CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877
WEB: WWW.COASTAL.CA.GOV

W12a

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Staff report prepared by:	J.Bishop/R.Moroney
Staff report approved by:	D.Carl
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APPEAL STAFF REPORT
SUBSTANTIAL ISSUE DETERMINATION & DE NOVO HEARING

Appeal number.....**A-3-SLO-07-059, San Simeon Creek Road Bridge Replacement**

Applicant.....San Luis Obispo County Public Works Department

Appellants.....Commissioners Steve Blank and Sara Wan; Sierra Club, Santa Lucia Chapter; and Land Watch of San Luis Obispo County.

Local government.....San Luis Obispo County.

Local decision.....Approved by San Luis Obispo County on May 18, 2007 (Coastal Development Permit (CDP) DRC2005-00273).

Project location.....Two bridge crossings (over San Simeon Creek) on San Simeon Creek Road located 2.3 and 3.5 miles inland of State Highway 1.

Project description.....Construction of two new 2-lane bridges and related elements (including abutment work, road approach modifications, and rip-rap along stream channel), removal of the two existing 1-lane bridges (once the two new bridges are finished), and restoration of former bridge locations.

File documents.....Administrative record for San Luis Obispo County CDP DRC2005-00273; San Luis Obispo County Appeal Response (Additional Information dated April 30, 2008 and October 29, 2008); San Luis Obispo County certified Local Coastal Program (LCP).

Staff recommendation ...**No Substantial Issue**

A. Staff Recommendation

1. Summary of Staff Recommendation

This is an appeal of a CDP approved by San Luis Obispo County authorizing the County Department of Public Works to demolish two single-lane wooden bridges and construct two larger two-lane concrete bridge structures in their place over San Simeon Creek, on San Simeon Creek Road located approximately 2.3 and 3.5 miles inland of State Highway 1. The Appellants contend that the project does not meet LCP requirements for protecting and enhancing environmentally sensitive habitat area (ESHA)/San Simeon Creek and the scenic and rural character of the area, and that a smaller scale bridge

replacement project would better protect coastal resources. The County indicates that the replacement bridges are necessary because the existing bridges are deteriorating, and they do not meet the traffic and safety needs of the community. Most recently, Caltrans bridge inspectors closed the bridges until emergency repairs, including replacing one bridge with a temporary span, could be accomplished to allow safe passage. The bridges are currently open to traffic, albeit at reduced load capacities.

The San Luis Obispo County LCP requires the protection of scenic coastal areas and requires that new development in rural areas be subordinate to, and blend in with, the rural character of the area. The LCP also contains a specific requirement for bridge construction over creeks that requires that an approved bridge project be the least environmentally damaging feasible alternative.

Bridge improvement or replacement projects are typically proposed because of some problem with the bridge itself, and/or because of traffic and safety needs. In such cases, it is important that these problems and needs be clearly identified and substantiated, and that the response be as focused as possible to address the problems while limiting environmental impacts as much as is possible. As described by the County, the two bridges on San Simeon Creek Road are in bad condition and are inadequate to provide safe passage over the long term. Both bridges have been designated functionally obsolete and structurally deficient by Caltrans under federal standards. In particular, the bridges are in extremely poor shape and present a potential collapse danger, indicating urgency for repair or replacement. The County has also raised concerns regarding public safety since San Simeon Creek Road has no inland public road outlet (although it does have a private inland road connection), and it serves as an essential vehicular access route for fire, emergency response, and evacuation of area residents.

The proposed project would replace the two single lane 12-foot wide wooden deck bridges with two 29-foot wide cast-in-place reinforced concrete structures with 3-foot tall concrete barrier rails running along each side of the bridges. Metal beam guardrails would be attached to the corners of the bridges along the roadway approach for a length of approximately 60 feet. In order to support the new bridges, the project will require creek bank and creek bed excavation, construction of abutments, and the placement of rip-rap to protect the abutments. Replacement bridge 1 nearest Highway 1 (Bridge 1), would be a free-span bridge with no in stream support, but replacement bridge 2 (the further inland bridge, Bridge 2) would include two concrete support piers in the creek bed.

According to the County's environmental documents and the project plans, the project will result in the temporary disturbance of approximately 4.2 acres of ESHA, and permanent disturbance that includes the removal of 23 mature riparian corridor trees of five different species and coverage (for riprap and supports) of approximately 1/3 acre of ESHA. The larger concrete bridges will also change the character of the existing rural agrarian landscape somewhat. To offset these impacts, the County project includes various restoration components, including restoration of the area from which the old bridges would be removed.

The SLO County LCP contemplates and allows some level of ESHA impacts for such a project. The key factor in this analysis is determining the least environmentally damaging feasible alternative. At this site, the analysis boils down to two primary issues: 1) whether the replacement bridges can or should be

one lane or two; and 2) abutment methods and the degree of abutment protection necessary.

With respect to the question of one lane or two, federal bridge replacement standards (associated with federal funding for the project) dictate that a two-lane bridge be provided. However, these federal standards allow the Director of the San Luis Obispo County Department of Public Works (DPW) to identify design exceptions necessary to respond to local conditions and issues. Thus, the DPW Director could identify a design exception for a one-lane bridge. That said, DPW has indicated that a one-lane bridge would raise public safety concerns, and has indicated that they can't design and build a bridge that "creates a reasonably foreseeable risk of a dangerous condition", such as a "bottleneck" in an emergency wildfire situation. DPW has provided information that indicates that if a single-lane "in-kind" bridge replacement was required, the County would be liable, and the DPW civil engineer signing off the bridge would also be liable under the California Government Code because the typical public agency design immunity would not apply. The County's rationale in this respect appears sound, and Caltrans concurs that a two-lane bridge is required in this circumstance. As a result, the bridge replacement project must be two-lanes.

In a two-lane bridge scenario, DPW can pursue the same types of design exceptions to standard bridge widths to the extent site specific circumstances dictate; for example to avoid ESHA. In this case, the federal and local standards that apply would at most shave 2-feet from the 29-foot proposed width of the bridge. This is because the CalFire and San Luis Obispo County minimum allowed lane width is 10 feet, and the minimum allowed shoulder width is 2 feet (i.e., a 24-foot wide area for two travel lanes and two shoulders, and 3 feet for two railings); the two foot reduction would be with respect to reducing the shoulder width from 3 feet to 2 feet each. To justify the 2-foot reduction, the road would have to be determined to accommodate less than 400 vehicles per day. The County has indicated that they believe more than 400 vehicles per day would use the bridges, including potential future development. Given the rural nature of the road and the handful of residences and agricultural operations past the bridge, it seems more likely that less than 400 vehicles per day use the bridge, and that an exception to shave the 2 feet could be justified. That said, reducing the width of the bridges from 29 feet to 27 feet would not result in significant ESHA benefits. This is due to the bridge abutments and the need to protect them. Given the geomorphology of the creek bank, a 2-foot reduction in width would have little to no effect on the abutment specifications.

Given that determination, the next question is whether alternative abutment designs could be utilized that would limit ESHA impacts, with or without the 2-foot reduction in bridge width. The primary question here is whether to use rip-rap and lesser abutment structures (as proposed), or to use greater abutment structures without rip-rap, including using more substantial and deeper caissons. In the case of the proposed version, the abutments would be protected and shouldn't be undermined, even in a large event. In the case of the larger caisson style, it appears that the abutments themselves would need to be enlarged, and the caissons embedded further away from the creek channel and to a greater depth. Given the erodable alluvial nature of the creek bank, it is likely that these caissons would eventually be daylighted under heavy erosional events, leading to additional work along the "new" stream edge to bridge to the daylighted abutments, and greater impacts in the longer term. In sum, the rip-rap abutment methodology, where the rip-rap is embedded in the creek bank and covered with soil and vegetated with

riparian species as proposed, would appear to result in less ESHA harm in the long run, and less coastal resource impacts overall (including allowing for shorter bridge spans and less disruption of archaeological sites and prime agricultural land on either side of the bridges).

In conclusion, it is clear that the appeal raises valid coastal resource issues. As a result, in the time since this matter was appealed, staff, including the Commission's senior engineer, has spent considerable time researching bridge standards and exceptions, bridge funding, and related issues, and spent considerable time coordinating with DPW, Caltrans, and related experts to best understand bridge related issues and requirements as they apply to this site. The conclusion of these efforts is that it appears that the County approved project has been designed in a manner that avoids coastal resource impacts as much as possible, and there isn't a feasible bridge replacement project that would lead to significantly less resource degradation. So although the appeals raise valid LCP issues, they don't rise to the level of a substantial LCP conformance issue.

Staff recommends that the Commission find that the appeal raises no substantial issue and decline to take jurisdiction over the CDP for this project. The motion and the resolution to implement this recommendation are found directly below.

2. Staff Recommendation on Substantial Issue

Staff recommends that the Commission determine that **no substantial issue exists** with respect to the grounds on which the appeal was filed. A finding of no substantial issue would mean that the County's decision in this matter would be final (conversely, a finding of substantial issue would bring the project under the jurisdiction of the Commission for hearing and action).

Motion. I move that the Commission determine that Appeal Number A-3-SLO-07-059 raises no substantial issue with respect to the grounds on which the appeal has been filed under Section 30603 of the Coastal Act.

Staff Recommendation of No Substantial Issue. Staff recommends a **YES** vote. Passage of this motion will result in a finding of No Substantial Issue and adoption of the following resolution and findings. If the Commission finds No Substantial Issue, the Commission will not hear the application de novo and the local action will become final and effective. The motion passes only by an affirmative vote by a majority of the Commissioners present.

Resolution to Find No Substantial Issue. The Commission hereby finds that Appeal Number A-3-SLO-07-059 does not present a substantial issue with respect to the grounds on which the appeal has been filed under Section 30603 of the Coastal Act regarding consistency with the certified Local Coastal Program and/or the public access policies of the Coastal Act.

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B.Findings and Declarations

The Commission finds and declares as follows:

1. Project Location

Regional Setting

San Simeon Creek is located in northern San Luis Obispo County between the unincorporated coastal communities of Cambria and San Simeon (see Exhibit 1). This stretch of coastline is known worldwide as the home of the famous Hearst Castle, but those who live there or have visited probably appreciate it more for its rugged coastal vistas, and pleasant bucolic atmosphere. The coastal scenery is stunning, and wildlife is ubiquitous. The area supports a vibrant tourist industry sustained by its abundance of recreational activities (most notably camping, hiking and biking) as well as the beautiful San Simeon State Park, one of the oldest units of the California State Park system. See Exhibit 1 for location map.

San Simeon Creek Road/Project Area

The San Simeon Creek Road bridges are located within the coastal zone of the southern portion of Central Coast District, in an unincorporated portion of San Luis Obispo County. San Simeon Creek Road generally parallels San Simeon Creek as it flows down through the San Simeon Creek Valley towards the Pacific Ocean. The road crosses San Simeon Creek in three locations - the two most western crossings (approximately 2.3 and 3.5 miles inland of State Highway 1) being the location of the proposed project (see Exhibit 1). San Simeon Creek Road is a rural road that extends a distance of

approximately 5.5 miles from Highway One (and the entrance to San Simeon Beach State Park) along the valley floor before it begins to climb and the public portion of the road ends at a locked gate approximately 8.2 miles inland. The road area up to the locked gate is mostly paved and narrow, ranging in width from 15 to 30 feet, with the narrowest portions at cattle gates for example, and generally inland of the bridges. Past the locked gate, the road becomes more of a truck trail that extends through a series of locked gates, with one branch heading off to State/County emergency radio transmission equipment located inland atop Rocky Butte, and another over the Santa Lucia Range where it connects to Chimney Rock Road near Lake Nacimiento. The portion of the road past the gate is privately maintained and is only accessible by local residents, by County/State staff accessing the communications site, and by emergency responders (fire, ambulance, etc.). The public cannot access the portion of San Simeon Creek Road past the gate, which forms an impassable vehicular and pedestrian barrier at the gate location, includes multiple locks, and is signed to keep the public out (i.e., "no trespassing", "private", etc.).[1]

San Simeon Creek Road is a rural road that is traveled primarily by residents who live in the vicinity and by farm workers. It serves as an essential vehicular access route for residents and workers, and for fire, emergency response, and evacuation. The creek and valley also attract recreationalists that enjoy a variety of interests in the area, including bicycling, hiking, and dog walking along the road up to the locked gate, nature and landscape painting, bird watching, fishing, sight seeing, and in a few rare high water instances, kayaking.[2] There are about a dozen residences and a couple of agricultural operations that depend on the stretch of San Simeon Creek Road dependent on the bridges for access.

2. Project Description

The proposed project would replace the two damaged bridges along San Simeon Creek Road (hereafter Bridge 1 closest to the coast and Bridge 2 furthest away) with new bridges and abutment structures, and would include associated road improvements at the bridge approaches, removal of the old bridges, and restoration of the construction area.

A. Site Preparation

Initial construction activities would include relocation of utilities, clearing, grubbing, removing and

[1] Historically, the full length of San Simeon Creek Road was a public road (that was designated as "County Road 22" when it became a County road in 1871) that extended from Leffingwell Landing in Cambria up San Simeon Creek Canyon and over the mountain to the Monterey County line. According to the County, the portion of the road from the ocean up the canyon to near the ridgeline has been in use somewhat continuously since the road was created. There is speculation however that the north portion of the road from Nacimiento River to the county line was never constructed. On September 10, 1974 the Board of Supervisors passed Resolution 74-518 allowing a locked gate to be installed across the road and the portion of the road from the gate to Chimney Rock Road became privately maintained. The physical road only continues within the public highway easement for a few hundred feet beyond the gate, then diverges from the easement and continues northerly on private property for about a half mile. At that point, the road ends and splits into a series of dirt truck trails. In other words, it appears that there still exists a public road easement associated with County Road 22, but that there is not actual road within this easement past a few hundred feet beyond the gate.

[2] Because of the limited road width and the lack of off-road area to park, pursuit of such public access opportunities along the road itself is made difficult.

disposing of vegetation and debris in the construction zone. In addition to the bridge locations themselves, the construction zone would also include two construction staging areas along both sides of the proposed road alignments. Equipment access to the creek bed would be provided at both bridges, requiring the construction/improvement of existing dirt access roads down the banks and into the channel itself at each bridge site. The proposed project would also involve roadway excavation, embankment construction, and disposal of material and the relocation of an overhead utility line at both bridge sites.

The County would retain the services of a biological resources monitor who would be involved in pre-construction coordination meetings, grading, erosion control, scheduling, as well as construction activities. In addition, the County has proposed numerous other mitigation measures aimed at reducing the impacts to protected resources prior to commencement of construction (e.g., flagging project limit areas, identifying appropriate equipment staging areas, finalizing drainage, sedimentation, and erosion control plans, and marking trees for protection, etc.). Diversion of water in the creek may be necessary during construction of the new bridges and decommissioning of the older replaced bridges.[3] If flowing water is present, culverts would be used for dewatering. Two culverts would be placed in the channel to allow the project biologist to manipulate water depths in the culverts. Sandbag and visqueen diversion dams would be used to direct water flow into the culverts. A secondary diversion dam could be installed to help retain water that leaks through the primary dam. A sump pump would direct water retained between the dams into the mouth of the culvert. A minimum 5-mm mesh screen would be used to cover the intake. Metal plates would be placed over the upper and lower ends of the diversion to protect the culverts from construction activities and to allow contractor access to the entire construction area.

B. Construction Activities

Bridge 1

Bridge 1 is located approximately 2.3 road miles east of the San Simeon Creek Road and State Highway 1 junction, 3 miles due east of the Pacific Ocean and 2.5 miles upstream from the creek mouth at San Simeon Beach State Park. The existing four-span[4], 106-foot long, single-lane, 12-foot wide bridge was built in 1967. The span and road surface of Bridge 1 is constructed of timber. There are concrete supports located on the embankment at each end of the bridge and a large center concrete pier support structure (approximately 25-feet tall) within the creek channel bottom. Bridge 1 would remain in place to provide through access during construction of the replacement bridge.[5] See Exhibit 2 for photos of

[3] During the more recent emergency work, the creek bed was dry.

[4] Two of the spans are very short spans near the top edge of the creek arroyo with very little space underneath, and two of the spans open up over the creek channel itself. In other words, the bridge presents itself as a two span bridge for the most part.

[5] In the time since this matter was appealed, Caltrans re-inspected the existing bridges and found them to be in even worse shape than the County understood when it took its CDP action. The bridges were determined to be dangerous and not structurally capable, and emergency measures were recently undertaken to abate the danger. Specifically, Bridge 2 was demolished and replaced with a temporary one-lane steel bridge that the County has on hand for just such emergencies, and Bridge 1 was deemed unsafe and not structurally capable and its load rating decreased to 5 tons. The County is

Bridge 1 site.

The replacement bridge for Bridge 1 would be constructed immediately downstream of the existing bridge on a similar skew to the creek (i.e., at a similar angle) as the existing bridge, which is slightly off perpendicular. The bridge would be 29-feet wide (two 10-foot travel lanes, two 3-foot shoulders, and two 1.5-foot curb/railings), would extend approximately 150 feet across the creek, and would include 3-foot tall concrete barriers along each side of the bridge. A single-span, cast-in-place, pre-stressed, concrete box girder bridge is proposed. Metal beam guardrails would be attached to all four corners of the bridge along the roadway approaches, a length of approximately 60 feet on either side of the bridge.

The bridge would require concrete support abutments along both banks of the creek. In order to secure the abutments in place, a series of concrete piles would be driven down through the creek bank into shallow bedrock, holding in place the abutment footings. Approximately 1,512 cubic yards of one-half ton rock-slope protection (rip-rap) would be excavated into the creek banks at the abutment location. The area of rock slope protection coverage along the bank and creek channel at Bridge 1 would be about 7,100 square feet.

Bridge 2

Bridge 2 is located approximately 1.2 road miles inland of Bridge 1 and approximately 3.5 road miles east of the San Simeon Creek Road and State Highway 1 junction, nearly 4 miles due east of the Pacific Ocean and 3.7 miles upstream from the creek mouth. Bridge 2 is currently a single span steel girder bridge that was installed as a temporary fix by the County in October 2008, replacing the previous three-span, single-lane timber bridge originally built in 1967.[6] It is 78 feet long and 12 feet wide and crosses the creek at a fairly large skew (approximately 35 degrees). Bridge 2 would remain in place to provide through access during construction of the replacement bridge. See Exhibit 2 for photos of Bridge 2 site.

The new alignment for Bridge 2 proposes to replace the bridge immediately downstream of the existing bridge on a similar skew to the creek. The length of the proposed Bridge 2 structure would be approximately 136 feet. It would consist of a 3-span cast-in-place reinforced concrete slab bridge supported on concrete pier walls and supported on cast-in-steel-shell piles, resulting in new concrete pier supports in two locations in the creek channel proper (covering approximately 350 square feet of creek channel). The dimensions of Bridge 2 would be the same as Bridge 1, and it would have the same metal beam guardrail structures at the approaches to the bridge.

The construction of support abutments for Bridge 2 would require disturbance to both banks of the creek. As with Bridge 1, a series of piers would be drilled into bedrock to support abutment footings and 1,781 cubic yards rock slope protection would be placed below the abutments. The rock slope protection and new concrete supports at Bridge 2 would cover about 7,350 square feet.

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waiting for the final release of the Caltrans inspection reports and has recently indicated that they may install a similar temporary one-lane steel bridge at the Bridge 1 location.

[6] Id.

C. Site Restoration

Upon completion of construction activities, the old bridges would be removed and impacted areas would be restored in accordance with a Conceptual Restoration Plan prepared for the project. Affected areas would be cleared of construction-related debris, and trenches, holes, and pits created during the construction phase would be filled. All impacted creek bed areas would be restored to their pre-project condition, and the rock slope protection areas would be capped with soil and aggressively vegetated through the rock. Riffle pool regimes would be maintained and enhanced in the creek channel for the benefit of fishery resources, including steelhead. Revegetation efforts would be initiated prior to use and operation of the new bridge structures; including replacing removed coastal live oaks at a ratio of 4:1, all other trees at a ratio of 3:1, and all riparian vegetation at a minimum 2:1 ratio. Construction is estimated to take six to nine months, and would take place during the dry season when flowing water is low or absent (between May 1 and October 31) to minimize impacts on creek resources. According to the project record, the County may consolidate construction activities by building both bridges within the same timeframe, or may build each bridge and associated road improvements separately. Construction would occur as early as 2009, but may be delayed to 2010 depending on the time necessary to complete right-of-way acquisition efforts.

3. San Luis Obispo County CDP Approval

The proposed project was originally approved on May 18, 2007 by the Administrative Hearing Officer at the Planning Department (see Exhibit 3). The County's decision was subsequently appealed to the County Board of Supervisors on May 31, 2007 by three separate appellants: Michael Phelan, Jon Pedotti and the Santa Lucia Chapter of the Sierra Club; the latter appellant being one of the current appellants to the Coastal Commission (see Exhibit 4). The appeals were based on allegations that the County's decision to approve the project did not adequately protect wetland, riparian, and steelhead habitats, and was inconsistent with the LCP. On October 2, 2007 the County Board of Supervisors affirmed the decision of the Administrative Hearing Officer, thus approving a CDP the project.

Notice of the County Board of Supervisor's action on the CDP was received in the Coastal Commission's Central Coast District Office on October 29, 2007. The Coastal Commission's ten-working day appeal period for this action began on October 30, 2007 and concluded at 5 p.m. on November 13, 2007. Three valid appeals (see below) were received during the appeal period.

4. Appeal of San Luis Obispo County CDP Approval

A. Appeal Procedures

Coastal Act Section 30603 provides for the appeal to the Coastal Commission of certain CDP decisions in jurisdictions with certified LCPs. The following categories of local CDP decisions are appealable: (a) approval of CDPs for development that is located (1) between the sea and the first public road paralleling the sea or within 300 feet of the inland extent of any beach or of the mean high tide line of the sea where there is no beach, whichever is the greater distance, (2) on tidelands, submerged lands, public trust lands, within 100 feet of any wetland, estuary, or stream, or within 300 feet of the top of the

seaward face of any coastal bluff, and (3) in a sensitive coastal resource area; or, for counties, approval of CDPs for development that is not designated as the principal permitted use under the LCP. In addition, any local action (approval or denial) on a CDP for a major public works project (including a publicly financed recreational facility and/or a special district development) or an energy facility is appealable to the Commission. This project is appealable on three separate grounds: 1) it involves development located within 100 feet of a wetland/stream; 2) it is located in a sensitive coastal resource area; and 3) it involves a major public works project.

The grounds for appeal under Section 30603 are limited to allegations that the development does not conform to the certified LCP and/or to the public access policies of the Coastal Act. Section 30625(b) of the Coastal Act requires the Commission to conduct a de novo CDP hearing on an appealed project unless a majority of the Commission finds that "no substantial issue" is raised by such allegations. Under Section 30604(b), if the Commission conducts a de novo hearing and ultimately approves a CDP for a project, the Commission must find that the proposed development is in conformity with the certified LCP.

The only persons qualified to testify before the Commission on the substantial issue question are the Applicant, persons who made their views known before the local government (or their representatives), and the local government. Testimony from other persons regarding substantial issue must be submitted in writing. Any person may testify during the de novo CDP determination stage of an appeal.

B. Summary of Appeal Contentions

The Appellants (Coastal Commissioners Steve Blank and Sarah Wan, the Santa Lucia Chapter of the Sierra Club, and Land Watch of San Luis Obispo County) contend that the County-approved project raises issues with respect to the project's conformance with core LCP and Coastal Act policies related to the protection of ESHA and visual and scenic resources. As summarized by one of the appeals, "the approved project does not meet the minimum LCP requirements for protecting and enhancing ESHA/San Simeon Creek, and meeting such standards may be feasible through an alternative less-environmentally damaging bridge design and location…Such alternatives would appear to lessen the impact on the rural character of the area." See Exhibit 4 for the full appeal documents.

In response to the appeals, the County prepared additional information in support of their action (see documents dated April 30, 2008 and October 29, 2008 in Exhibit 6).

5. Substantial Issue Determination

A. Applicable Policies

The LCP requires protection of ESHA. San Simeon Creek and its riparian corridor are identified as Sensitive Resource Areas ("SRAs") and Environmentally Sensitive Habitat Areas (ESHAs) in the LCP. This LCP designation entitles these areas special protections, including with respect to bridge work specifically that requires the selection of the least environmentally damaging feasible alternative (LCP ESHA Policies 1-3, 7, 12, 16, 17, 18, 20-30, and 38; LCP CZLUO Sections 23.07.170-23.07.178; and

North Coast Area Plan SRA Standard 10[7]).

The LCP also requires protection of public viewsheds, character, and aesthetics within the coastal zone. Specifically, the LCP requires that new development in rural areas such as this be designed (height, bulk, style, etc.) to be subordinate to, and blend in with, the rural character of the area (LCP Visual and Scenic Resource Policies 1, 2, 4, and 7).

See applicable LCP policies in Exhibit 5.

B. Analysis

Bridge improvement or replacement projects are typically proposed because of some problem with the bridge itself, and/or because of traffic and safety needs. In such cases, it is important that these problems and needs be clearly identified and substantiated, and that the response be as focused as possible to address the problems while limiting environmental impacts as much as is possible. The County has made a valid case that the two bridges on San Simeon Creek Road are in bad condition and are inadequate to provide safe passage over the long term. Both bridges have been designated functionally obsolete and structurally deficient by Caltrans. In particular, the bridges are in extremely poor shape and present a potential collapse danger, indicating urgency for repair or replacement. In addition and as noted above, in the time since the appeal, the status of the two bridges has been downgraded by State bridge inspectors such that Bridge 1 was deemed unsafe and not structurally capable and Bridge 2 was replaced. The County has also raised legitimate concerns regarding public safety as San Simeon Creek Road is blocked at the locked gate and has no public inland outlet (residents can access the road past the locked gate, but the general public cannot), and serves as an essential vehicular access route for fire, emergency response, and evacuation of area residents.

ESHA and Viewshed/Character Concerns

The proposed project raises ESHA concerns. The proposed project would replace two single lane 12-foot wide wooden deck[8] bridges with two 29-foot wide cast-in-place reinforced concrete structures with 3-foot concrete barrier rails running along each side of the bridges. In order to support these structures, the project would require construction of new abutments and the placement of rock slope protection below the abutments; a total of over 3,000 cubic yards of rip-rap in all. Replacement Bridge 2 (the further inland bridge) would also require the construction of two support piers in the creek. The County's environmental documents and the project plans indicate that the proposed project will result in the temporary disturbance of approximately 4.2 acres of ESHA, and permanent disturbance that includes the removal of 23 mature riparian corridor trees of five different species and coverage (for riprap and supports) of approximately 1/3 acre of ESHA.

In addition, the project is likely to impact federally threatened steelhead (*Oncorhynchus mykiss*) habitat,

[7] The North Coast Area Plan was recently updated. At the time of the filing of the original appeals to this project, the current Area Plan SRA Standard 10 was listed as Area Plan SRA Standard 1 in the old document. The text of the standard has not changed, only its location in the plan.

[8] The original Bridge 2 was a wooden bridge; it was replaced in October 2008 with a steel bridge (id).

including because the removal of the existing bridge piling at Bridge 1 could result in the loss of two deep scour pools that have formed around the base of this structure and that provide some opportunity for rearing of juvenile steelhead for part of the year.[9] The National Marine Fisheries Service (NMFS) has concluded that the proposed action is not likely to jeopardize the continued existence of threatened steelhead or result in the adverse modification of their critical habitat.[10] The proposed project includes NMFS' recommended measures to minimize any potential steelhead impacts.

The longer and wider concrete bridge design also raises concerns with the character of the existing rural agrarian landscape. The County's Final Visual Impact Assessment report measured the existing visual resources of the project area using Federal Highway Administration guidelines. Existing visual resources were identified by assessing two factors; visual character and visual quality. The Assessment found that the aesthetic character of the area is rural, and that the existing visual quality was high because:

> *…the Project area's vividness is characterized as high. The rural nature of both bridges' surroundings are generally untouched by development and include memorable features such as the meandering creek, the rolling green hills, the quaint farm house structures, and mature trees. The Project area is characterized as having a high intactness. That is, the original natural setting is largely unchanged aside from pockets of agricultural fields, limited farm residences, and roadway/bridge development. Unity for the Project area is considered high. Looking at the natural landscape as a whole it has a visually coherent, cohesive aesthetic with little disharmony. There is nothing that stands out as incongruous with the overall, natural surroundings.*

The LCP consistency analysis recognizes that bridge replacement projects have ESHA impacts given the nature of the environment in which they are necessarily located. In other words, the LCP contemplates and allows some degree of ESHA impacts for such a project. The key factor in this analysis is determining the least environmentally damaging feasible alternative. At this site, that analysis primarily boils down to two primary issues: 1) whether the replacement bridges can or should be one lane or two; and 2) abutment methods and the degree of abutment protection necessary.

Bridge Standards: 1-lane vs. 2-lane Bridges

A primary driver behind the scaling of the proposed project has been identified as the criteria to qualify for Federal highway trust fund dollars. The project seeks to obtain roughly 88% of its funding from the Federal Highway Administration's (FHWA) Bridge Program Fund.[11] In order to qualify for these funds, the project was designed to meet certain criteria set by the FHWA; the American Association of State

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[9] The occasional observance of adult steelhead in these pools in the spring indicates that these pools may provide some value in the form of temporary refuge for out migrating steelhead as they wait for late season storms to bring flows up enough to move out.

[10] National Marine Fisheries Service's (NMFS) biological opinion for the Federal Highway Administration (FHWA), December 18, 2006.

[11] The FHWA Bridge Replacement Program (BRP) is administered in this state by Caltrans.

Highway Transportation Officials (AASHTO) standards. While sometimes referred to as standards, AASHTO criteria are more akin to a set of guidelines and recommendations, assisting traffic engineers and designers in making more informed design decisions. In fact, the FHWA itself has acknowledged the importance of flexibility in approaching design standards for project in rural areas[12] and, through Caltrans, has developed a straightforward procedure for granting design exceptions to these standards based on local context, including environmental sensitivities.[13] Designers in rural areas have also found that AASHTO standards often are a poor fit for their roads.[14] The "wider and straighter" design models encouraged by AASHTO can induce sprawl and be less safe (by encouraging excess speeds) in rural areas.

With respect to funding and design, it appears clear that the FHWA has expressly acknowledged that each project is unique and that traffic designers and engineers should maintain flexibility, particularly for projects in rural areas. The Caltrans Local Agency Procedure Manual (or LAPM), the canon of local traffic planners, also expressly states that project conditions, such as environmental impacts, sometimes warrant an exception to accepted standards (such as AASHTO) or procedures.[15] As previously described, for a local project not on the State Highway System (such as the proposed project), the County Public Works director has design exception approval authority.[16] The LAPM sets forth a standard procedure for granting such design exceptions,[17] and allows such exceptions as long as the final

[12] "An important concept in highway design is that every project is unique. The setting and character of the area, the values of the community, the needs of the highway users, and the challenges and opportunities are unique factors that designers must consider with each highway project." Flexibility in Highway Design (FHWA Pub. No. FHWA-PD-97-062).

[13] Any deviation from AASHTO standards with respect to design standards, including bridge width, lane width and shoulder width, requires formal design exception approval in accordance with the procedure outlined in Section 11-4 the Caltrans Local Assistance Procedure Manual (LAPM). The LAPM expressly acknowledges that project conditions, such as environmental impacts, may warrant an exception to accepted standards (such as AASHTO) or procedures. For a local project not on the State Highway System (such as the proposed project), the County Public Works director has design exception approval authority (LAPM p.11-26: "The FHWA has delegated Caltrans approval authority for design exceptions on local projects not on the SHS. However, since local agencies are in a better position to assess applicability to any given situation on local roads; design exception approval authority (for those standards from which deviations are permitted) is now delegated to the City and County Public Works Directors.").

[14] "The best way to decrease speeds and the detrimental effects of traffic is to retain the existing features of rural roads that tend to slow traffic speeds. These features, including narrow traffic lanes and curves, are the same features that give our rural roads their charm and rural character." Rural Roads Design Standards, Advisory Committee Report "Road Work", Clallam County, Washington, pp. 16.

[15] LAPM p. 11-24: "Sometimes, project conditions may warrant an exception to certain accepted standards or procedures. Such conditions might include: extreme difficulties or high cost of obtaining right of way; cost of construction; or the mitigation of environmental impacts. Although all deviations from accepted standards and procedures must be justified and documented in some manner and retained in the project files; not all design exceptions must adhere to the formal design exception procedures as described below."

[16] Id (LAPM p. 11-26).

[17] The local agency must prepare a design exception fact sheet, which must be stamped by an approved registered civil engineer (registered in the State of California), signed by the appointed officer, and retained by the approved agency.

project design will result in bridge with a "sufficiency rating" that exceeds 80[18] and the structural capacity of the bridge complies with Caltrans requirements.[19]

Thus, although federal bridge replacement standards (associated with federal funding for the project) generally dictate a two-lane bridge be provided, it appears clear that these federal standards will allow the director of the San Luis Obispo County Department of Public Works (DPW) to identify design exceptions necessary to respond to local conditions and issues. Thus, the DPW Director could, conceivably, identify a design exception for a one-lane bridge. That said, however, DPW has indicated that a one-lane bridge would raise public safety concerns, and has indicated that they can't design and build a bridge that "creates a reasonably foreseeable risk of a dangerous condition", such as a "bottleneck" in an emergency wildfire situation. DPW has provided information that indicates that if a single lane "in-kind" bridge replacement was required, the County would be liable, and the DPW civil engineer signing off the bridge would also be liable under the California Government Code because the typical public agency design immunity would not apply (see Exhibit 6). The County's rationale in this respect appears sound, and Caltrans concurs that a two-lane bridge is required in this circumstance. In essence, and as a matter of public policy, the County can't design and build a one-lane bridge. As a result, the bridge replacement project must be two-lanes.

In a two-lane bridge scenario, DPW can pursue the same types of design exceptions to standard bridge widths to the extent site specific circumstances dictate; for example to avoid ESHA. In this case, the federal and local standards that apply would at most shave 2-feet from the 29-foot proposed width of the bridge. This is because the CalFire and San Luis Obispo County minimum allowed lane width is 10 feet, and the minimum allowed shoulder width is 2 feet (i.e., a 24-foot wide area for two travel lanes and two shoulders, and 3 feet for two railings).[20] To justify the overall 2-foot reduction to 27 feet, the road would have to be determined to accommodate less than 400 vehicles per day. The County has indicated that they believe more than 400 vehicles per day would use the bridges, including potential future

[18] LAPM p. 11-25: "…design exceptions that would result in the construction of a federally funded new bridge that would result in a Sufficiency Rating (SR) of less than 80 are not allowed." The "sufficiency rating," is a number that is generated from combining the functional adequacy of a bridge with its structural condition. Bridges are considered functionally obsolete if they have deck geometry, load carrying capacity, clearance, or approach roadway alignment that no longer meets the criteria for the system of which the bridge is a part. Functional improvement needs are generally determined by applying user-specific standards to the bridge, subject to benefit-cost considerations. Because the benefit predicted for a functional improvement increases proportionately with the amount of traffic, the determination of whether a functional improvement is justified is heavily dependent on predicted traffic. Bridges are considered structurally deficient if they are restricted to light vehicles, require immediate rehabilitation to remain open, or are closed. A deficient bridge may or may not be dangerous, but it does require significant maintenance, rehabilitation, or sometimes replacement. Sufficiency rating combines the condition and functional adequacy data collected on a bridge, runs that data through a complex formula, and assigns a single aggregate number ranging from 0 (low) to 100 (high).

[19] LAPM p. 11-13: "In addition to the twelve geometric controlling criteria discussed in the Caltrans Bridge Design Specifications manual, the FHWA has designated "bridge structural capacity" as the thirteenth controlling criteria with a primary importance for safety in the selection of design standards. Deviations from standards relating to "bridge structural capacity" are not permitted."

[20] The two foot reduction would be with respect to reducing the shoulder widths from 3 feet to 2 feet each.

development.[21] Given the rural nature of the road and the handful of residences and agricultural operations past the bridge, it seems more likely that less than 400 vehicles per day use the bridge, and that an exception to shave the 2 feet could be justified.

That said, however, reducing the width of the bridges from 29 feet to 27 feet would have insignificant ESHA benefits. This is due to the bridge abutments and the need to protect them. In other words, given the geomorphology of the creek bank, a 2-foot reduction in width would have little to no effect on the abutment specifications, as is detailed below.

Abutment Design

Specifically, the question is whether alternative abutment designs could be utilized that would limit ESHA impacts, whether with or without the 2-foot reduction in bridge width. The primary question here is whether to use rip-rap and lesser abutment structures (as proposed), or no rip-rap and greater abutment structures, including more substantial and deeper caissons. In the case of the proposed version, the abutments would be protected and shouldn't be undermined, even in a large event. In the case of the larger caisson style, it appears that the abutments themselves would need to be enlarged, and the caissons embedded further away from the creek channel and deeper.[22] Given the erodable alluvial nature of the creek bank, it is likely that these caissons would eventually be daylighted under heavy erosional events, leading to additional work along the "new" stream edge to bridge to the daylighted abutments, and greater impacts in the longer term. In sum, the rip-rap abutment methodology, where the rip-rap is embedded in the creek bank and covered with soil and vegetated with riparian species as proposed, would appear to result in less ESHA harm in the long run, and less coastal resource impacts overall (including allowing for shorter bridge spans and less disruption of archaeological sites and prime agricultural land on either side of the bridges).

C. Conclusion – No Substantial Issue

In conclusion, it is clear that the appeal raises valid coastal resource issues; such has been the case ever since this project was first appealed. The Commission has diligently explored and researched bridge standards and exceptions, bridge funding, and related issues as a means to best understand bridge related issues and requirements as they apply to this site. Based on this information, it appears that the County approved project has been designed in a manner that avoids coastal resource impacts as much as

[21] The County developed a "middle ground" traffic assumption based on taking either end of an assumed buildout projection over time (from a very high to a very low amount of future development in this area) and averaging the two. Although this methodology is better than presuming a "worst case" of max development, it still appears to overestimate potential traffic, including because it appears not to adequately recognize and reflect LCP objectives for this area that will significantly limit future development and traffic associated with it. In addition, it is not clear that the traffic estimates used by the County were for San Simeon Creek Road at the bridges and beyond, but rather for all of San Simeon Creek Road. In other words, certain traffic (i.e., State Park traffic, Van Gordon Creek Road traffic, and other commercial traffic west of the bridges, etc.) drops out before the bridge locations.

[22] Abutments would likely need to be pulled back some 10 to 20 feet, lengthening the spans by about 20 to 30%. This raises the span elevation, requires larger box girders at each end (the current proposed boxes are about 6.5 feet, and they would need to be increased in scale to about 10 feet), and larger caissons themselves (increasing to about 6-foot in diameter).

possible, and there isn't a feasible bridge replacement project that would lead to significantly less resource degradation. Thus, although the appeals raise valid LCP issues, they don't rise to the level of a substantial LCP conformance issue.

The Commission finds that the appeal raises no substantial issue and declines to take jurisdiction over the CDP for this project.