONTROL CHECK BY:		PLANS & SPECS COMPARED BY:		LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD		QUANTITIES BY:		CHECKED BY:		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	
*		*				J. GRANT		*				09/24/12 01/21/13 04/26/13	



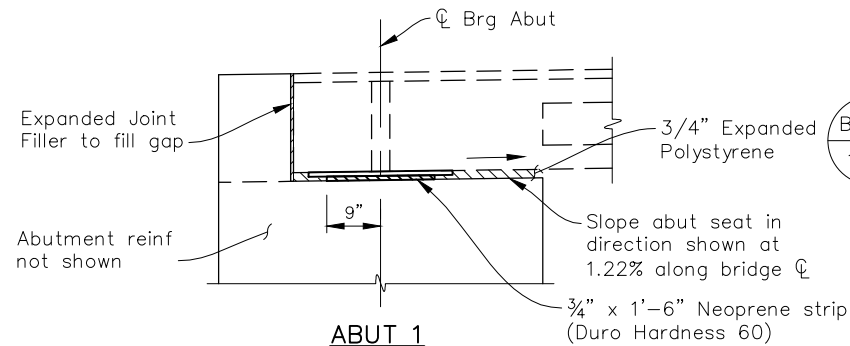
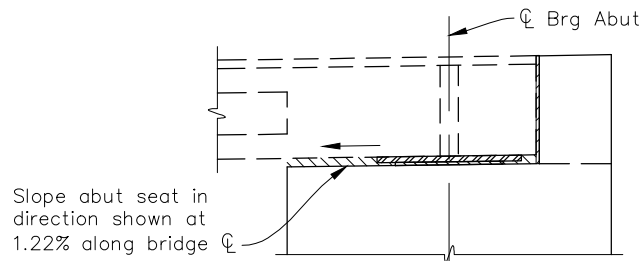
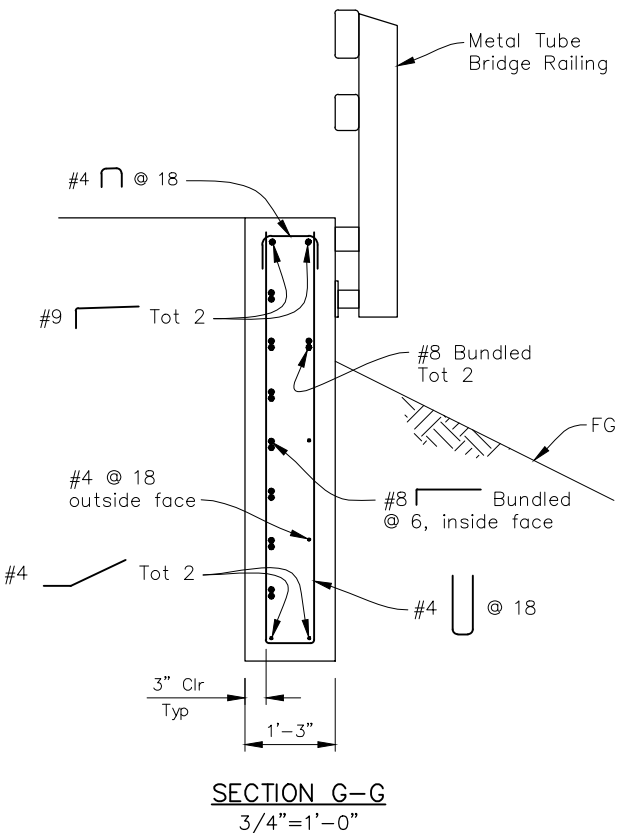
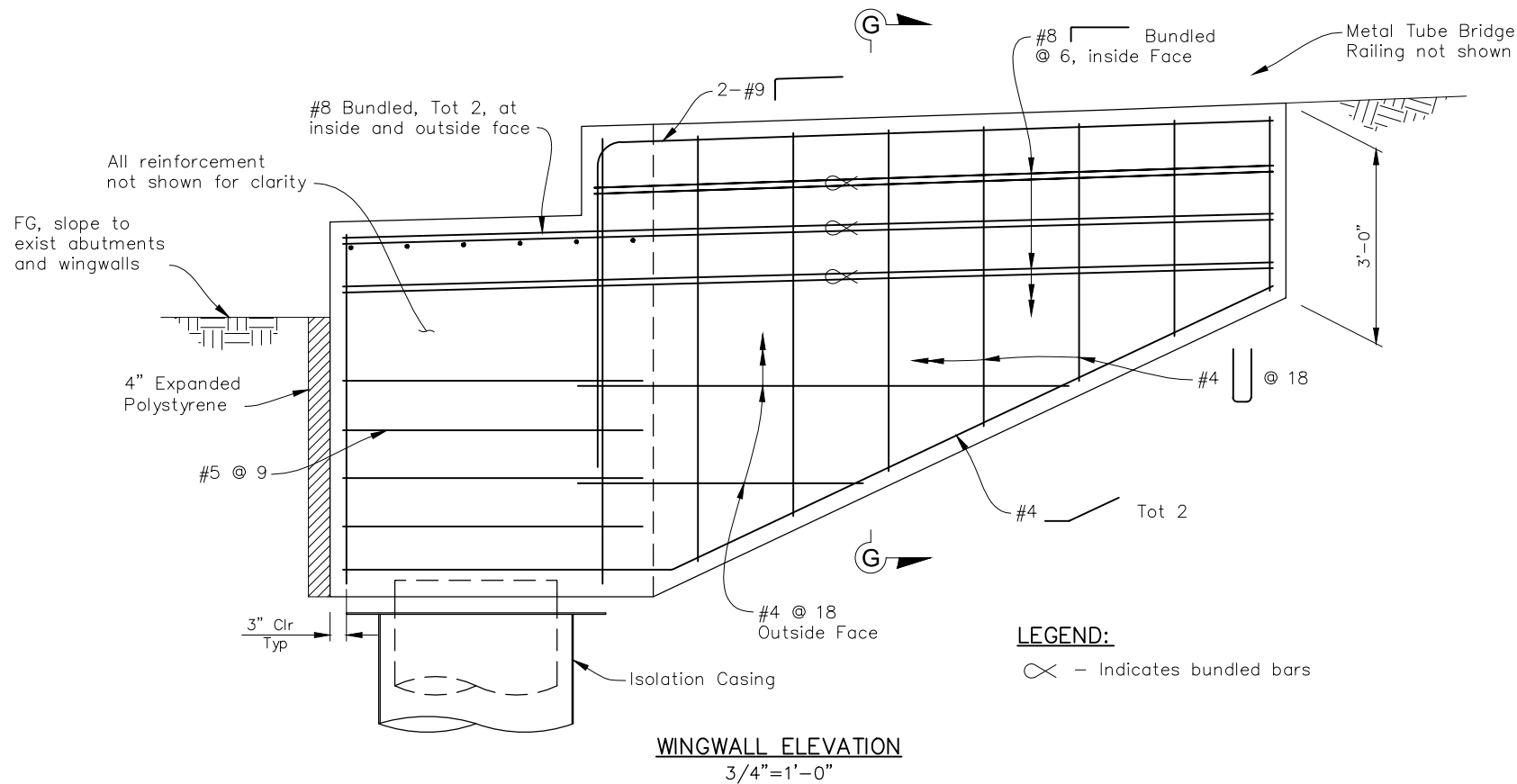
COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES

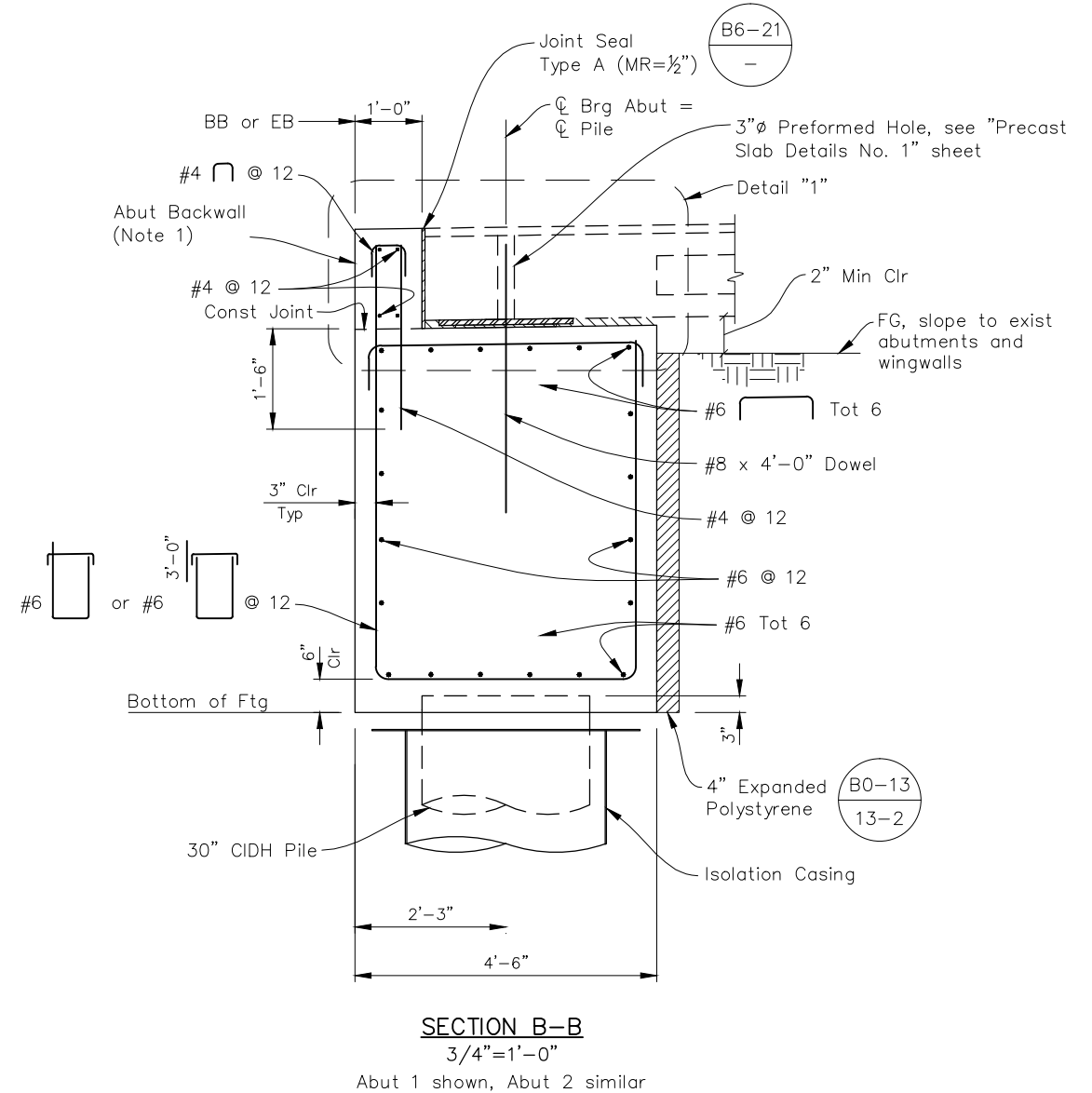


KINEVAN ROAD BRIDGE
OVER SAN JOSE CREEK
BRIDGE No. 51C-0372

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DETAIL 1
3/4"=1'-0"



NOTES:

1. Pour Backwall after PC/PS Concrete Slabs are placed.
2. The abutments cannot be backfilled until after the PC/PS Concrete Slabs are in place. The abutments shall be backfilled simultaneously.

ABUTMENT DETAILS NO. 1
ST-7

Note:

The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

CONSTRUCTABILITY REVIEW BY: *	PROJECT ENGINEER:
LAYOUT BY: *	DATE
SPECIFICATIONS BY: *	CHECKED BY: *
FLOOD CONTROL CHECK BY: *	PLANS & SPECS COMPARED BY: *



95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

DESIGN BY:
J. GRANT
DETAILS BY:
K. DRESBACH

CHECKED BY:
*
CHECKED BY:
*

SCALE:
AS SHOWN
PROJECT NO.
862328

KINEVAN ROAD BRIDGE
OVER SAN JOSE CREEK
BRIDGE No. 51C-0372

SHEET No.
24 OF 35
FILE No.
*

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES

0 1 2 3

QUANTITIES BY:
J. GRANT

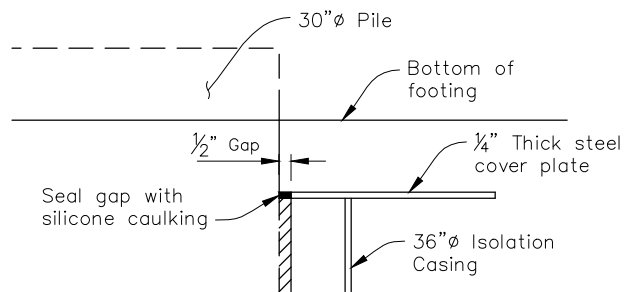
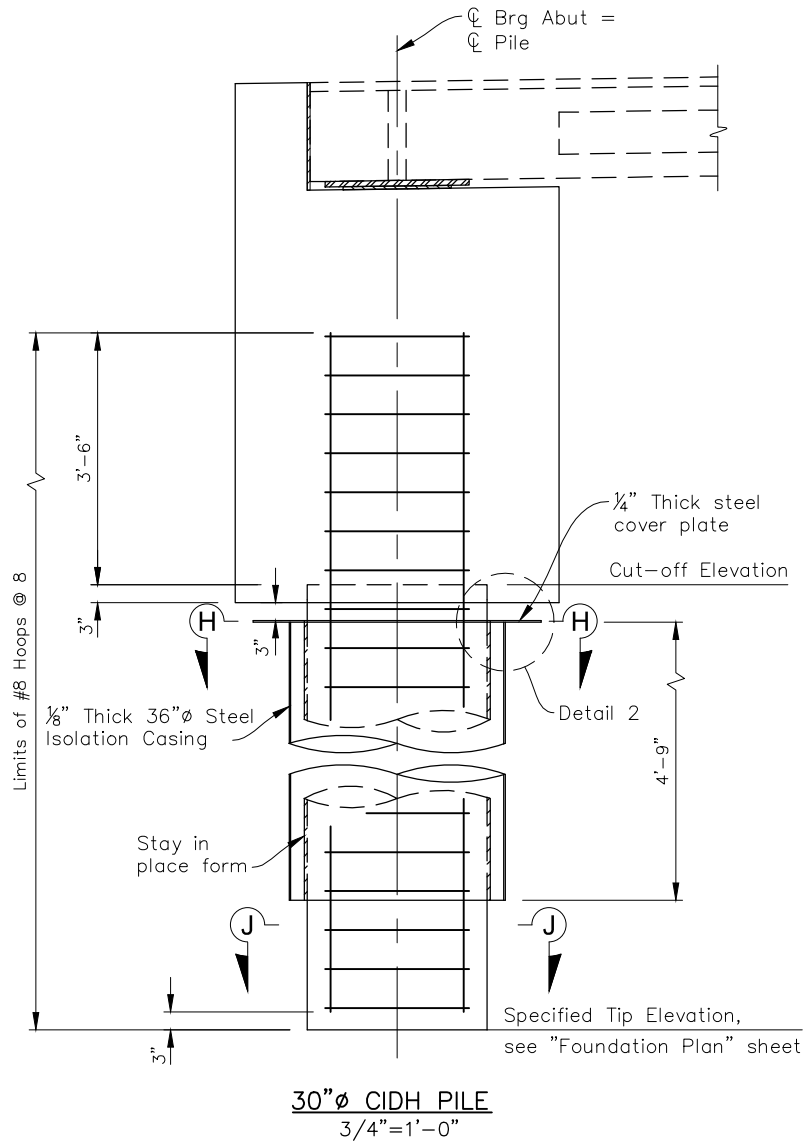
CHECKED BY:
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DISREGARD PRINTS BEARING
EARLIER REVISION DATES

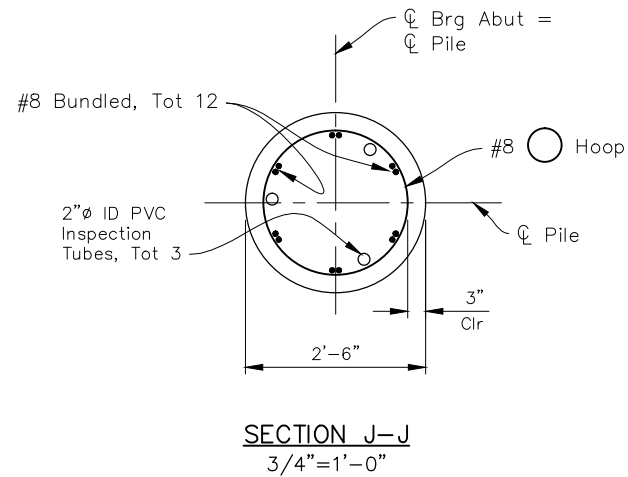
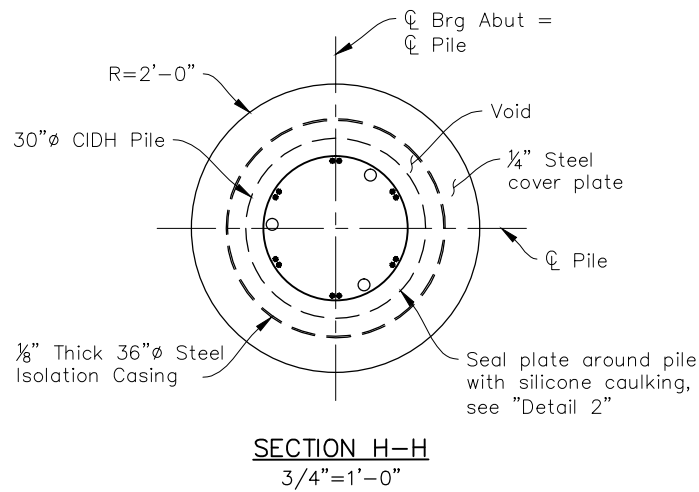
REVISION DATES (PRELIMINARY STAGE ONLY)

09/20/12 01/24/13 04/26/13

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DETAIL 2
No Scale

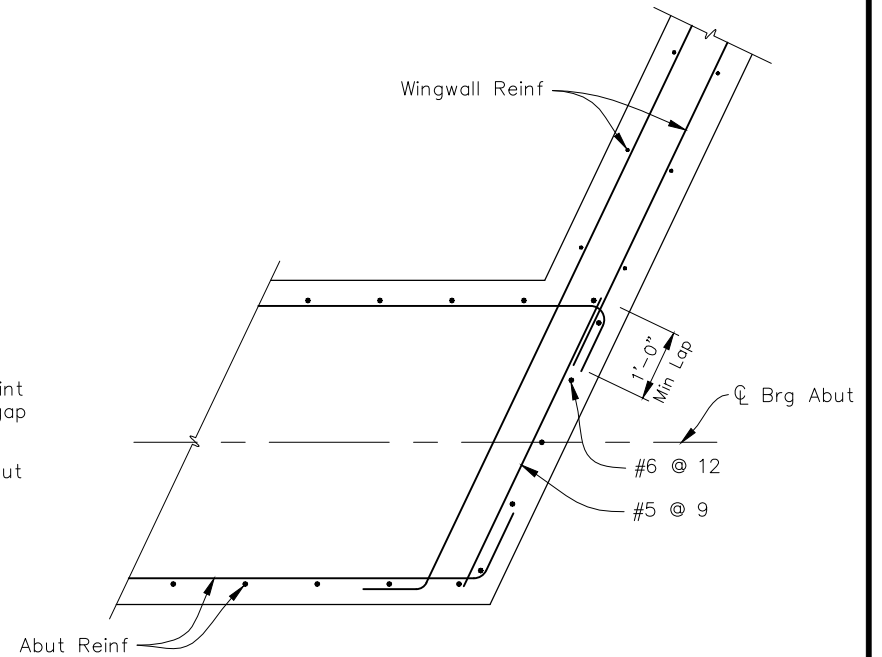
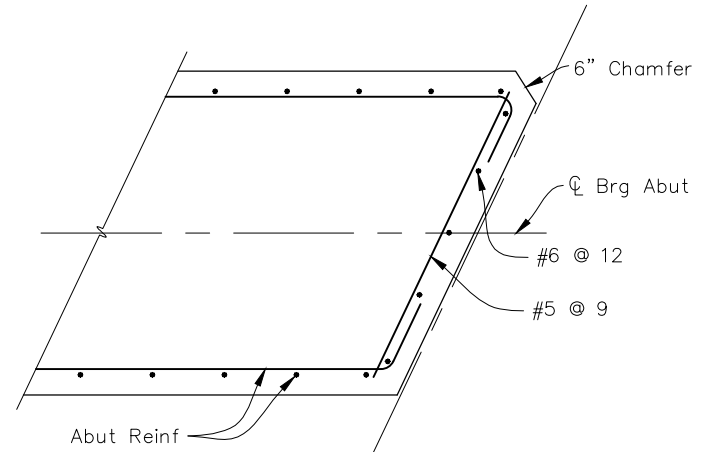
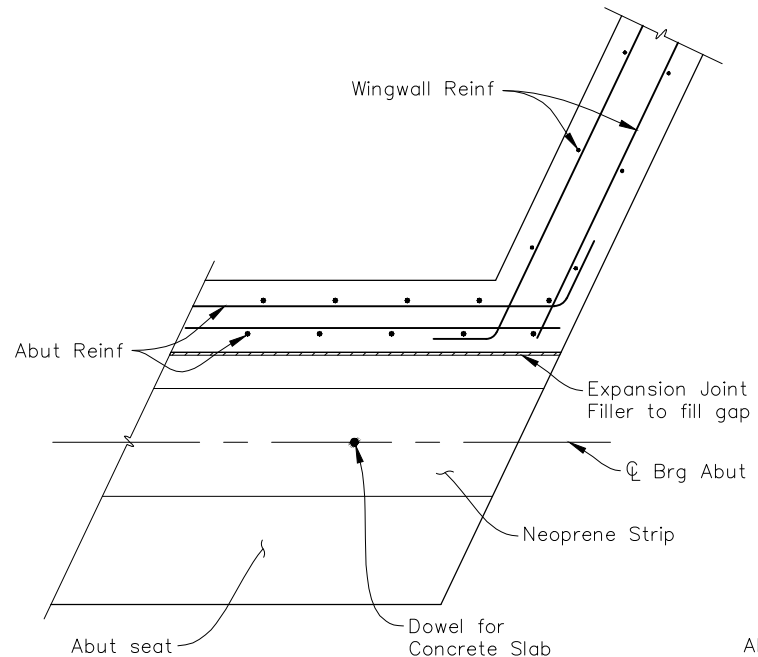
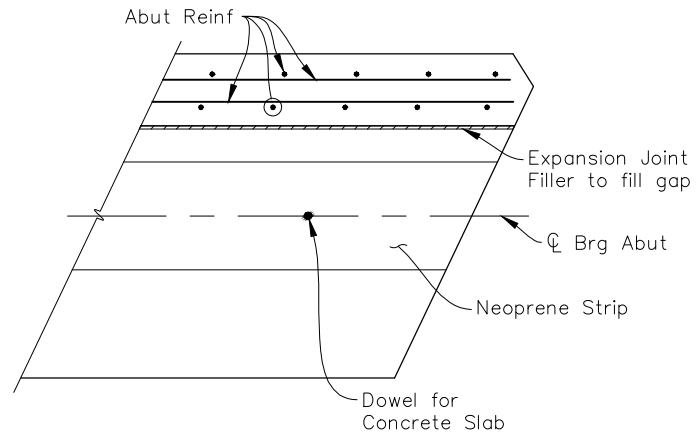


Note:

1. No Splices allowed in Main Longitudinal CIDH Reinforcement



BUTT WELD CONTINUOUS HOOP
No Scale



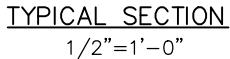
ABUTMENT DETAILS NO. 2
ST-8

Note:

The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

CONSTRUCTABILITY REVIEW BY: *		PROJECT ENGINEER: _____ DATE		COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DESIGN BY: J. GRANT	CHECKED BY: *	SCALE:	PROJECT NO.	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372	SHEET No. 25 OF 35
LAYOUT BY: *					DETAILS BY: K. DRESBACH	CHECKED BY: *	AS SHOWN	862328		FILE No. *
SPECIFICATIONS BY: *	CHECKED BY: * DATE									
FLOOD CONTROL CHECK BY: *	PLANS & SPECS COMPARED BY: *				LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3				QUANTITIES BY: J. GRANT

CONSTRUCTABILITY REVIEW BY: *	
LAYOUT BY: *	
SPECIFICATIONS BY: *	CHECKED BY: *
FLOOD CONTROL CHECK BY: *	PLANS & SPECS COMPARED BY: *



(A) PC/PS Concrete Slab (Type SIII-48 Modified)

(B) PC/PS Concrete Slab (Type SIII-48)

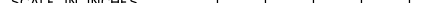
(C) PC/PS Concrete Slab (Type SIII-36)

1. See "Precast Slab Details No. 2" sheet for PC/PS Concrete Slab details.

95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION



FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES



DESIGN BY:
J. GRANT
DETAILS BY:
K. DRESBACH

QUANTITIES BY:
J. GRANT

CHECKED BY:
*
CHECKED BY:
*

CHECKED BY:

SCALE:

PROJECT NO.

862328

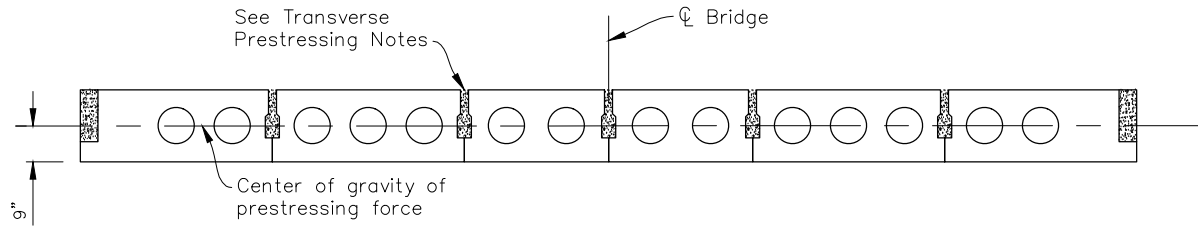
KINEVAN ROAD BRIDGE
OVER SAN JOSE CREEK
BRIDGE No. 51C-0372

SHEET No.
26 OF 35
FILE No.
*

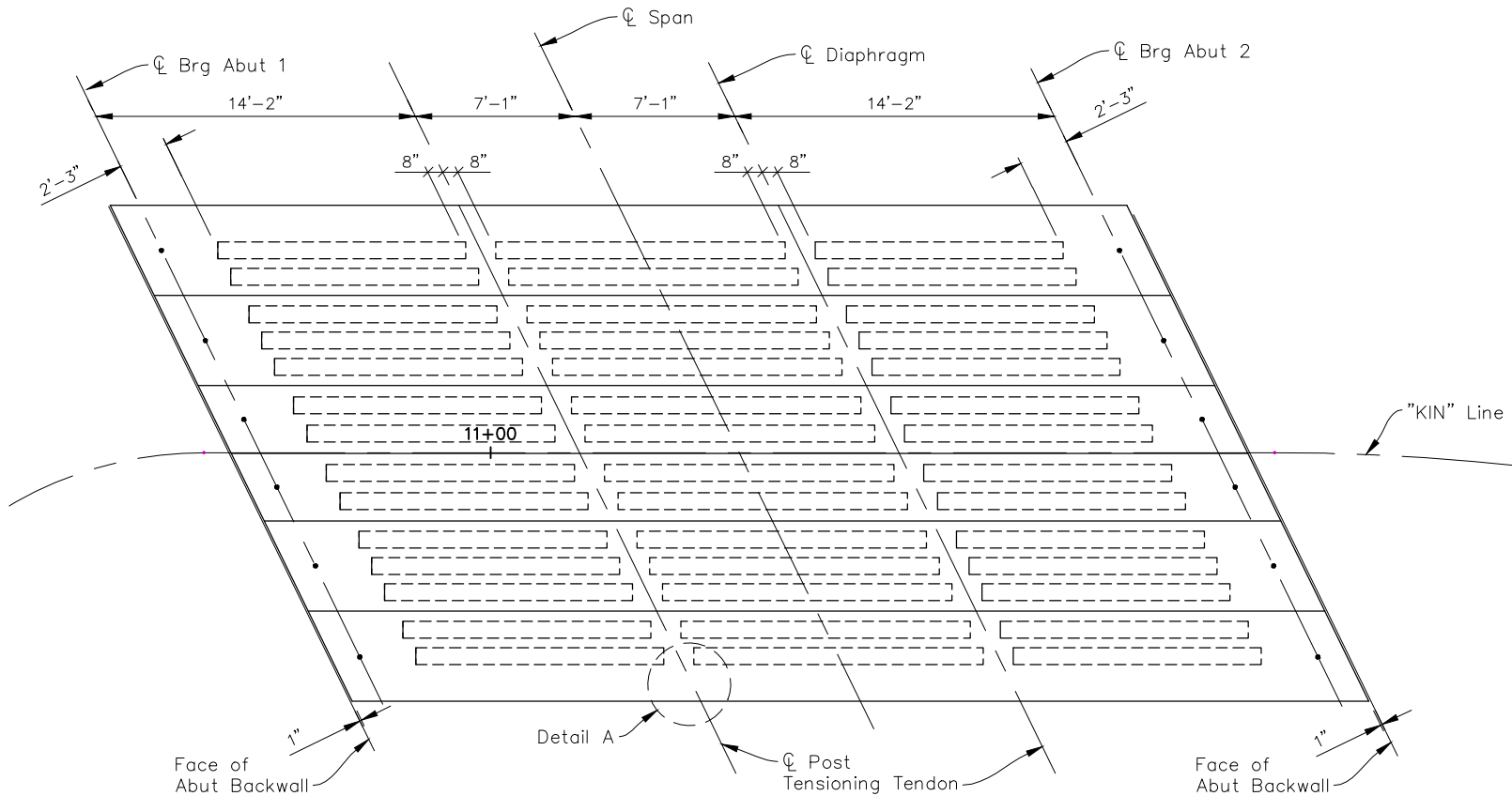
DISREGARD PRINTS BEARING
EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)									
09/04/12	01/14/13	04/24/13	*	*	*	*	*	*	*

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POST TENSIONING DETAIL
1/2"=1'-0"



PRECAST PRESTRESSED CONCRETE SLAB LAYOUT
1/4"=1'-0"

TRANSVERSE PRESTRESSING NOTES

270 ksi low relaxation strand:

P-jack 280 kips

Anchor set: 3/8"

The Contractor shall submit working drawings to the Engineer for approval. The working drawings shall include any addition or rearrangement of reinforcing steel from that shown on the plans.

Design is based on $u=0.15$ and $k=0.0002$.

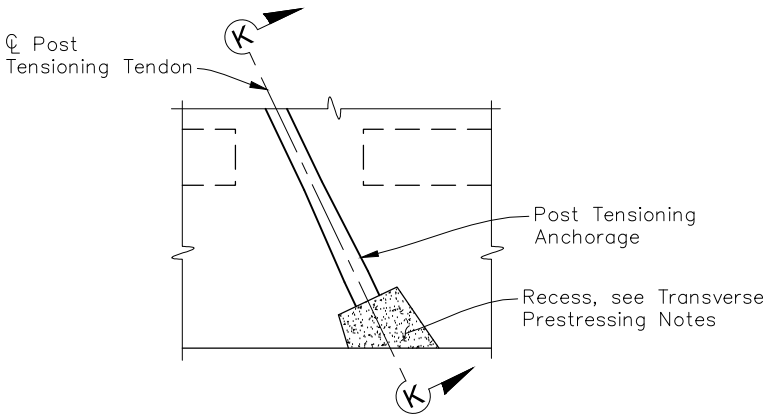
The post tensioning tendons shall be tensioned to snug tight conditions to close bottom gaps between girders.

After post tensioning tendons are snug tight, grout the key-ways and holes at abutments with non-shrink grout with minimum compressive strength of 5000 psi (in 24 hours). Allow grout to cure for 24 hours before stressing to final force.

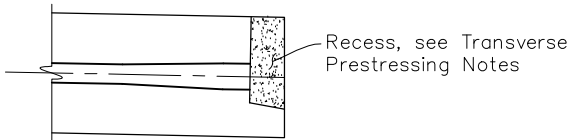
Pressure grout duct and fill recess with non-shrink grout.

Differential deflection is anticipated between the girders. The Contractor shall be prepared to temporarily correct the differential camber in order to align the openings for installing the post tensioning.

P-jack specified is per diaphragm, total 2 diaphragms.



DETAIL A
1"=1'-0"



SECTION K-K
1"=1'-0"

NOTE:

1. Precast Concrete Slabs to be oriented at N 67°58'15" E.

Note:

The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

CONSTRUCTABILITY REVIEW BY: *	
LAYOUT BY: *	
SPECIFICATIONS BY: *	CHECKED BY: *
FLOOD CONTROL CHECK BY: *	PLANS & SPECS COMPARED BY: *

PROJECT ENGINEER:

DATE

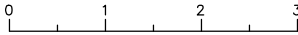
LIVE LOADING: HS20-44 AND ALTERNATIVE
AND PERMIT DESIGN LOAD



95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES



DESIGN BY:
J. GRANT
DETAILS BY:
K. DRESBACH

QUANTITIES BY:
J. GRANT

CHECKED BY:
*
CHECKED BY:
*

CHECKED BY:
*

SCALE:
AS SHOWN

PROJECT NO.
862328

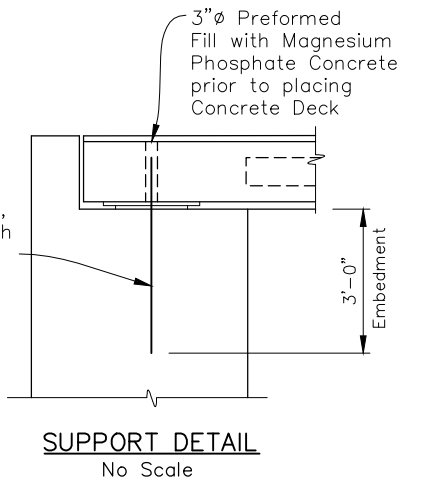
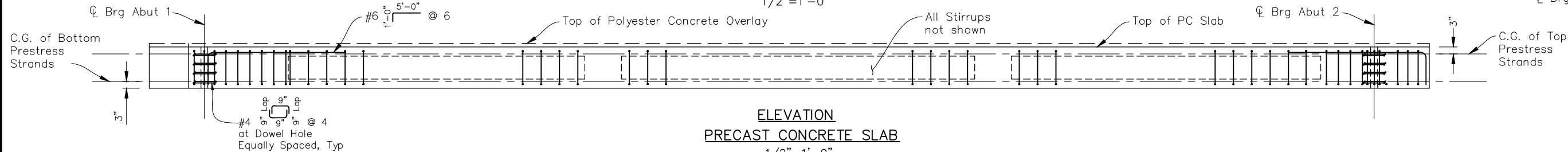
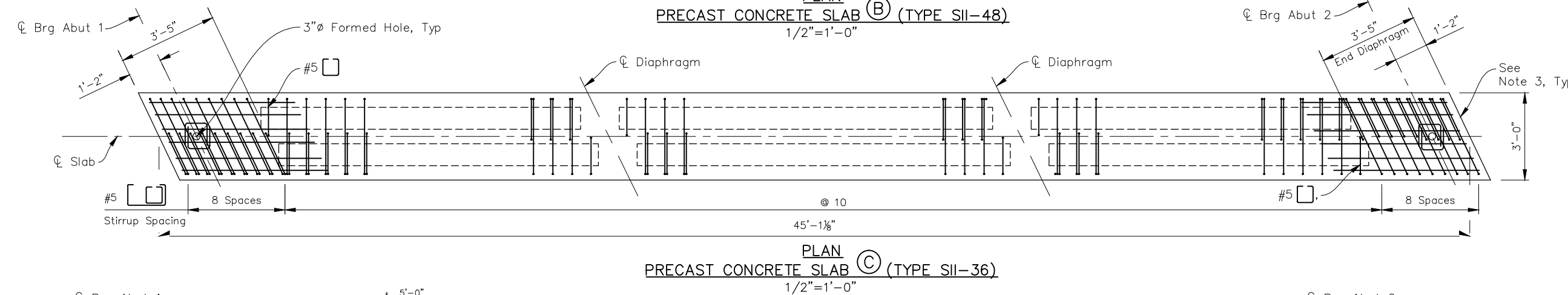
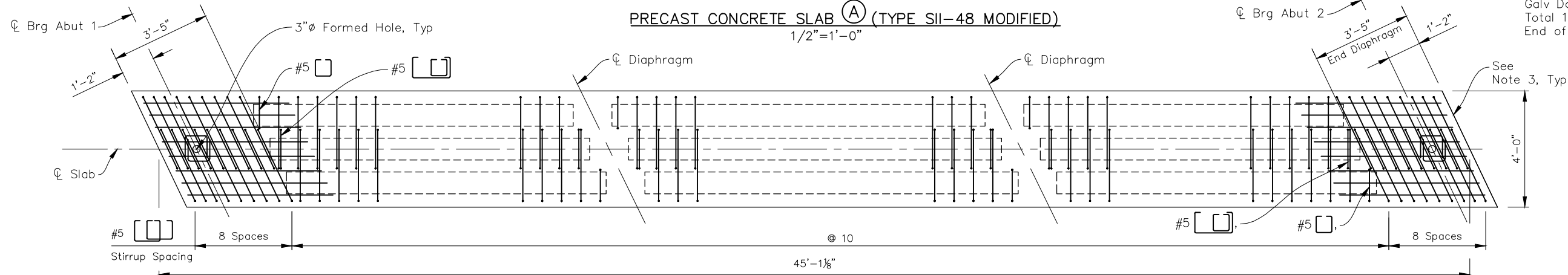
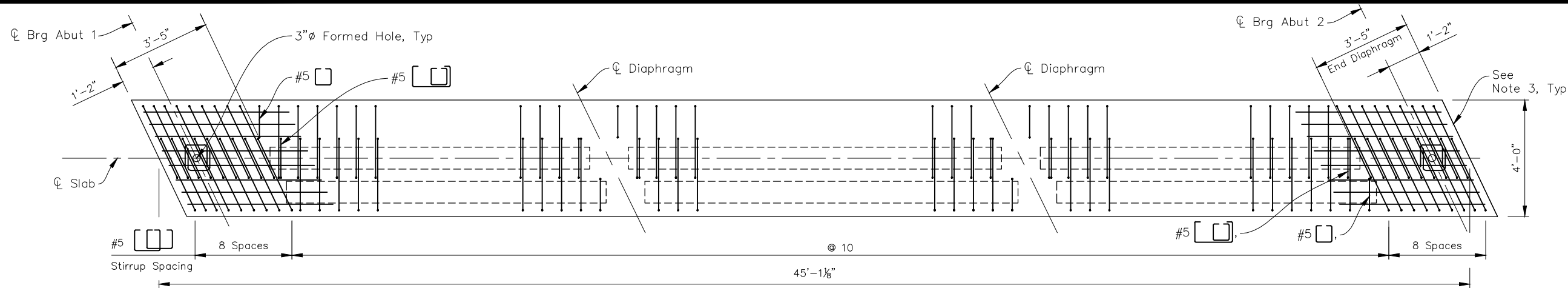
KINEVAN ROAD BRIDGE
OVER SAN JOSE CREEK
BRIDGE No. 51C-0372

SHEET No.
27 OF 35
FILE No.
*

DISREGARD PRINTS BEARING
EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

U:\10014 - County of Santa Barbara\400 Project Design Files\430 Bridges & Structures\Kinevan Rd.dwg, 4/29/2013 4:42 PM, Keith Dresbach



- NOTES:**
- No exterior Void in PC Slab A
 - For Precast Slab A, Precast Slab B and Precast Slab C Details, see "Precast Slab Details No. 2" sheet.
 - End of girder shall be cast parallel to Brg Abut.

Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

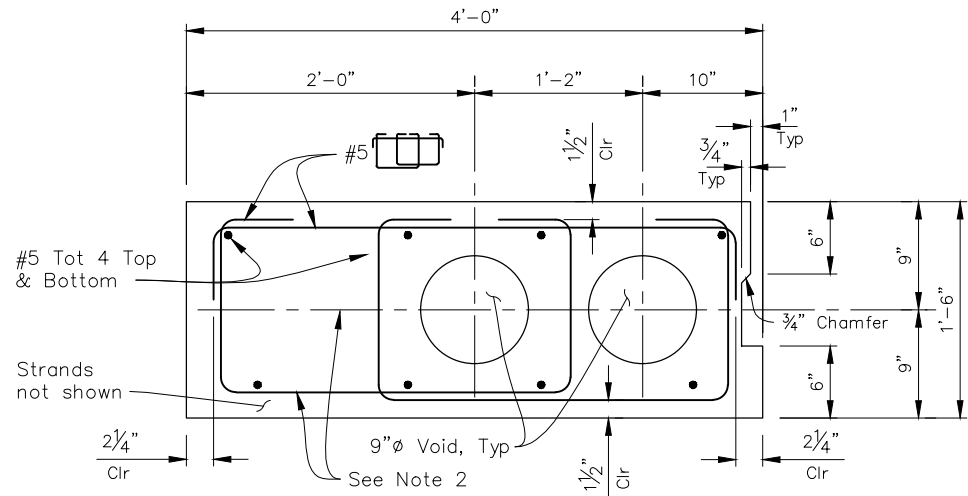
Precast Slab A shown, Precast Slabs B & C are similar

95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

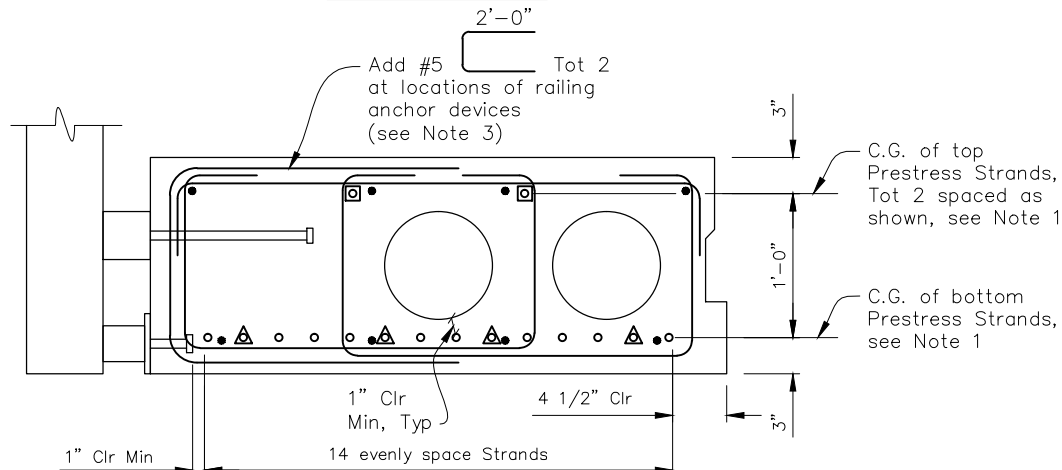
**PRECAST SLAB DETAILS NO. 1
ST-11**

CONSTRUCTABILITY REVIEW BY: *		PROJECT ENGINEER: DATE  COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION	DESIGN BY: J. GRANT	CHECKED BY: *	SCALE: AS SHOWN	PROJECT NO. 862328	KINEVAN ROAD BRIDGE OVER SAN JOSE CREEK BRIDGE No. 51C-0372 SHEET No. 28 OF 35 FILE No. *
LAYOUT BY: *			DETAILS BY: K. DRESBACH	CHECKED BY: *			
SPECIFICATIONS BY: *	CHECKED BY: *						
FLOOD CONTROL CHECK BY: *	PLANS & SPECS COMPARED BY: *		QUANTITIES BY: J. GRANT	CHECKED BY: *	DISREGARD PRINTS BEARING EARLIER REVISION DATES		
LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD			FOR REDUCED PLANS ORIGINAL SCALE IN INCHES		REVISION DATES (PRELIMINARY STAGE ONLY)		
			0 1 2 3		09/24/12 01/24/13 04/24/13		

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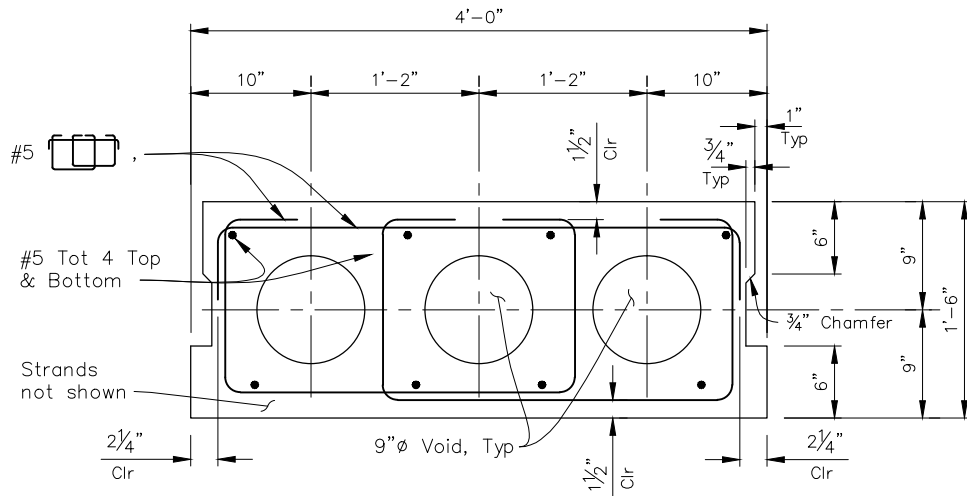


TYPICAL SECTION

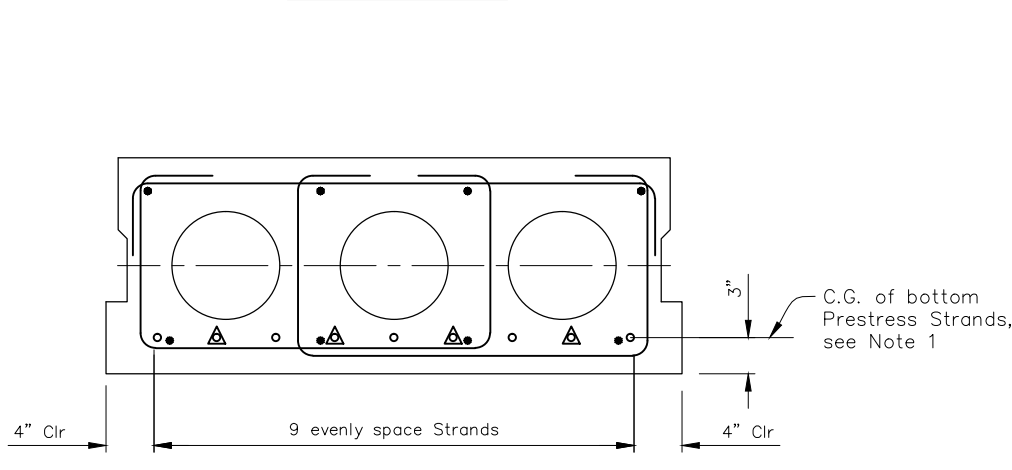


STRAND PATTERN DETAILS

PRECAST CONCRETE SLAB **A** (TYPE SIII-48 MODIFIED)
1 1/2"=1'-0"

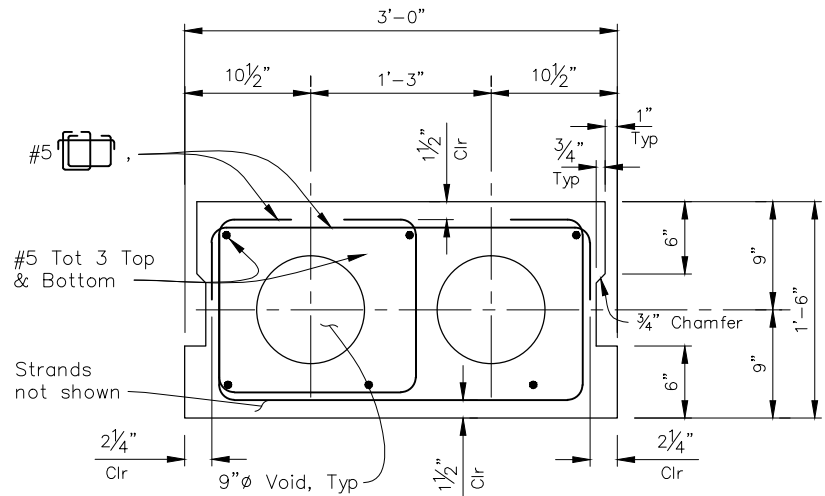


TYPICAL SECTION

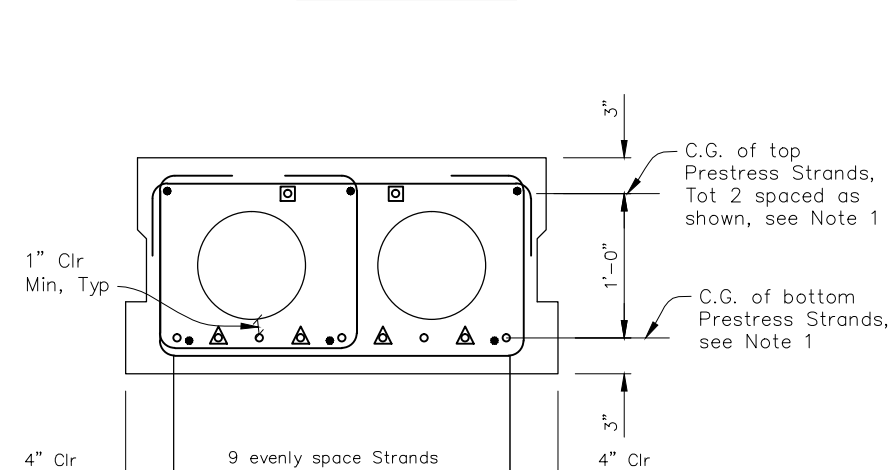


STRAND PATTERN DETAILS

PRECAST CONCRETE SLAB **B** (TYPE SIII-48)
1 1/2"=1'-0"



TYPICAL SECTION



STRAND PATTERN DETAILS

PRECAST CONCRETE SLAB **C** (TYPE SIII-36)
1 1/2"=1'-0"

LEGEND:

- △ Denotes Strand to be debonded 6' each end.
- Denotes middle 26' of strand to be debonded, 13' each side of $\bar{C}$ span.

PRESTRESSING NOTES:

270 ksi Low Relaxation Strands

- Pj is the total Prestress Force required in one Slab Unit at time of stressing prior to release (Initial pull corresponding to 0.75fpu).
- Concrete Strength: f'ci is at time of initial Prestressing.
f'c is at 28 days.
- Deflection Components: Informational – to be used in setting Screed Line Elevations.
- Design Details shown are for Pretensioned Units.
- Contractor may adjust location of Strands as approved by the Engineer.

NOTES:

- Strands should be placed symmetrically about $\bar{C}$ slab.
- The reinforcement may be adjusted to miss the railing anchor device.
- The railing anchors will be placed when the precast slab units are cast. See "Metal Tube Bridge Railing Details No. 1 & No. 2" sheets.
- Strand spacing shall not be less than 2" o/c.

Slab	Jacking Force (P), k	C.G., in	Concrete Strength (ksi)		Deflection Components in Feet	
			f'ci	f'c	Deck DL	Barrier DL
A	620	3	6.0	7.5	0.01'	0.01'
	90	15				
B	400	3	6.0	7.5	0.01'	0.00'
C	400	3	6.0	7.5	0.01'	0.00'
	90	15				

Note:

The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

CONSTRUCTABILITY REVIEW BY: *	LAYOUT BY: *
SPECIFICATIONS BY: *	CHECKED BY: *
FLOOD CONTROL CHECK BY: *	PLANS & SPECS COMPARED BY: *

PROJECT ENGINEER:	DATE
LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	



95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

DESIGN BY:
J. GRANT
DETAILS BY:
K. DRESBACH

QUANTITIES BY:
J. GRANT

CHECKED BY:
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CHECKED BY:
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SCALE:
AS SHOWN

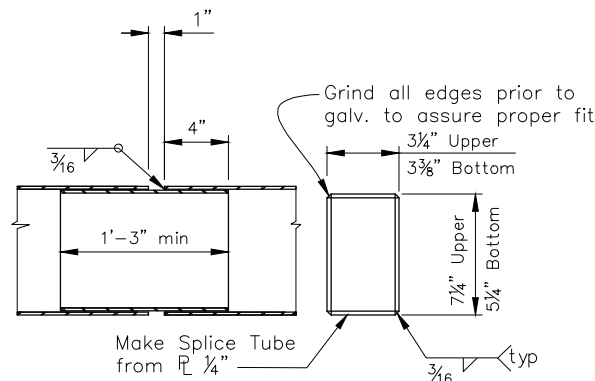
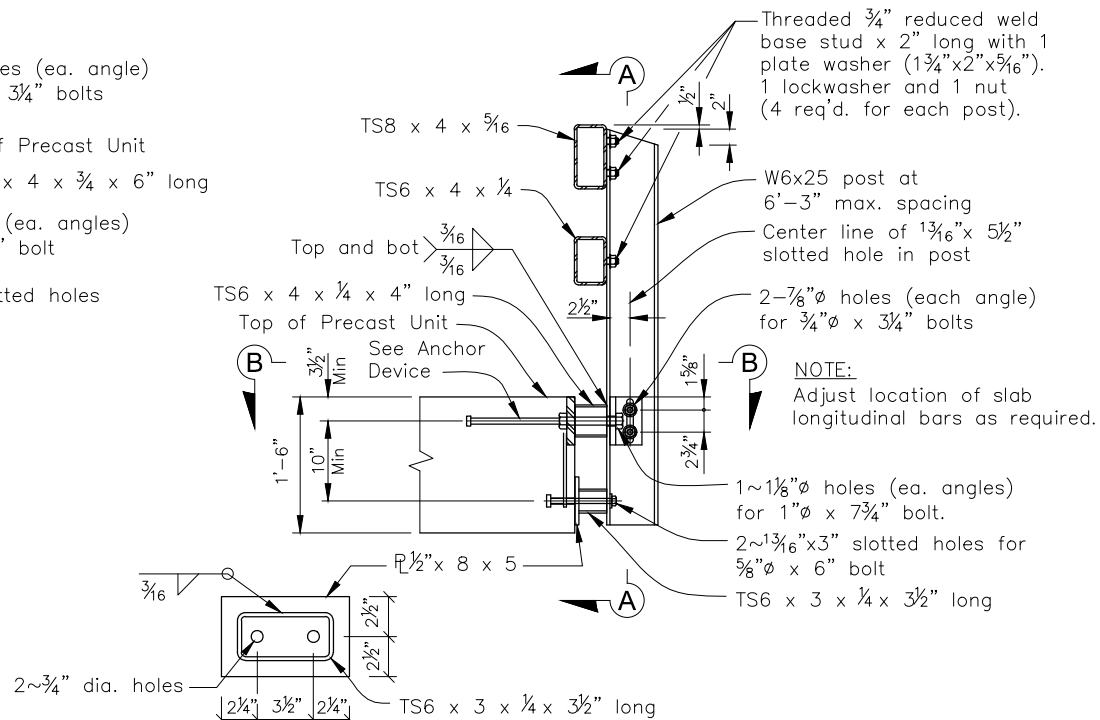
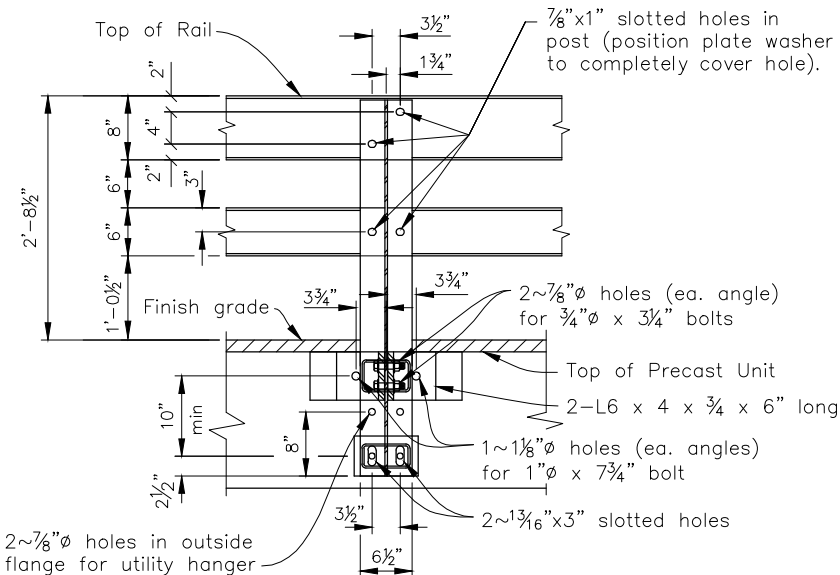
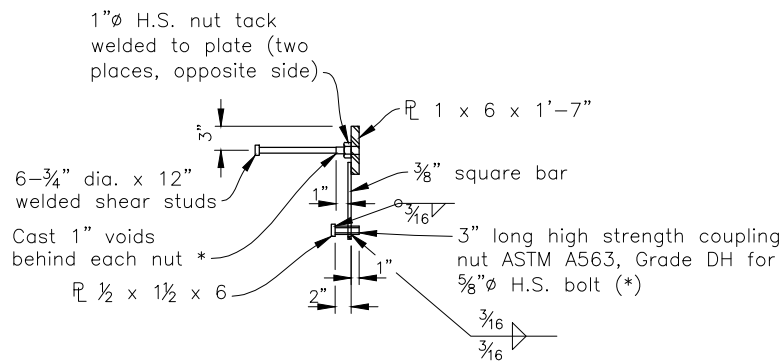
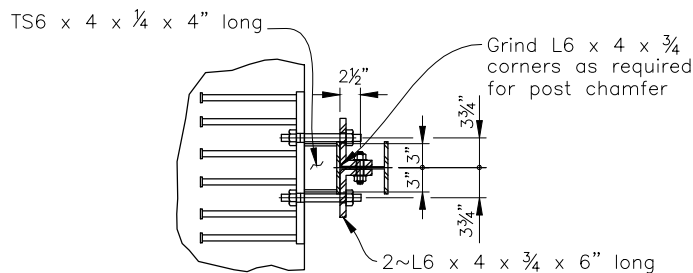
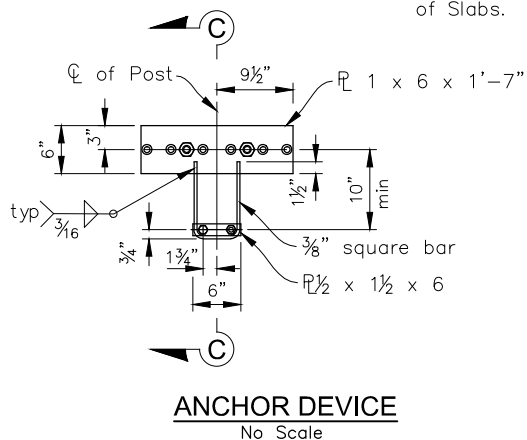
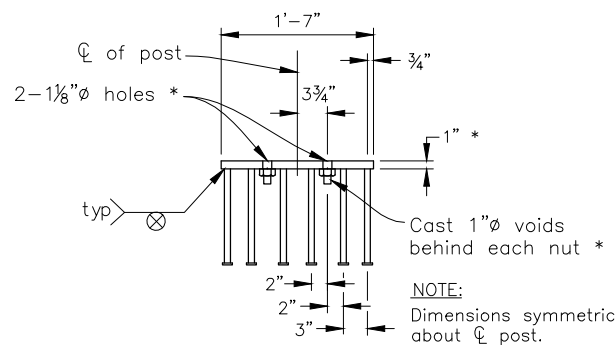
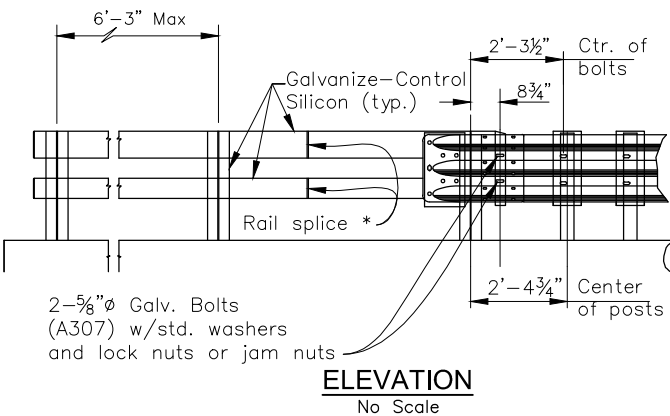
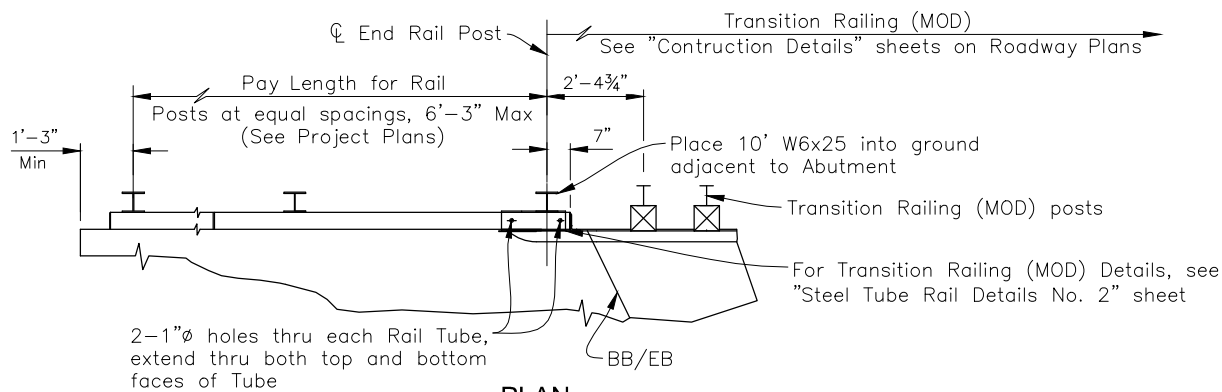
PROJECT NO.
862328

KINEVAN ROAD BRIDGE
OVER SAN JOSE CREEK
BRIDGE No. 51C-0372

SHEET No.
29 OF 35
FILE No.
*

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)
	09/24/12 01/24/13 04/24/13

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GENERAL NOTES:

- Provide steel tubing conforming to ASTM Specification A500, Grade B, A501 or A618.
- Provide structural steel shapes and plates conforming to AASHTO Specification M183 or ASTM A36 unless otherwise noted.
- Provide bolts conforming to AASHTO Specification M164, (ASTM A325) unless otherwise noted.
- Construct rail normal to slab in both the longitudinal and the transverse directions. When wearing surface varies due to beam camber and/or superelevation, vary rail post lengths to provide uniform rail height. Field verify post lengths before fabrication.
- Hot-dip galvanize structural steel including fasteners after fabrication. Provide Galvanize-Control Silicon posts and horizontal rail steel tubing. Tap nuts 0.021+0.01- 0.00 oversize after galvanizing in accordance with ASTM A563.
- Tighten upper post bolts 240° turn past snug tight condition and lower post bolts 120° turn past snug tight condition.
- Adjust reinforcement to clear anchor device as approved by the Engineer. Rail height above surface must be maintained.
- The anchor device shall be placed during prestressed precast slab construction.

METAL TUBE BRIDGE RAILING DETAILS NO. 1 ST-13

Note:

The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

CONSTRUCTABILITY REVIEW BY: *	LAYOUT BY: *
SPECIFICATIONS BY: *	CHECKED BY: *
FLOOD CONTROL CHECK BY: *	PLANS & SPECS COMPARED BY: *

PROJECT ENGINEER:
DATE

LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD



95% PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES

0 1 2 3

DESIGN BY:
J. GRANT
DETAILS BY:
K. DRESBACH

QUANTITIES BY:
J. GRANT

CHECKED BY:
*
CHECKED BY:
*

CHECKED BY:
*

SCALE:
AS SHOWN

PROJECT NO.
862328

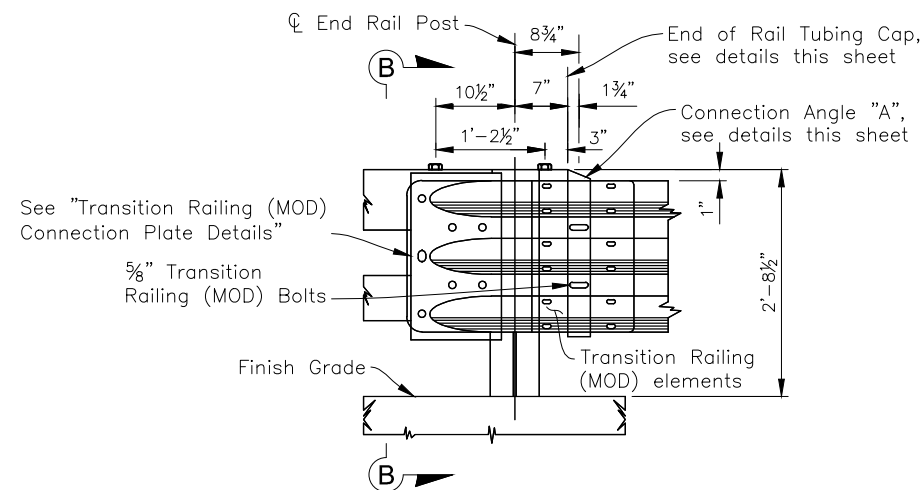
KINEVAN ROAD BRIDGE
OVER SAN JOSE CREEK
BRIDGE No. 51C-0372

SHEET No.
30 OF 35
FILE No.
*

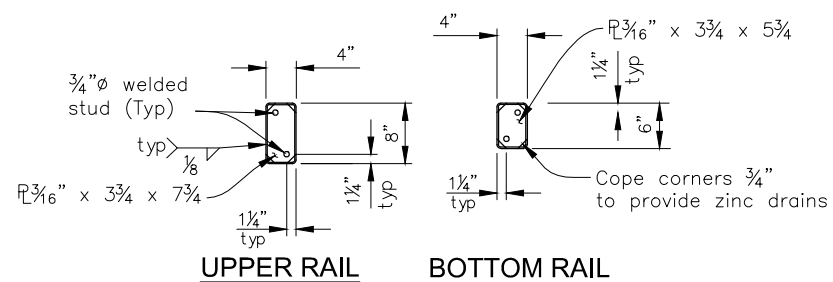
DISREGARD PRINTS BEARING
EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

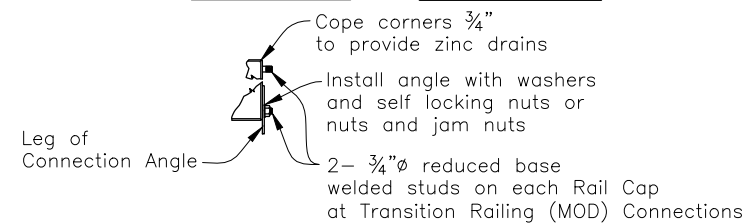
No Scale
Details for Abutment 1 and at crash cushion
on Northeast corner of Abutment 2



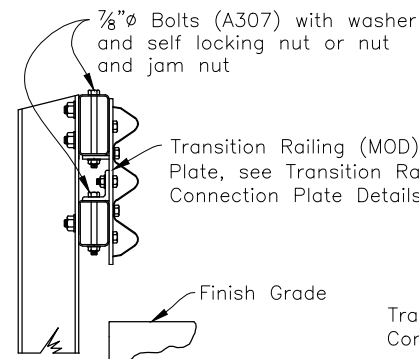
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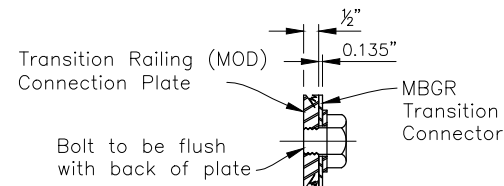
BOTTOM RAIL



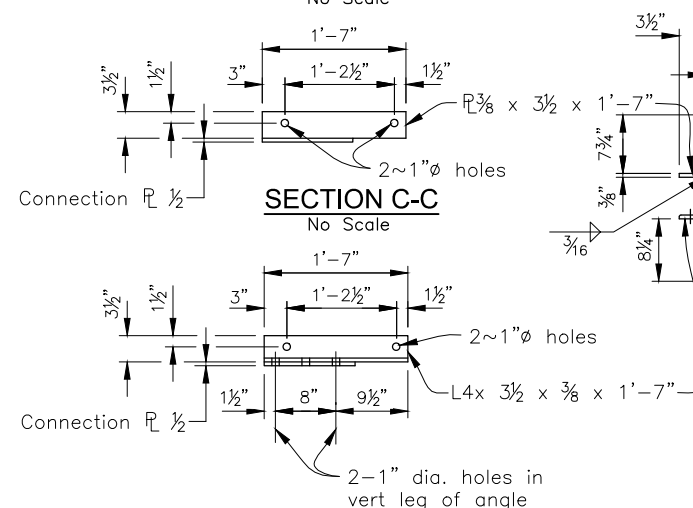
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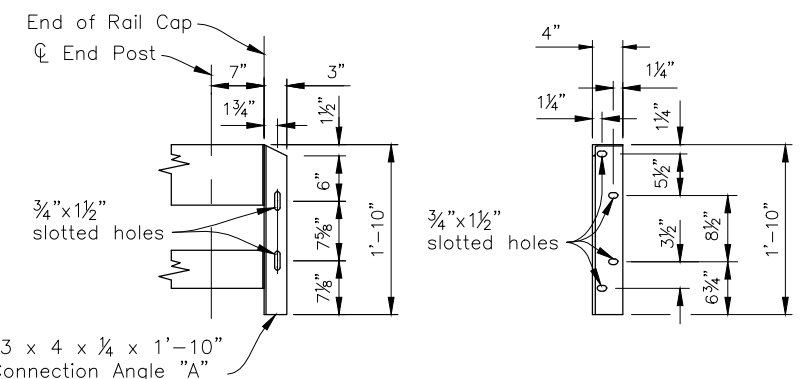
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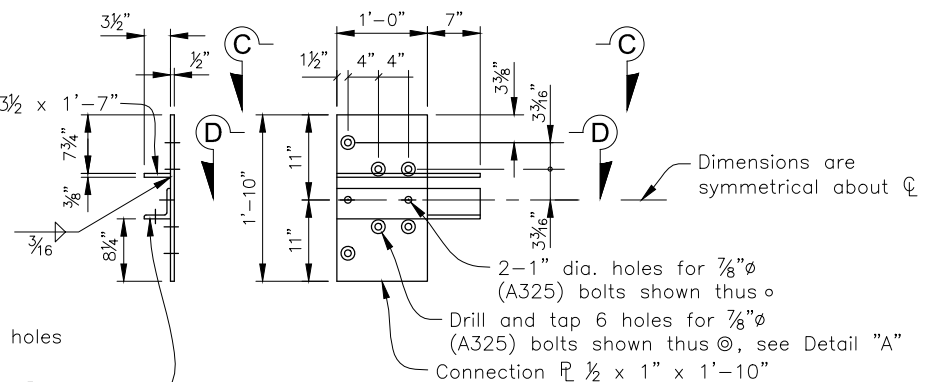
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NOTE:
Verify that all bolt hole locations match Transition Railing (MOD) Connector holes.

PROJECT ENGINEER: _____
DATE _____

LIVE LOADING: HS20-44 AND ALTERNATIVE
AND PERMIT DESIGN LOAD



COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

FOR REDUCED PLANS
ORIGINAL SCALE IN INCHES

A horizontal number line with arrows at both ends. There are four major tick marks labeled 0, 1, 2, and 3. There are also four minor tick marks between each major tick mark, dividing each unit into five equal parts.

QUANTITIES BY:
J. GRANT

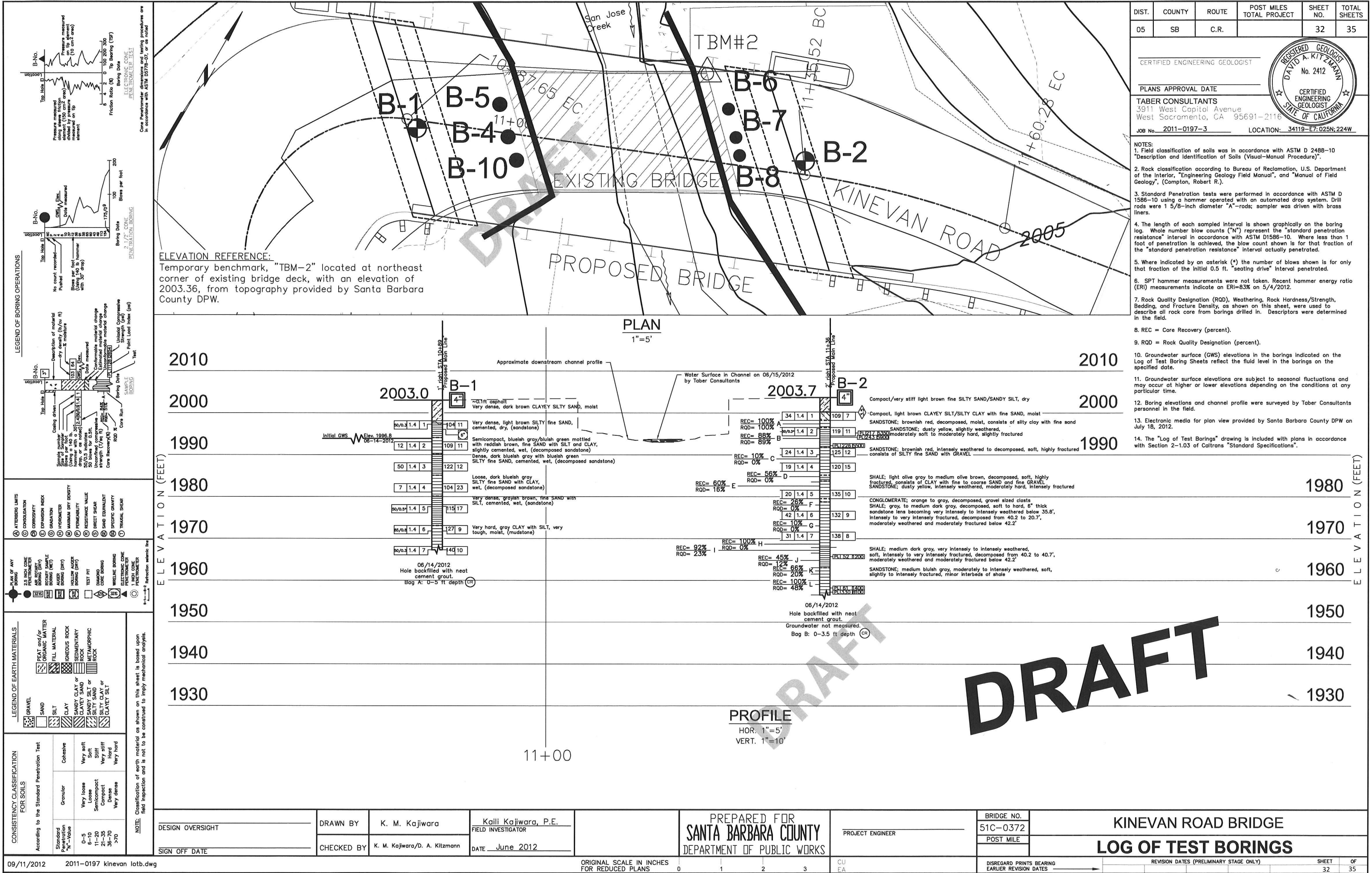
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*	

DISREGARD PRINTS BEARING
EARLIER REVISION DATES —

KINEVAN ROAD BRIDGE
OVER SAN JOSE CREEK
BRIDGE No. 51C-0372

SHEET No.
31 OF 35
FILE No.
*

REVISION DATES (PRELIMINARY STAGE ONLY)



DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	SB	C.R.		33	35

CERTIFIED ENGINEERING GEOLOGIST



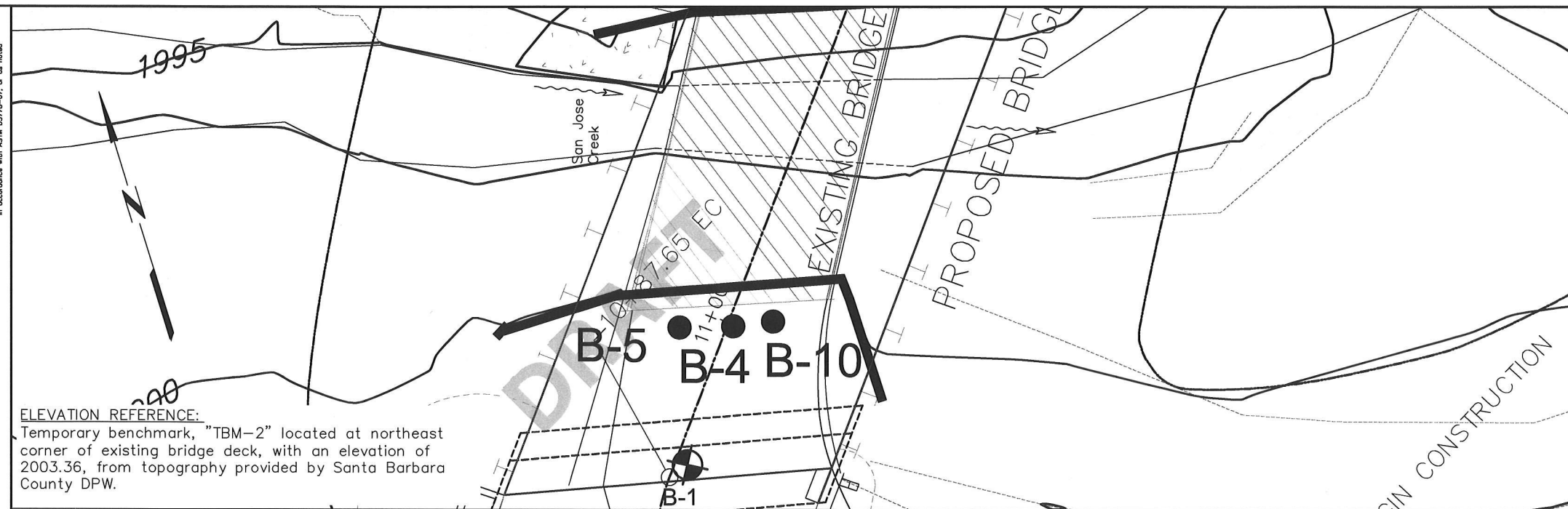
PLANS APPROVAL DATE

TABER CONSULTANTS
3911 West Capitol Avenue
West Sacramento, CA 95691-2116

JOB No. 2011-0197-3 LOCATION: 34119-E7:025N;224W

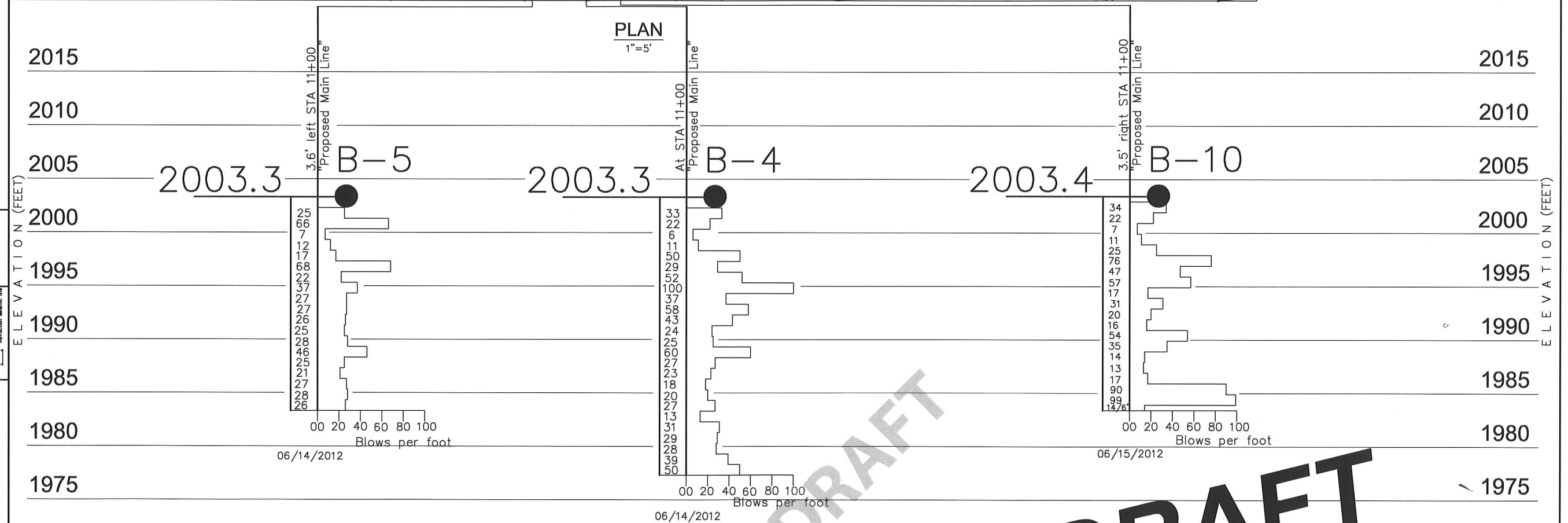
NOTES:

1. Field classification of soils was in accordance with ASTM D 2488-10 "Description and Identification of Soils (Visual-Manual Procedure)".
2. Standard Penetration tests were performed in accordance with ASTM D 1586-10 using a hammer operated with an automated drop system. Drill rods were 1 5/8-inch diameter "A"-rods; sampler was driven with brass liners.
3. The length of each sampled interval is shown graphically on the boring log. Whole number blow counts ("N") represent the "standard penetration resistance" interval in accordance with ASTM D1586-10. Where less than 1 foot of penetration is achieved, the blow count shown is for that fraction of the "standard penetration resistance" interval actually penetrated.
4. SPT hammer measurements were not taken. Recent hammer energy ratio (ER) measurements indicate an ER=83% on 5/4/2012.
5. Boring elevations and channel profile were surveyed by Taber Consultants personnel in the field.
6. Electronic media for plan view provided by Santa Barbara County DPW on July 18, 2012.
7. The "Log of Test Borings" drawing is included with plans in accordance with Section 2-1.03 of Caltrans "Standard Specifications".



ELEVATION REFERENCE:

Temporary benchmark, "TBM-2" located at northeast corner of existing bridge deck, with an elevation of 2003.36, from topography provided by Santa Barbara County DPW.



PROFILE

HOR. 1"=5'
VERT. 1"=5'

DESIGN OVERSIGHT	DRAWN BY	K. M. Kajiwara	Kali Kajiwara, P.E. FIELD INVESTIGATOR
SIGN OFF DATE	CHECKED BY	K. M. Kajiwara/F. P. Taber	DATE <u>June 2012</u>

PREPARED FOR
SANTA BARBARA COUNTY
DEPARTMENT OF PUBLIC WORKS

BRIDGE NO.
51C-0372
POST MILE

KINEVAN ROAD BRIDGE

LOG OF TEST BORINGS

[illegible]

WEATHERING DESCRIPTORS

Descriptors	Diagnostic features					General characteristic (strength, excavation, etc.) [§]
	Chemical weathering—Discoloration and/or oxidation		Mechanical weathering—Grain boundary conditions (disaggregation) primarily for granitics and some coarse-grained sediments	Texture and solutioning		
	Body of rock	Fracture surfaces†		Texture	Solutioning	
Fresh	No discoloration, not oxidized	No discoloration or oxidation	No separation, intact (tight)	No change	No solutioning	Hammer rings when crystalline rocks are struck. Almost always rock excavation except for naturally weak or weakly cemented rocks such as siltstones or shales.
Slightly weathered to fresh						
Slightly weathered	Discoloration or oxidation is limited to surface of, or short distance from, fractures; some feldspar crystals are dull	Minor to complete discoloration or oxidation of most surfaces	No visible separation, intact (tight)	Preserved	Minor leaching of some soluble minerals may be noted	Hammer rings when crystalline rocks are struck. Body of rock not weakened. With few exceptions, such as siltstones or shales, classified as rock excavation.
Moderately to slightly weathered						
Moderately weathered	Discoloration or oxidation extends from fractures usually throughout; Fe-Mg minerals are "rusty", feldspar crystals are "cloudy".	All fracture surfaces are discolored or oxidized	Partial separation of boundaries visible	Generally preserved	Soluble minerals may be mostly leached	Hammer does not ring when rock is struck. Body of rock is slightly weakened. Depending on fracturing, usually is rock excavation except in naturally weak rocks such as siltstones or shales.
Intensely to moderately weathered						
Intensely weathered	Discoloration or oxidation throughout; all feldspars and Fe-Mg minerals are altered to clay to some extent; or chemical alteration produces in situ disaggregation, see grain boundary conditions.	All fracture surfaces are discolored or oxidized, surfaces friable	Partial separation, rock is friable; in semiarid conditions granites are disaggregated	Texture altered by chemical disintegration (hydration, argillation)	Leaching of soluble minerals may be complete	Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened. Usually common excavation.
Very intensely weathered						
Decomposed	Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe-Mg minerals are completely altered to clay.		Complete separation of grain boundaries (disaggregated)	Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete		Can be granulated by hand. Always common excavation. Resistant minerals such as quartz may be present as "stringers" or "dikes".

NOTE: This chart and its horizontal categories are more readily applied to rocks with feldspars and mafic minerals. Weathering in various sedimentary rocks, particularly limestones and poorly indurated sediments, will not always fit the categories established. This chart and weathering categories may have to be modified for particular site conditions or alterations such as hydrothermal effects; however, the basic framework and similar descriptors are to be used.

Combination descriptors are permissible where equal distribution of both weathering characteristics are present over significant intervals or where characteristics present are "in between" the diagnostic feature. However, dual descriptors should not be used where significant, identifiable zones can be delineated. When given as a range, only two adjacent terms may be combined (i.e., decomposed to slightly weathered or moderately weathered to fresh) are not acceptable.

[†] Does not include directional weathering along shears or faults and their associated features. For example, a shear zone that carried weathering to great depths into a fresh rock mass would not require the rock mass to be classified as weathered.

[§] These are generalizations and should not be used as diagnostic features for weathering or excavation classification. These characteristics vary to a large extent based on naturally weak materials or cementation and type of excavation.

ROCK HARDNESS/STRENGTH DESCRIPTORS

Descriptor	Criteria
Extremely hard	Core, fragment, or exposure cannot be scratched with knife or sharp pick; can only be chipped with repeated heavy hammer blows.
Very hard	Can be scratched with knife or sharp pick. Core or fragment breaks with repeated heavy hammer blows.
Hard	Can be scratched with knife or sharp pick with difficulty (heavy pressure). Heavy hammer blow required to break specimen.
Moderately hard	Can be scratched with knife or sharp pick with light or moderate pressure. Core or fragment breaks with moderate hammer blow.
Moderately soft	Can be grooved 1/16 inch (2 mm) deep by knife or sharp pick with moderate or heavy pressure. Core or fragment breaks with light hammer blow or heavy manual pressure.
Soft	Can be grooved or gouged easily by knife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure.
Very soft	Can be readily indented, grooved or gouged with fingernail, or carved with a knife. Breaks with light manual pressure.

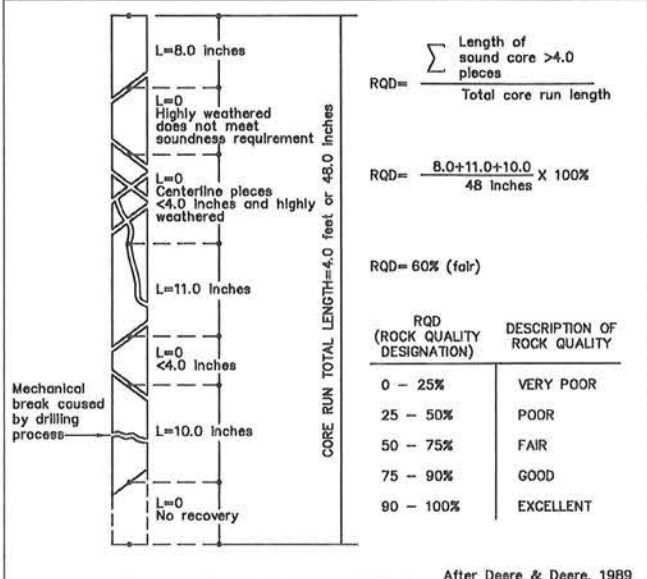
Any bedrock unit softer than very soft, is to be described using USBR 5000 consistency descriptors.

NOTE: Although "sharp pick" is included in these definitions, descriptions of ability to be scratched, grooved or gouged by a knife is the preferred criteria.

BEDDING, FOLIATION, OR FLOW TEXTURE DESCRIPTORS

Descriptor	Thickness/apacing
Massive	Greater than 10 ft (3 m)
Very thickly, (bedded, foliated, or banded)	3 to 10 ft (1 to 3 m)
Thickly	1 to 3 ft (300 mm to 1 m)
Moderately	0.3 to 1 ft (100 to 300 mm)
Thinly	0.1 to 0.3 ft (30 to 100 mm)
Very thinly	0.03 [3/8 in] to 0.1 ft (10 to 30 mm)
Laminated (intensely foliated or banded)	Less than 0.03 ft [3/8 in] (<10 mm)

RQD LOGGING



After Deere & Deere, 1989

IGNEOUS AND METAMORPHIC ROCK GRAIN SIZE DESCRIPTORS

Descriptor	Average crystal diameter
Very coarse-grained or pegmatic	> 3/8 inch
Coarse-grained	3/16-3/8 inch
Medium-grained	1/32-3/16 inch
Fine-grained	0.04-1/32 inch
Aphanitic (cannot be seen with the unaided eye)	<0.04 inch

FRACTURE DENSITY

FRACTURE DENSITY - Based on the spacing of all natural fractures in an exposure or core recovery lengths in drill holes; excludes mechanical breaks, shears, and shear zones; however, shear-distributed zones (fracturing outside the shear) are included. Descriptors for fracture density apply to all rock exposures such as tunnel walls, dozer trenches, outcrops, or foundation cut slopes and inverts, as well as boreholes. Descriptive criteria presented below are based on drill hole cores where lengths are measured along the core axis, for other exposures the criteria is distance measured between fractures (size of blocks).

UNFRACTURED: No/observed fractures.

VERY SLIGHTLY FRACTURED: Core recovered mostly in lengths greater than 3 feet (1 m).

SLIGHTLY TO VERY SLIGHTLY FRACTURED

SLIGHTLY FRACTURED: Core recovered mostly in lengths from 1 to 3 feet (300 to 1000 mm) with few scattered lengths less than 1 foot (300 mm) or greater than 3 feet (1000 mm).

MODERATELY TO SLIGHTLY FRACTURED

MODERATELY FRACTURED: Core recovered mostly in 0.33 to 1.0 foot (100 to 300 mm) lengths with most lengths about 0.67 foot (200 mm).

INTENSELY TO MODERATELY FRACTURED

INTENSELY FRACTURED: Lengths average from 0.1 to 0.33 foot (30 to 100 mm) with scattered fragmented intervals. Core recovered mostly in lengths less than 0.33 foot (100 mm).

VERY INTENSELY TO INTENSELY FRACTURED

VERY INTENSELY FRACTURED: Core recovered mostly as chips and fragments with a few scattered short core lengths.

* Combinations of fracture densities (e.g. very intensely to intensely fractured or moderately to slightly fractured) are used where equal distribution of both fracture density characteristics are present over a significant interval or exposure, or where characteristics are "in between" the descriptor definitions.

Total Sheets

Source: U.S. Department of Interior, Bureau of Reclamation "Engineering Geology Field Manual".

DESIGN OVERSIGHT	DRAWN BY	M. D. Robertson	K. M. Kajiwara
SIGN OFF DATE	CHECKED BY	D. A. Kitzmann	DATE June 2012

PREPARED FOR
SANTA BARBARA COUNTY
DEPARTMENT OF PUBLIC WORKS

PROJECT ENGINEER

BRIDGE NO.
21C-214
POST MILE

KINEVAN ROAD BRIDGE

USBR ENGINEERING GEOLOGY FIELD DESCRIPTORS SHEET

12.4 Appendices D Public Comment Letter

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
(916) 657-5390 - FAX

April 2, 2013

Morgan Jones

County of Santa Barbara

123 E. Anapamu Street
Santa Barbara, CA 93101-2065

RE: SCH# 2013031698 CEQA Notice of Completion; proposed Mitigated Negative Declaration – **"Kinevan Road Bridge 51C-214 Bridge Replacement Project;"** located in the Galleta area; Santa Barbara County, California

Dear Morgan Jones

The Native American Heritage Commission (NAHC) has reviewed the CEQA Notice regarding the above referenced project. In the 1985 Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources impacted by proposed projects, including archaeological places of religious significance to Native Americans, and to Native American burial sites.

The California Environmental Quality Act (CEQA) states that any project that causes a substantial adverse change in the significance of an historical resources, which includes archeological resources, is a significant effect requiring the preparation of an EIR (CEQA guidelines 15064(b)). To adequately comply with this provision and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required:

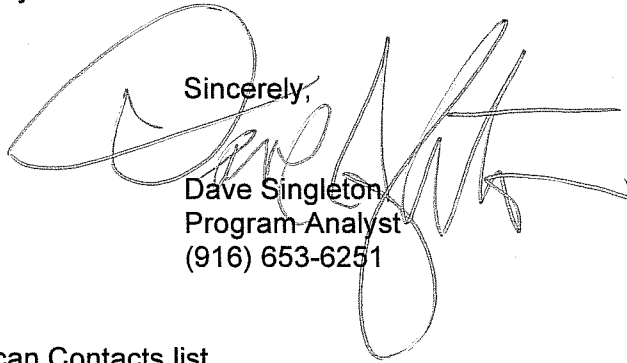
Contact the appropriate Information Center for a record search to determine if a part or all of the area of project effect (APE) has been previously surveyed for cultural resources, which we know that it has. The NAHC recommends that known cultural resources recorded on or adjacent to the APE be listed in the draft Environmental Impact Report.

If an additional archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey. We suggest that this be coordinated with the NAHC, if possible. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure pursuant to California Government Code Section 6254.10. Contact has been made to the Native American Heritage Commission for a Sacred Lands File Check. A list of appropriate Native American Contacts for consultation

concerning the project site has been provided and is attached to this letter to determine if the proposed active might impinge on any cultural resources. Lack of surface evidence of archeological resources does not preclude their subsurface existence.

Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities. Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans. Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dave Singleton', is written over the typed name and title.

Dave Singleton
Program Analyst
(916) 653-6251

CC: State Clearinghouse

Attachment: Native American Contacts list

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**Native American Contacts
Santa Barbara County
April 2, 2013**

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Santa Barbara CA 93103
805-636-3963

Chumash

Patrick Tumamait
992 El Camino Corto
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(805) 216-1253 Cell

Chumash

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Thousand Oaks, CA 91362
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Chumash
Tataviam
Ferrnandeño

San Luis Obispo County Chumash Council
Chief Mark Steven Vigil
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Chumash

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varmenta@santaynezchumash.

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Chumash

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Chumash

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

Distribution of this list does not relieve any person of the 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 regard to cultural resources for the proposed SCH#2013031069; CEQA Notice of Completion; proposed Mitigated Negative Declaration for the Kinevan Road Bridge 51C-214 Bridge Replacement; located in the Goleta area; Santa Barbara County, California.

**Native American Contacts
Santa Barbara County
April 2, 2013**

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Chumash

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Chumash

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Chumash

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Chumash

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Chumash
Fernandeño
Tataviam
Shoshone Paiute
Yaqui

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Chumash

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**Native American Contacts
Santa Barbara County
April 2, 2013**

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