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STAFF REPORT: REGULAR CALENDAR

Consistency Certification No.:	**CC-0006-14**
Applicant:	**North County Transit District**
Location:	San Dieguito River Railroad Bridge 243.0, City of Del Mar, San Diego County (**Exhibits 1-3**)
Project Description:	Placement of 4,139 cubic yards of riprap underneath Bridge 243.0 to protect timber bridge bents from ongoing river scour, and temporary stockpiling of up to 2,800 cubic yards of excavated river sediments in the railroad right-of-way east of the track and south of the river.
Staff Recommendation:	Concurrence

SUMMARY OF STAFF RECOMMENDATION

The North County Transit District (NCTD) has submitted a consistency certification for installing riprap scour protection for structural stability underneath portions of Bridge 243.0 at the crossing of the San Dieguito River adjacent to the Del Mar Fairgrounds. This bridge serves the Los Angeles to San Diego (LOSSAN) rail corridor, which is used by NCTD's Coaster commuter rail service, Southern California Regional Rail Authority's Metrolink commuter rail service, Amtrak's Pacific Surfliner intercity rail service, and Burlington Northern and Santa Fe Railway's freight service. River and tidal flow scouring has exposed bridge timber pilings and bents, created unsupported pile lengths, and exposed wooden pilings to marine borer infestation.

Over time these scouring effects will weaken the timber structure and reduce the load carrying capacity and structural stability of this 98-year-old railroad bridge.

The river channel underneath the bridge would be excavated and then backfilled in stages. Approximately 5,854 cubic yards (cu.yds.) of existing channel bottom sediments would be excavated and replaced with 4,139 cu.yds. of 1,000-pound riprap and 3,056 cu.yds. of the excavated sediments, the latter to partially fill the riprap voids and cover the 5.4-feet-thick riprap bed with a one-foot-thick layer of sediment. Up to 2,800 cu.yds. of excess excavated sediment will be temporarily stockpiled in the railroad right-of-way south of the river and east of the railroad track. All excess sediments suitable for beach nourishment will be transported from this location to a nearby shoreline site after completion of grain size analysis and coordination with Commission staff on shoreline site selection. The riprap bed will be excavated and removed from the river channel upon completion of the future San Dieguito River double-track railroad bridge at this location. Construction of the proposed project would take three months and is anticipated to commence in March or April 2015.

The project is an allowable use in the San Dieguito River estuary as a limited improvement to an existing transportation facility that is necessary to maintain existing capacity of the railroad line. There is no feasible less environmentally damaging alternative to the riprap bed for protecting Bridge 243.0 from river and tidal flow scouring. The project will not result in permanent reductions in open water/intertidal area. Temporary impacts to open water and upland areas will be mitigated by restoration to pre-project conditions. Best management practices are included to protect water quality and marine resources during project construction. The project would not adversely affect the functional capacity of San Dieguito Lagoon, and excess excavated sediments that are deemed suitable for beach nourishment will be transported to a shoreline site. The staff recommends the Commission find the project consistent with the wetland habitat, sand supply, marine resources, and water quality policies of the California Coastal Management Program (Coastal Act Sections 30230, 30231, and 30233).

The proposed scour protection at Bridge 243.0 would improve public access by maintaining the existing railroad bridge and railroad operations, which in turn helps to reduce automobile traffic on regional highways which provide public access to coastal recreation areas. The staff recommends the Commission find the project consistent with the public access and recreation policies of the California Coastal Management Program (Coastal Act Sections 30210 and 30252).

Commission staff recommends **concurrence** with CC-0006-14. The motion to implement this recommendation is found on Page 4, below.

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APPENDICES

EXHIBITS

I. APPLICANT'S CONSISTENCY CERTIFICATION

The North County Transit District has certified that the proposed activity complies with the California Coastal Management Program and will be conducted in a manner consistent with that program.

II. MOTION AND RESOLUTION

Motion:

> *I move that the Commission **concur** with consistency certification CC-0006-14 that the project described therein is fully consistent with the enforceable policies of the California Coastal Management Program.*

Staff recommends a **YES** vote on the motion. Passage of this motion will result in an agreement with the certification and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution:

> *The Commission hereby **concurs** with consistency certification CC-0006-14 by the North County Transit District on the grounds that the project is fully consistent with the enforceable policies of the California Coastal Management Program.*

III. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION

The North County Transit District (NCTD) proposes to install riprap scour protection for structural stability underneath portions of Bridge 243.0 at the crossing of the San Dieguito River adjacent to the southwest corner of the Del Mar Fairgrounds (**Exhibits 1-3**). This bridge serves the Los Angeles to San Diego (LOSSAN) rail corridor, which is used by NCTD's Coaster commuter rail service, Southern California Regional Rail Authority's Metrolink commuter rail service, Amtrak's Pacific Surfliner intercity rail service, and Burlington Northern and Santa Fe Railway's freight service (**Exhibit 4**). While there are several possible explanations for the direct cause of the recent and ongoing scour conditions present in the river at and adjacent to the bridge, there is no question that river and tidal flow scouring has exposed bridge timber pilings and bents (a set of pilings in a row), created unsupported pile lengths, and exposed wooden pilings to marine borer infestation. NCTD states that over time these scouring effects will weaken the timber structure and reduce the load carrying capacity and structural stability of this 98-year-old railroad bridge.

There are plans to replace the existing Bridge 243.0 with a new double-track concrete structure. While engineering and environmental studies for this project are underway, the replacement bridge is currently not expected to be in service any sooner than the year 2030, hence the need to

maintain the aging timber bridge. To that end, the Commission's Executive Director concurred with a negative determination (ND-067-09) from NCTD in November 2009 for installation of longitudinal and transverse bracing and wrapping of timber pilings in order to strengthen the bridge in advance of river channel dredging associated with the San Dieguito Lagoon restoration project. That work was completed in 2011. The Commission later concurred with a consistency determination (CC-006-11) from NCTD in October 2011 for installation of riprap to protect the southern railroad bridge abutment from anticipated increased river flows due to the aforementioned dredging. Construction of that project has yet to commence. NCTD states that it monitors the condition of the bridge with special inspections every two weeks and that the previously-installed bracing:

> *. . . provides some protection against sudden failure of the structure under a train. However . . . a more permanent measure is needed to ensure the pile bent stability and protect the bridge from further channel degradation until it is replaced.*

The proposed scour protection project at Bridge 243.0 includes the following elements (**Exhibits 5 and 6**):

- The project will be constructed within the railroad right-of-way.

- The river channel would be excavated and then backfilled along the length of the bridge, from Bent 2 to Bent 28, for a total length of approximately 360 feet and a total width of approximately 70 feet. Work would be limited to three bents at a time to maintain stability of the bridge and to accommodate tidal flows under the bridge. Work would proceed from the north end of the bridge (where there is much sand in the river channel) to the south end (where most of the scouring is taking place). Approximately 5,854 cubic yards (cu.yds.) of existing channel bottom sediments would be excavated and replaced with approximately 4,139 cu.yds. of 1,000-pound riprap and 3,056 cu.yds. of the previously excavated river bottom sediments, the latter to partially fill the riprap voids and cover the riprap bed.

- In cross section from east to west, there would be a 10.8-foot-long, 1:2 slope from elevation -4 feet NGVD29 (National Geodetic Vertical Datum of 1929) to -9.4 feet NGVD29, a 48-foot-wide flat bottom at elevation -9.4 feet NGVD29, and a 10.8-foot-long 1:2 slope from elevation -9.4 feet NGVD29 to -4 feet NGVD29.

- Geotextile fabric would be placed at the base of the slope along the bottom of the dredged area. This trench would be filled with a 5.4-foot-thick bed of riprap, with the top of the bed extending to -4 feet NGVD29. Scour holes that extend deeper than -9.4 feet NGVD29 would first be filled with excavated sand up to the -9.4 feet level, and then followed by geotextile fabric and riprap placement.

- The riprap would then be covered with approximately 3,056 cu.yds. of excavated channel bottom sediments to an elevation of -3 feet NGVD29 (to be consistent with Southern California Edison's permitted dredging channel surface depth of -4 feet NGVD29) or to original grade, whichever elevation is higher.

- NCTD estimates that 3,056 cu.yds. of excavated channel bottom sediment will be returned to the excavation footprint: 2,642 cu.yds. to provide the 1-foot-thick cap above the riprap to elevation -3 feet NGVD29 or original grade, and 414 cu.yds. to fill a 10-percent void space within the riprap layer.

- Although the riprap may have up to 30 percent void space, the quantities for the replaced channel bottom sediment material assumes that a void space equal to 10 percent of the riprap volume will be filled. If the riprap voids take more material, it will increase the volume of fill material required and decrease the amount of excess material. However, this will not change the physical dimensions of the placement of riprap and excavated sediment.

- Up to 2,800 cu.yds. of excess excavated sediment will be temporarily stockpiled in the railroad right-of-way south of the river and east of the railroad track. All excess sediments suitable for beach nourishment will be transported from this location to a nearby shoreline site after completion of grain size analysis and coordination with Commission staff on shoreline site selection (**Exhibit 7**).

- The riprap bed will be excavated and removed from the river channel upon completion of the future San Dieguito River double-track railroad bridge at this location (**Exhibit 7**).

- Construction staging/laydown areas will be used to assemble, organize, and store equipment and materials necessary for project construction. The proposed staging areas may include the area southeast of the bridge within the railroad right-of-way adjacent to the Del Mar Public Works Maintenance Yard, as well as Southern California Edison's staging/laydown area on the Del Mar Fairgrounds property. These areas are currently disturbed and contain no sensitive habitat.

- Construction vehicles and equipment would access the project site and staging/laydown area by using Jimmy Durante Boulevard to the dirt road on the south side of the lagoon channel and then to the railroad right-of-way. Access from the west side of the railroad tracks is from Camino Del Mar to 28th Street to the railroad ROW.

NCTD states that the project contractor will undertake work below the high tide line during low water conditions when the area is naturally dewatered, to the maximum extent feasible, and that diversion or blocking of tidal influence and/or dewatering of the construction site will not occur. The contractor may work from barges when working in the river under the bridge for excavation of the channel bottom, slope preparation, and riprap placement. Turbidity curtains will be installed around in-water work areas, as necessary, to reduce sediment from migrating significant distances from the work areas.

NCTD states that construction of the proposed project would take three months and is currently anticipated to commence in March or April 2015.

B. COASTAL COMMISSION JURISDICTION AND STANDARD OF REVIEW

The project triggers federal consistency review because it needs a U.S. Army Corps of Engineers ("Clean Water Act Section 404") permit. The standard of review for federal consistency certifications is consistency with the enforceable policies of Chapter 3 of the Coastal Act. The Commission also believes the project is subject to the permitting requirements of the Coastal Act; however, the North County Transit District (NCTD) disagrees with this position. The NCTD believes that based on a decision by the federal Surface Transportation Board, it is not required to obtain coastal development permits for track improvements and is only subject to federal consistency review for such projects. However, the Commission still holds to its long-standing position that railroad projects in the Los Angeles to San Diego railroad corridor sponsored by the NCTD, including the proposed project, are subject to the permitting requirements of the Coastal Act. The Commission further notes that the NCTD has applied for a number of permits for its railroad improvement activities in other sections of the coast, including the following coastal development permits: 6-03-102-G (Agua Hedionda emergency repairs), 6-02-152 (San Luis Rey River bridge repair), 6-02-151 (Agua Hedionda bridge), 6-02-102 (Del Mar drainage outlets), 6-02-80 (Santa Margarita Bridge repair), 6-01-64 (Balboa Avenue), 6-01-108 (Tecolote Creek), 6-93-60 (Del Mar), 6-94-207 (Solana Beach), 6-93-106 (Carlsbad), and 6-93-105 (Camp Pendleton). Notwithstanding this disagreement about whether a coastal development permit is needed, there is no dispute that the proposed project is subject to the Commission's federal consistency review authority, which involves a similar standard of review. Consequently, the Commission can achieve the same substantive goals by conducting its review under its federal consistency authority and therefore will rely on that and not challenge NCTD's position in this case. By employing that standard, the Commission concurs with this consistency certification based on its findings that the project is consistent with the Coastal Act.

C. WETLAND HABITAT/MARINE RESOURCES/WATER QUALITY

The Coastal Act provides:

> *Section 30230. Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Use of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*
>
> *Section 30231. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Section 30233.

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

. . .

(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

. . .

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for these purposes to appropriate beaches or into suitable longshore current systems.

(c) In addition to other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division . . . .

The proposed excavation of channel bottom sediments and the installation of riprap scour protection for structural stability underneath portions of Bridge 243.0 at the crossing of the San Dieguito River triggers the three-part test of Section 30233(a) of the Coastal Act, the dredge spoil disposal test of Section 30233(b), and the functional capacity test of Section 30233(c). These analyses are required because the project includes fill in San Dieguito lagoon, because there will be excess excavated channel bottom sediments potentially suitable for beach replenishment, and because this lagoon is one of the "priority wetlands" referred to in Section 30233(c).

Under the first of these tests, a project must qualify as one of the seven stated uses allowed under Section 30233(a). The Commission has considered minor improvements or expansions of existing roads, railroad lines, and airport runways in certain situations to qualify as "incidental public service purposes," and thus allowable under Section 30233(a)(4), but only where no other feasible less damaging alternative exists and the expansion is necessary to maintain existing traffic capacity.

The Court of Appeal has recognized this definition of incidental public service as a permissible interpretation of the Coastal Act. In the case of *Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County* (1999) 71 Cal.App.4th 493, 517, the court found that:

> *… we accept Commission's interpretation of sections 30233 and 30240… In particular we note that under Commission's interpretation, incidental public services are limited to temporary disruptions and do not usually include permanent roadway expansions. Roadway expansions are permitted only when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.*

The proposed project is clearly necessary to protect and maintain existing rail capacity. NCTD has documented the need to further protect (beyond those measures previously approved by the Commission) the existing timber piles and bents that support Bridge 243.0 from the increased threat of scour and erosion (which could ultimately lead to partial or complete failure of the bridge) due to tidal and river flows. The Commission's coastal engineer visited the project site in October 2014 and observed the high tidal flows and confirmed the presence of deep scour holes, particularly at the southern end and upstream side of the bridge. Moreover, in several cases, the Commission has applied the same rationale to transportation modes other than roads (CC-055-05, NCTD, Railroad Bridge Replacement over Agua Hedionda Lagoon; CC-058-02, City of Santa Barbara, modifications to the Santa Barbara Airport; CC-052-05, NCTD, Bridge Replacement and Second Track, Santa Margarita River; and CC-086-03, NCTD, Second Track, San Onofre Area, Camp Pendleton).

For example, NCTD asserted in CC-086-03 the following:

> *Allowable Use Test - Coastal Act Section 30233(a)*
>
> *Section 30233(a) does not authorize wetland fill unless it meets the "allowable-use" test. Similar to the Commission decision regarding safety improvements at the Santa Barbara Airport (CC-58-01), the proposed project is an allowable use as an incidental public service because is it necessary to maintain existing passenger service.*

The Commission responded in CC-086-03 as follows:

> *The Commission agrees and finds that the project is a limited expansion and is necessary to maintain existing capacity, and can be considered an allowable use as an incidental public service under Section 30233(a)(5).*

In CC-052-05, the Commission found:

> *Given this information, the Commission believes the same conclusion for the subject bridge replacement that it relied on in CC-86-03 is warranted, and that the project can be considered is a limited expansion and necessary to maintain existing capacity, and, therefore, an allowable use as an incidental public service under Section 30233(a)(5).*

In addition, unlike the above-two cases, the proposed installation of scour protection riprap underneath the San Dieguito River bridge does not involve additional tracks. The aforementioned consistency certifications are cited to establish that rail line maintenance, including the proposed scour protection for the existing bridge, can qualify as an incidental public service under Section 30233(a) when it is necessary to maintain existing rail capacity. Furthermore, while San Dieguito Lagoon is one of the "priority wetlands" afforded additional protection under Section 30233(c), which was not at issue in the above-referenced cases, the Commission finds (as analyzed later in this section of the staff report) that: (1) the proposed scour protection project will not alter or affect the functional capacity of San Dieguito Lagoon; and (2) even if it considered the project to alter the lagoon, the project can be considered a "very minor incidental public facility" based on the same rationale discussed above and in the Commission's wetlands guidelines[1] and several past Commission permit reviews. These guidelines and reviews apply the same test for a project that the Commission has determined is necessary to maintain existing capacity to constitute an allowable use under Section 30233, regardless of whether it is being viewed as an "incidental public service" under Section 30233(a), or a "very minor incidental public facility" under Section 30233(c). Thus, the Commission has determined that a limited improvement or expansion of an existing transportation facility that is necessary to maintain existing capacity is an allowable use as an incidental public service under either Section 30233(a)(4) and Section 30233(c). Moreover, the project will not adversely affect the functional capacity of San Dieguito Lagoon, another test of Section 30233(c). Therefore, the Commission finds that the project is an allowable use as an incidental public service and a very minor incidental public facility under both Sections 30233(a) and 30233(c) of the Coastal Act.

While the proposed scour protection riprap is necessary to protect and maintain existing railroad capacity and operations, the Commission is aware of the proposed future double-track bridge across San Dieguito Lagoon. During the Commission's review of CC-006-11 (riprap protection of the Bridge 243.0 southern abutment), NCTD responded to Commission staff inquiries regarding the potential for that riprap project to potentially affect future plans for either double-tracking along the current alignment or relocating the alignment inland away from the Del Mar bluffs via a tunnel alternative. The Commission staff also sought assurances that the proposed southern abutment riprap would be removed if it was not necessary for the future double-track bridge or if the railroad track was relocated at a future date. NCTD stated at that time that a decision regarding alternative second track alignments through Del Mar had not yet been made and that:

> *. . . portions of the proposed revetment likely would have to be removed to build a new LOSSAN double track bridge, but that this would not preclude the future LOSSAN double track project.*
>
> *A Project Study Report (PSR) was completed in June 2009 by SANDAG to look at a double track bridge replacement and seasonal rail platform for San Dieguito. If you assume the*

[1] The Commission's wetland guidelines include a footnote for "incidental public services," which states: [Footnote 3:] "When no other alternative exist, and when consistent with the other provisions of this section, limited expansion of roadbeds and bridges necessary to maintain existing traffic capacity may be permitted." The footnote for "very minor incidental public facilities" states: "(see footnote #3)."

[Del Mar] Fairgrounds will not give up any of their land for a future double track/tunnel project (they have stated as much), then the alignment of the current bridge is generally the alignment of the future double track bridge in the PSR. However, in all of the eight alternatives considered, the southern bridge abutment is moved to the south about 100 feet or more to help provide additional flood capacity and to reduce impacts to wetlands (the berm under the southern extended part of the bridge would be removed to match the river channel).

That would put the future bridge abutment and some piles, if the second track is to the east, within the proposed riprap which is proposed to extend 160 feet south of the existing abutment on the east side. In this case, the riprap in the vicinity of the new piles and abutment would have to be removed prior to construction of the new abutment and piles.

The PSR further addresses the issue of future double tracking through Del Mar (See attached pages from the PSR). The tunnel option under I-5 would require a realignment of the southern 500 feet or so of the PSR double track bridge (i.e., the bridge and track (heading south) would begin to gradually turn to the east in the vicinity of the northern bank of the River).

It is uncertain where the southern abutment and piles would be for a realigned bridge, but they very well may be within the proposed revetment. In this case, the riprap in the vicinity of the new abutment and piles would have to be removed prior to construction of the new abutment.

In October 2011 the Commission adopted the following findings to support its concurrence with CC-006-11:

The proposed riprap structure is designed to protect the existing abutment and railroad track berm at the southern end of the Bridge 243.0. Should that riprap not be needed to protect the future alignment of a second track and bridge or a realigned bridge(s) required for a LOSSAN tunnel project, NCTD will remove the riprap. The Commission finds that the proposed riprap project will not prevent any future double-track alignment alternatives along this segment of the LOSSAN corridor from receiving due consideration by NCTD during future project and environmental planning. In addition, the Commission believes that for any second track ultimately proposed across the lagoon, the question of whether a second track and bridge at this location can be found an incidental public service or consistent with Section 30233 as the least environmentally damaging feasible alternative remains an unresolved issue at this time. The Commission will address that question at the appropriate future date.

The proposed scour protection riprap project raises similar issues regarding the future double-track railroad bridge at this location. NCTD has stated that the proposed riprap is designed and would be installed only for protection of the existing timber bridge. All of the proposed riprap will be excavated and removed from the channel bottom concurrent with demolition and removal of the existing Bridge 243.0, which would occur concurrent with and/or immediately after

construction of the future double-track bridge (depending on the alignment and construction method for the latter bridge). This commitment to remove all of the proposed channel bottom riprap is in addition to NCTD's commitment to remove the abutment riprap approved for installation under the aforementioned CC-006-11 (**Exhibit 7**).

Concerning the alternatives test of Section 30233(a), NCTD submitted (as an element of its consistency certification) the *Bridge 243.0 Scour Repair Alternatives Analysis (October 2014)* report, which examined the proposed project (Alternative 1) and five alternatives:

1. Rock riprap scour countermeasure (proposed project)
2. Articulating concrete block scour countermeasure
3. Regular scour hole maintenance
4. Re-dredge lagoon to design template
5. Structural improvements
6. No action

The *Alternatives Analysis* describes the engineering design rationale supporting Alternative 1 (the proposed project):

> *Design Guideline 11 within Federal Highway Administration's HEC-23 (FHWA 2009) includes recommendations and design guidelines for countermeasures for bridge pier protection. HEC-23 provides a unique methodology for sizing rock riprap for pier protection as opposed to methods developed for bank revetment or other applications (See pier protection layout in Figure 3). Riprap pier protection is an effective solution presented in HEC-23 to prevent scour from occurring at the bents as long as it is periodically monitored and maintained during the life of the bridge. The railroad industry typically uses riprap as a common permanent scour countermeasure, and this measure was employed to protect the railroad bridge from scour associated with the restoration of Batiquitos Lagoon.*
>
> *The previously mentioned HDR report dated June 2014 covers design specific details of a riprap apron at this location per HEC-23 guidelines. Briefly stated, the apron would be designed to the 100-year event, would tie into the current proposed and permitted riprap revetment to be constructed at the south abutment of the bridge, and would extend approximately 360' across the active channel. The determined projected pier width (a) was 7 feet based on flow angle, therefore requiring a minimum apron width of 14 feet (2a) from the bent in all directions. The existing 14-foot span dimension between bents necessitates a continuous apron, bent to bent. The apron would be constructed three bridge spans at a time due to structural safety concerns. The entire construction effort is estimated to last 3 months. Dredging and minor fill would be required, along with backfill in areas to match existing grade. The top of the riprap apron will be at -4 feet NGVD29 in order to provide 1 foot of stream material cover on the riprap to the SCE design dredge template elevation of -3 ft NGVD29, and to ensure the channel would not be restricted such that tidal flows would remain essentially as modeled by SCE to support SCE's lagoon restoration (See Exhibit 2 in Appendix A).*

Alternative 2 (articulated concrete blocks):

> *. . . is an interlocking matrix of concrete blocks of uniform size, shape, and weight connected by a series of cables that pass longitudinally through pre-formed ducts in each block. The block provides resistance to erosion and high tractive forces. It is installed over site-specific filter fabric consisting of lightweight blankets or meshes. The primary failure mechanism of articulated concrete block is undermining especially in environments characterized by large fluctuations in the surface elevation of the channel bed and/or bank. Failures have been observed where a corner or edge of the mattress is undercut resulting in complete failure of the revetment.*

The *Alternatives Analysis* further states that articulated concrete blocks are very difficult to place in water moving more than four feet per second; that placement tolerances require that top surfaces of blocks must be within one-half inch vertically of adjacent blocks; that placement tolerances may require dewatering during construction and placement; and blocks are more difficult to repair than riprap.

Alternative 3 (regular scour hole maintenance) involves:

> *. . . maintaining the channel elevation beneath the bridge at a set elevation through regular inspection and maintenance. As scour holes are identified as posing a risk to the structural integrity of the bridge, channel dredging equipment would be utilized to fill them. Presumably fill would consist of locally derived native material.*

The *Alternatives Analysis* further states that scour hole maintenance could be frequent, would require permitting for on-going channel dredging and filling upstream and downstream of the bridge, stream materials are easily erodible and would not protect the bridge bents from scour, and that there is a high risk of a scoured condition to exist during train operations prior to the occurrence of the maintenance work.

Alternative 4 (Re-dredge lagoon to design template) involves a one-time dredging/filling operation to remediate the existing stream bottom condition in an effort to eliminate flow concentrations at the bridge. However, the *Alternatives Analysis* states that the effects of this operation would likely be temporary and that the dynamic nature of the lagoon, sand transport rates, and flow conditions "all point to a high probability that undesirable bottom conditions would return and leave the bridge vulnerable to local scour on a daily basis."

Alternative 5 involves structural improvements to the bridge:

> *Bridge structural improvements can be implemented to alleviate a scour concern. Substructure structural improvements, such as strengthening and underpinning, provide bridge support by strengthening the existing substructure (bents) or by creating a secondary, standalone substructure to take a portion or the entire structural load. Substructure strengthening might be accomplished by cross bracing*

> *or by driving/drilling new piles around the existing bent and tie these new piles with the existing bent together using a collar, such as poured concrete. Effectively, this would add length to the buried portion of the substructure.*
>
> *Another option is superstructure underpinning, for example to drive/drill piles away from the bents and affix a concrete cap or steel girder on top. The cap, placed perpendicular to the track, would provide additional structural support to the bridge superstructure (See Figure 5) and protect it from the scour hazards.*

The *Alternatives Analysis* states that while this alternative would provide a durable solution for the next 15-20 years that the bridge must remain operational, this alternative would also require a lengthy construction period, significant impacts to rail operations, deep excavation for pilings, and pile driving vibrations that could compromise the existing timber pilings.

Alternative 6 is the no-action alternative which would require:

> *. . . continuation of regular inspection activities and monitoring of the existing pier scour holes. Further scour could mandate a slow order be placed on the bridge, or worse, structural damage could occur. Emergency maintenance action, including instream earthwork, may be required if scour conditions worsened.*

The *Alternatives Analysis* concludes that:

> *Five alternatives were identified as feasible mitigation solutions against loss of material support around Bridge 243.0 pier bents along with one no action alternative. Each alternative was described and a Pros/Cons listing was developed for each. These alternatives were qualitatively evaluated using seven evaluation categories* [constructability, durability, effectiveness, construction cost, maintenance cost, construction environmental impact, and maintenance environmental impact]. *Ratings of Very High, High, Medium, Low, or N/A were assessed, with desirability (i.e. Very High = Desirable) dependent on category type.*
>
> *Alternative 1, Rock Riprap Scour Countermeasure, was determined to be the most preferred alternative based on the results of the qualitative comparison. For each evaluation category, rock riprap was always tied with the most desirable rating (not including N/A determinations) achieved by the other alternatives. All other alternatives were graded lower than riprap in at least two categories. The ACB alternative achieved the second highest evaluation*

NCTD has documented the need to maintain safe railroad operations across the San Dieguito River and the need to protect the structural stability of this bridge from river and tidal flow scouring until a proposed double-track replacement bridge is constructed (currently scheduled to occur no sooner than the year 2030). The alternatives analysis submitted by NCTD included a comprehensive list of feasible alternatives to address the scouring problem that currently exists at Bridge 243.0. The Commission agrees with NCTD that there is no less environmentally damaging feasible alternative for the proposed scour protection of the Bridge 243.0 timber

pilings and bents. The Commission also notes that this alternative includes the removal from the river channel of all the rock riprap to be installed; this will eliminate any permanent impacts to the river channel from implementing this alternative.

Concerning mitigation, NCTD states that while the agency's highest priority is protecting the existing timber bridge in order to maintain rail operations in the LOSSAN corridor, it believes that the proposed project avoids permanent impacts to resources and habitat within the river channel and minimizes to the extent practicable temporary impacts to those resources. Temporary impacts will occur from construction access and staging, from the excavation of channel bottom sediments underneath the bridge, and from the placement of riprap and capping of the riprap bed with excavated sediments. NCTD estimates that construction access and staging work will temporarily affect 0.06 acres of non-native vegetation, 1.14 acres of urban/developed area, 0.23 acres of mudflat, and 0.37 acres of open water. These temporarily affected areas will be restored to pre-project conditions. Proposed excavation and fill underneath the bridge will temporarily affect 0.47 acres of open water and 0.06 acres of mudflat. These areas will also be returned to pre-project conditions with the capping of all riprap with excavated channel bottom sediments.

Upon installation of the riprap bed underneath Bridge 243.0, the previously-excavated channel bottom sediments will be placed over the riprap to: (1) partially fill in the voids in the 5.4-foot-thick riprap bed; and (2) cover the bed with sediment to an elevation of -3 feet NGVD29 (to be consistent with Southern California Edison's permitted San Dieguito River channel dredging surface) or to original grade, whichever is higher. At project completion, the 70-foot-wide and 360-foot-long riprap bed (0.58 acres) underneath the railroad bridge will be covered with native channel bottom sediments. However, NCTD acknowledges that scouring will likely continue at this location after completion of the project and that as a result, sections of the riprap bed may periodically be uncovered, depending on the severity of scour, the movement of channel sediments upstream and downstream over time, and the filling-in of scour holes by sediment flows. The Commission staff's ecologist reviewed the proposed project and concluded that: (1) the buried riprap bed would not create adverse impacts to habitat in the river channel; (2) the possible exposure of sections of the riprap bed from river and tidal flow scouring would not necessarily be detrimental to habitat; and (3) the riprap bed will not adversely affect the functional capacity of the restored San Dieguito Lagoon. This conclusion is based on the absence of eelgrass or other sensitive marine habitat in and immediately adjacent to the project footprint, and on the dynamic nature of channel hydraulics at the bridge location subsequent to the reintroduction of tidal flows into the San Dieguito River lagoon after the dredging of an inlet channel to the Pacific Ocean in 2008.

In addition, and as noted earlier in this section, because the entire riprap bed will be removed by NCTD once the future double-track railroad bridge is constructed, the riprap bed will not be a permanent structure in the river channel. The bed will be routinely inspected by NCTD to ensure that the structure remains in place and is protecting the bridge pilings and bents as designed. Should maintenance, repair, or modification of the riprap bed be required at a future date, NCTD will coordinate with the Commission staff to determine the appropriate level of federal consistency review for such activity.

A pre-construction eelgrass survey was conducted during low tide in and adjacent to the project area (82 feet upstream and downstream of the railroad bridge centerline) in September 2014, and was performed in accordance with the Southern California Eelgrass Mitigation Policy (SCEMP, Revision 11). The survey results (Merkel & Associates, September 29, 2014) state that:

> *At the time of the pre-construction survey, no eelgrass was found within the survey area. The closest eelgrass observed was southeast of the survey area, along the estuary shoreline. This eelgrass occurs approximately 20 feet upstream of the temporary impact APE and outside of the work area. These observations are consistent with previous mapping of the eelgrass performed by M&A during June 2013 (M&A 2014).*
>
> *Based on the absence of eelgrass within the Project site, no direct impacts to eelgrass are anticipated as a result of repair work. Because of the lack of eelgrass in the project area, no mapping or turion counts were undertaken in the existing bed areas outside of the project area. The temporary impact zone is very close to the existing eelgrass upstream of the southern abutment of the bridge. For this reason, it is important that work be carefully controlled to stay within this zone and that if necessary, additional protective measures be used to control turbidity and sediment discharge from this area. A post-construction eelgrass survey will be required to verify that the adjacent eelgrass has been effectively protected.*

NCTD has committed to implement construction best management practices that will protect eelgrass located adjacent to the project area, to conduct a post-construction eelgrass survey in the area of the pre-construction survey, and to mitigate any eelgrass impacts (in accordance with the SCEMP) that were documented to have occurred due to project construction.

NCTD reports that no listed sensitive plant species are located in the project area. The California brown pelican is expected to forage in the tidal waters of the San Dieguito Lagoon but does not nest in the vicinity of Bridge 243.0. There is no suitable nesting habitat for the Western snowy plover or the California least tern within one-quarter mile of the of the project area. There is no cordgrass habitat and very little freshwater marsh habitat suitable for nesting for the Light-footed clapper rail at or adjacent to the project area. The proposed project will not adversely affect these sensitive species or their habitats.

The project also includes best management practices to protect marine resources and water quality during and after construction. These measures include: (1) undertaking work below the high tide line during low water conditions when the area is naturally dewatered, to the maximum extent feasible; (2) no diversion or blocking of tidal influence and/or dewatering of the construction site; (3) monitoring turbidity using field turbidity meters at 100 feet and 250 feet from the work areas; (4) installing silt/turbidity curtains around in-water work areas if monitoring indicates exceedance of turbidity thresholds based on the turbidity water quality criteria specified in the San Diego Regional Water Quality Control Plan; and (5) locating construction staging areas on currently disturbed areas within the NCTD right-of-way and/or on SCE staging areas at the Del Mar Fairgrounds.

The project will not result in permanent reductions in open water/intertidal area. Temporary impacts to open water and upland areas will be mitigated by restoration to pre-project conditions, and best management practices are included to protect water quality and marine resources during project construction. Therefore, the Commission finds that no further mitigation is required under Section 30233(a) and (c) to protect wetlands, marine resources, and water quality.

As noted earlier in Section III.A., the project includes the excavation of approximately 5,854 cu.yds. of channel bottom sediments to create room for the placement of the riprap bed underneath the bridge. NCTD estimates that just over half that volume will be returned to the river channel and placed over the rock bed to partially fill the voids and to create a cap. Depending on the volume of sediment that percolates down into the riprap voids, up to 2,800 cu.yds. of excavated sediment will be available for beneficial reuse outside of the project footprint. NCTD reports that most of the sand to be excavated underneath Bridge 243.0 is on the northern side of the river channel. Four subsurface borings were drilled in October 2014 at the northern end of the proposed excavation trench. The results of the physical grain size analysis showed that the sediment samples are poorly graded sands with sand content exceeding 90%. While the sediments in the central and southern sections of the proposed trench have not been sampled for grain size analysis (they will, as detailed below), NCTD expects that the sediments in these areas, given the river channel dynamics and sand bar locations, will be similar in grain size and sand content to those at the northern end of the bridge. In addition, given the sand content percentage of the channel bottom sediments, unsuitable levels of chemical constituents are not expected to occur. However, if future grain size analysis documents the presence of fine-grained sediments, that finding would likely preclude using the sediments for beach nourishment and NCTD would need to identify an alternate disposal site for those materials.

Excavation and placement of riprap will proceed from north to south underneath the bridge and in three-bent sections at a time in order to minimize channel flow interference. The initial volume of excavated sediments will be transported across the channel to a temporary stockpile location in the railroad right-of-way (ROW) south of the channel and east of the railroad track. Geotextile fabric and riprap will then be placed in the trench. The next three-bent section under the bridge will be excavated and that material placed over the adjacent riprap bed. This process will be repeated south across the channel. Any excess excavated sediment from each three-bent section will be placed at the stockpile site as it is generated. In addition, as sediment is placed at the stockpile site it will be tested for grain size analysis and sand content, in order to determine suitability for beneficial reuse.

The proposed project includes the temporary stockpiling of excess excavated sediments, estimated to be no more than 2,800 cu.yds., at the aforementioned ROW. The stockpile site is approximately 140 feet long and 40 feet wide, and supports no sensitive habitat as it is a currently disturbed railroad work area. The sediments to be stored here will extend no higher than 14 feet above existing grade. Plastic sheeting with suitable anchoring consistent with standard erosion control best management practices will be applied to cover the entire stockpile of sediments during non-working hours and upon completion of the project. NCTD has committed to minimizing the duration of the stockpile to the extent feasible, and to placing all suitable excess dredged material on a nearby beach as soon as possible in accordance with Section 30233(b) of the Coastal Act (**Exhibit 7**).

Commission staff informed NCTD that the preferred location for excess sediment placement is the shoreline immediately south of the San Dieguito River inlet. This area is currently in need of nourishment, this is where maintenance dredged materials from the San Dieguito River are typically placed, longshore sediment transport at this location is generally north to south (therefore minimizing the possibility that these sediments would return to the lagoon and river channel), and it is close to the stockpile site. NCTD has committed to work with the Commission staff to confirm the suitability of the excess excavated channel bottom sediments, to identify the most appropriate beach disposal site for suitable sediments, and to identify the disposal location of any unsuitable sediments. With the commitments by NCTD to ensure that excess excavated channel sediments will be transported to an appropriate beach and remain in the local littoral system, the Commission finds that the proposed project is consistent with the dredge spoils policy of Section 30233(b) of the Coastal Act.

Based on the above findings, the Commission concludes that the proposed scour protection project at the San Dieguito River railroad bridge is an allowable use would not cause significant adverse impacts to wetland habitat, marine resources, or water quality at and adjacent to the project area, that it is the least environmentally damaging alternative, and that adequate mitigation will be performed, and would therefore be consistent with the wetland habitat, sand supply, marine resources, and water quality protection policies of the California Coastal Management Program (Coastal Act Sections 30230, 30231, and 30233).

D. PUBLIC ACCESS AND RECREATION

The Coastal Act provides:

> *Section 30210. In carrying out the requirements of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*
>
> *Section 30252. The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service . . . .*

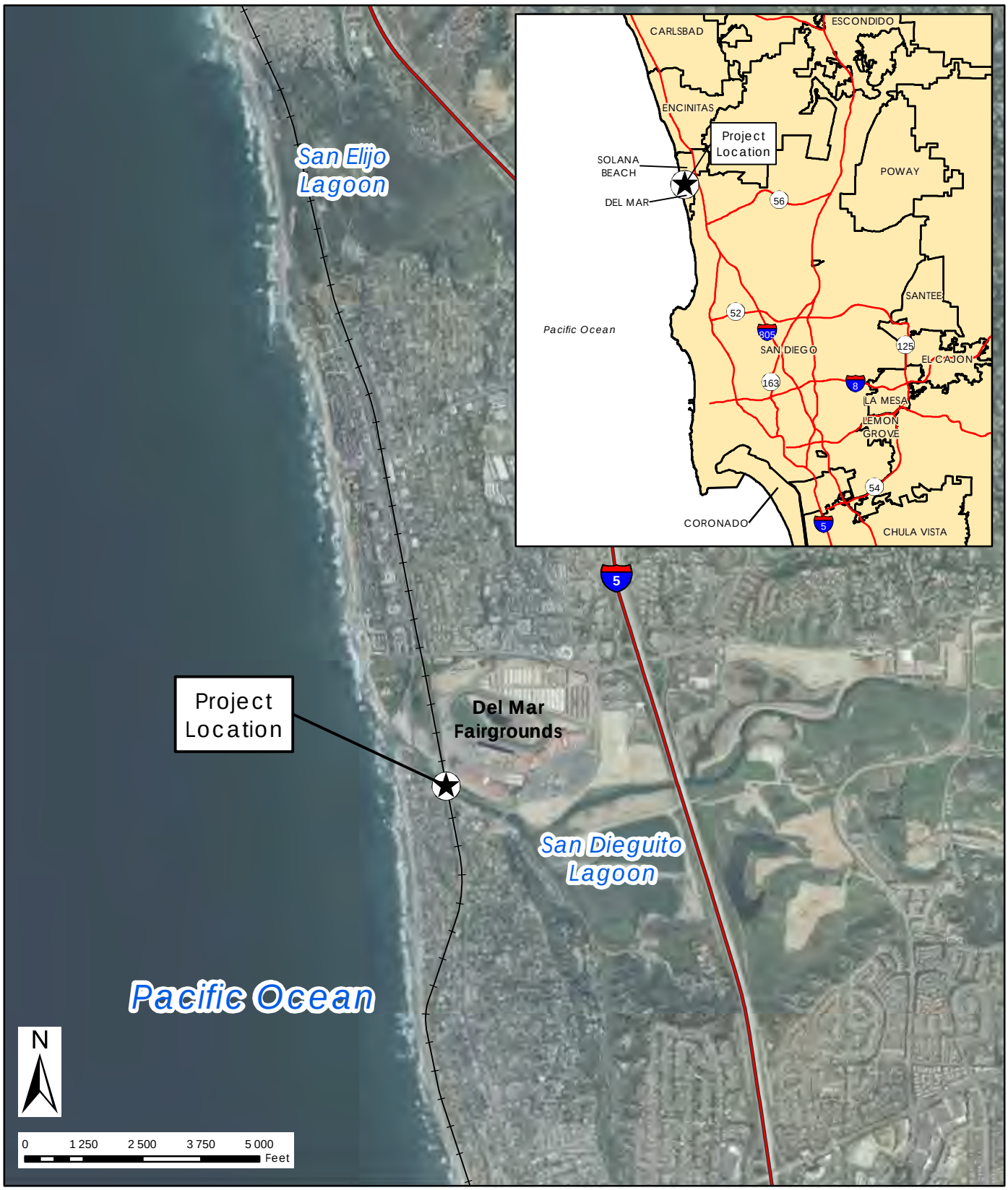
In reviewing past projects involving mass transit improvements in San Diego County, the Commission has considered traffic congestion to constitute a constraint on public recreation and access to the shoreline. Increased traffic on highways such as Interstate 5 and Coast Highway (Old U.S. 101), which are major, north-south coastal thoroughfares, reduces the ability of the public to reach coastal recreation areas and makes it more difficult for the public to get to the beach. Section 30252 of the Coastal Act recognizes the importance of improving public access through, among other factors, improvements in public transit. Maintaining existing public transit and associated infrastructure is equally important and beneficial to public access. The San Dieguito River railroad bridge 243.0 is a critical link in rail operations on the LOSSAN corridor, for both passenger and freight traffic. The inability of trains to use this bridge, due to structural instability or failure resulting from scouring at the timber pilings and bents, would create significant adverse impacts to transportation, regional and state economies, and coastal access.

The proposed scour protection at Bridge 243.0 would improve public access by maintaining the existing railroad bridge and railroad operations, which in turn helps to reduce automobile traffic on regional highways which provide public access to coastal recreation areas. The Commission therefore finds the project would be consistent with the public access and recreation policies of the California Coastal Management Program (Coastal Act Sections 30210 and 30252).

APPENDIX A

SUBSTANTIVE FILE DOCUMENTS

1. CC-006-14 (North County Transit District, San Dieguito River Railroad Bridge, Scour Repair Project, San Diego County)
2. CC-006-11 (North County Transit District, San Dieguito River Railroad Bridge, Southern Abutment Protection, San Diego County)
3. NE-067-09 (North County Transit District, San Dieguito River Railroad Bridge, Structural Retrofit and Pile Wrapping, San Diego County)
4. CC-059-09 (NCTD, Replacement of three wood trestle railroad bridges with concrete bridges, Los Penasquitos Lagoon, San Diego County)
5. CC-008-07 (NCTD, extension of passing track and construction of one replacement and one new railroad bridge over Loma Alta Creek in Oceanside)
6. CC-055-05 (NCTD, replacement of the railroad bridge over Agua Hedionda Lagoon)
7. CC-052-05 (NCTD, Santa Margarita River double tracking project at the south end of Camp Pendleton)
8. CC-004-05 (NCTD, O'Neill to Flores double track project in central Camp Pendleton)
9. CC-086-03 (NCTD, Pulgas to San Onofre double tracking at the north end of Camp Pendleton)
10. CC-058-02 (City of Santa Barbara, modifications to Santa Barbara Airport)
11. NCTD CDP Nos.: 6-03-102-G (Agua Hedionda emergency repairs), 6-02-152 (San Luis Rey River bridge repair), 6-02-151 (Agua Hedionda bridge), 6-02-102 (Del Mar drainage outlets), 6-02-80 (Santa Margarita Bridge repair), 6-01-64 (Balboa Avenue), 6-01-108 (Tecolote Creek), 6-93-60 (Del Mar), 6-94-207 (Solana Beach), 6-93-106 (Carlsbad), and 6-93-105 (Camp Pendleton).
12. *Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County* (1999) 71 Cal.App.4th 493, 517
13. Southern California Eelgrass Mitigation Policy (Revision 11), National Marine Fisheries Service, 1991.
14. Project Study Report for San Dieguito River Double Track Bridge, SANDAG, June 2009.



SOURCE: Esri, 2014; BRG Consulting, Inc, 2014

10/10/14

BRG CONSULTING, INC.

Bridge 243 Scour Repair

Regional Location

Exhibit 1
CC-0006-14

Figure 1: Regional Location Map

Exhibit 2
CC-0006-14

Figure 2: Project Location

Exhibit 3
CC-0006-14

Fairgrounds. A photo of the bridge is provided in Figure 1 and the project location is shown in Figure 2.

Figure 1: Bridge 243.0 Looking Upstream

Exhibit 4
CC-0006-14

GENERAL NOTES

1. CONTRACTOR SHALL UPDATE AND COMPLETE THE DRAFT SWPPP PREPARED BY HDR AND SUBMIT TO NCTD FOR APPROVAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THE APPROVED SWPPP.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATIONS AND REMOVAL, INSPECTIONS AND MAINTENANCE OF EROSION CONTROL BEST MANAGEMENT PRACTICES (BMP).
3. ALL BMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP), DEVIATION FROM THIS PLAN SHALL BE NOTED AND RECORDED IN WEEKLY INSPECTION REPORTS AS REQUIRED IN THE SWPPP.
4. ALL MAINTENANCE AND INSPECTION REPORTS WITHIN THE SWPPP SHALL BE SIGNED BY A QUALIFIED SWPPP PRACTITIONER (QSP) ASSIGNED BY THE CONTRACTOR AND/OR CLIENT. THE SWPPP PACKAGE AND THE REPORTS SHALL BE AVAILABLE TO ENVIRONMENTAL PROTECTION AGENCY (EPA), REGIONAL WATER QUALITY CONTROL BOARD (RWQCB) AND NCTD REPRESENTATIVES AT ALL TIMES DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL INSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC R/W, ON TO PRIVATE PROPERTY, OR ENVIRONMENTALLY SENSITIVE AREAS.
6. CONTRACTOR TO BEND SHRUBS AND GRASSES TO GROUNDLINE IN PROPOSED SOIL STORAGE AREAS, AND, SHALL UTILIZE GEOTEXTILE FABRIC OVER TOPSOIL, GRASSES AND SHRUBS IN AFFECTED AREAS.
7. UPON COMPLETION OF WORK, REMOVE GEOTEXTILE AND ANY EXCAVATED MATERIAL BEING CAREFUL NOT TO DISTURB NATIVE VEGETATION.
8. ANY DISTURBED AREAS IN THE DRY SHALL BE REVEGETATED PER PROJECT SPECIFICATIONS.
9. SILT CURTAIN (TURBIDITY CURTAIN) IN WATER SHALL SURROUND THE AREA BEING WORKED. SILT CURTAIN (TURBIDITY CURTAIN) FOR THE FULL WATER WIDTH NOT NECESSARY IF WORK IS CONFINED TO THE SILT CURTAIN (TURBIDITY CURTAIN) AREA.
10. SILT CURTAIN IS ALSO REFERRED TO AS "TURBIDITY CURTAIN" IN FACTSHEET NS-5 IN CASQA STORMWATER BMP HANDBOOK, CONSTRUCTION. REFER TO SWPPP.
11. THE CONTRACTOR SHALL COORDINATE ACCESS POINTS WITH THE CITY OF DEL MAR OR ADJACENT LAND OWNER.
12. ELEVATIONS BASED ON NGVD 1929 DATUM.
13. EXCAVATION/RIPRAP INSTALLATION MAY OCCUR AT NO MORE THAN 3 BENTS AT A TIME.
14. CONTRACTOR TO TAKE CARE IN EXCAVATING AND PLACING RIPRAP AROUND BRIDGE. ANY DAMAGE TO BRIDGE SHALL BE REPORTED IMMEDIATELY TO NCTD AND REPAIRED IN ACCORDANCE WITH NCTD INSTRUCTIONS, AT CONTRACTOR'S EXPENSE.
15. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH NCTD AND OTHER CONTRACTOR(S) ON SITE.
16. THE EXISTING BRIDGE AND GROUND ELEVATIONS ARE BASED UPON A SURVEY PERFORMED BY PROJECT DESIGN CONSULTANTS IN MARCH, 2014 AND ARE BASED UPON THE CITY OF DEL MAR VERTICAL CONTROL STATION DESIGNATED "LJ 106" HAVING AN ELEVATION OF 13.589 FEET, N.G.V.D. 29 DATUM.
SAID STATION IS LOCATED ON THE TOP OF A CONCRETE WING-WALL AT THE SOUTHEAST CORNER OF A CONCRETE BRIDGE ON CAMINO DEL MAR CROSSING THE SAN DIEGUITO RIVER IN THE CITY OF DEL MAR, CALIFORNIA.
THE COORDINATES FOR THE PROJECT BENCHMARK (CITY OF DEL MAR STATION DESIGNATION LJ-106) ARE:
N 1935802.69, E 6249239.77 FEET, CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 6.
17. HOLES, CUTS AND ABRASIONS MADE IN TIMBER SHALL BE SWABBED WITH PRESERVATIVE.
18. EXISTING PEDESTRIAN TRAIL/CROSSING SOUTH OF THE BRIDGE TO BE CLOSED BY CONTRACTOR DURING CONSTRUCTION.

EXCESS EXCAVATED MATERIAL DISPOSAL

1. THE MATERIAL PILED IN THE SOUTH DISPOSAL AREA SHALL EXTEND NO HIGHER THAN 14 FT ABOVE THE EXISTING GROUND.
2. MATERIAL DISPOSAL SHALL BE CONFINED TO AREAS INDICATED UNLESS WRITTEN APPROVAL IS OBTAINED BY NCTD.
3. PLASTIC SHEETING WITH SUITABLE ANCHORING PER STANDARD EROSION CONTROL BMP SHALL BE APPLIED TO COVER THE ENTIRE MATERIAL PILE IN THE SOUTH DISPOSAL AREA DURING NON-WORKING HOURS AND UPON COMPLETION.
4. MATERIAL DISPOSAL PILE LIMITS AND SILT FENCING MUST REMAIN AT LEAST 25 FEET AWAY FROM THE TRACK CENTERLINE.

CONSTRUCTION STAGING NOTES

SUGGESTED STAGING FOR ABUTMENT PROTECTION
1. EXCAVATE TO BOTTOM OF RIPRAP ELEVATION
2. INSTALL GEOTEXTILE FABRIC
3. INSTALL RIPRAP
4. BACKFILL AND SEED SLOPES
5. APPLY SLUICED SAND

SUGGESTED STAGING FOR BENT SCOUR PROTECTION (BID ALTERNATE 1)
1. EXCAVATE OR BACKFILL SCOURED AREAS WITH NATIVE MATERIALS (AS NEEDED) TO BOTTOM OF RIPRAP ELEVATION. A MAXIMUM OF 3 BENTS MAY BE EXCAVATED AT ONE TIME.
2. INSTALL GEOTEXTILE FABRIC
3. INSTALL RIPRAP
4. BACKFILL WITH NATIVE MATERIAL TO FINAL GRADING ELEVATION

BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES

A. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SWALES, AREA DRAINS, OR NATURAL DRAINAGE COURSES.

B. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.

C. EXCESS OR WASTE GROUT MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO DRAIN AND CONTAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.

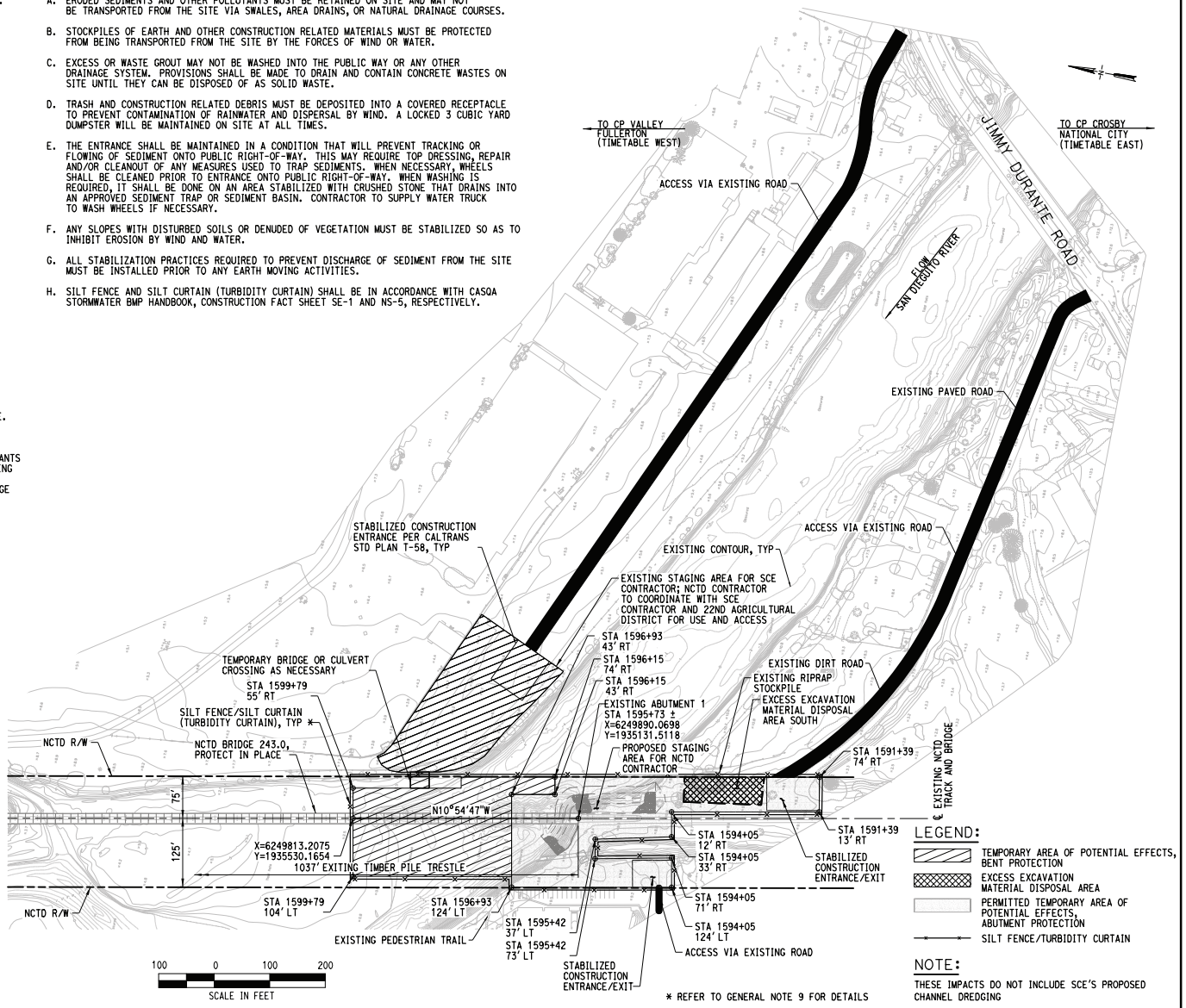
D. TRASH AND CONSTRUCTION RELATED DEBRIS MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND. A LOCKED 3 CUBIC YARD DUMPSTER WILL BE MAINTAINED ON SITE AT ALL TIMES.

E. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENTS. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. CONTRACTOR TO SUPPLY WATER TRUCK TO WASH WHEELS IF NECESSARY.

F. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.

G. ALL STABILIZATION PRACTICES REQUIRED TO PREVENT DISCHARGE OF SEDIMENT FROM THE SITE MUST BE INSTALLED PRIOR TO ANY EARTH MOVING ACTIVITIES.

H. SILT FENCE AND SILT CURTAIN (TURBIDITY CURTAIN) SHALL BE IN ACCORDANCE WITH CASQA STORMWATER BMP HANDBOOK, CONSTRUCTION FACT SHEET SE-1 AND NS-5, RESPECTIVELY.



* REFER TO GENERAL NOTE 9 FOR DETAILS

NOTE:
THESE IMPACTS DO NOT INCLUDE SCE'S PROPOSED CHANNEL DREDGING

Exhibit 5
CC-0006-14

DESCRIPTION	BY	SUB	APP.

Information confidential (plans, drawings, specifications, and or information furnished herewith shall remain the property of the North San Diego County Transit District and shall be held confidential and shall not be used for any purpose not provided for in agreements with the North San Diego County Transit District.

DESIGNED BY J. HYLES
DRAWN BY M.R. GRANADO
CHECKED BY R. McNAUGHT
APPROVED BY B. DOEING
DATE NOVEMBER 2014

HDR ENGINEERING, INC.
3230 EL CAMINO REAL, SUITE 200
IRVINE, CALIFORNIA 92602
(619) 237-1885

NCTD

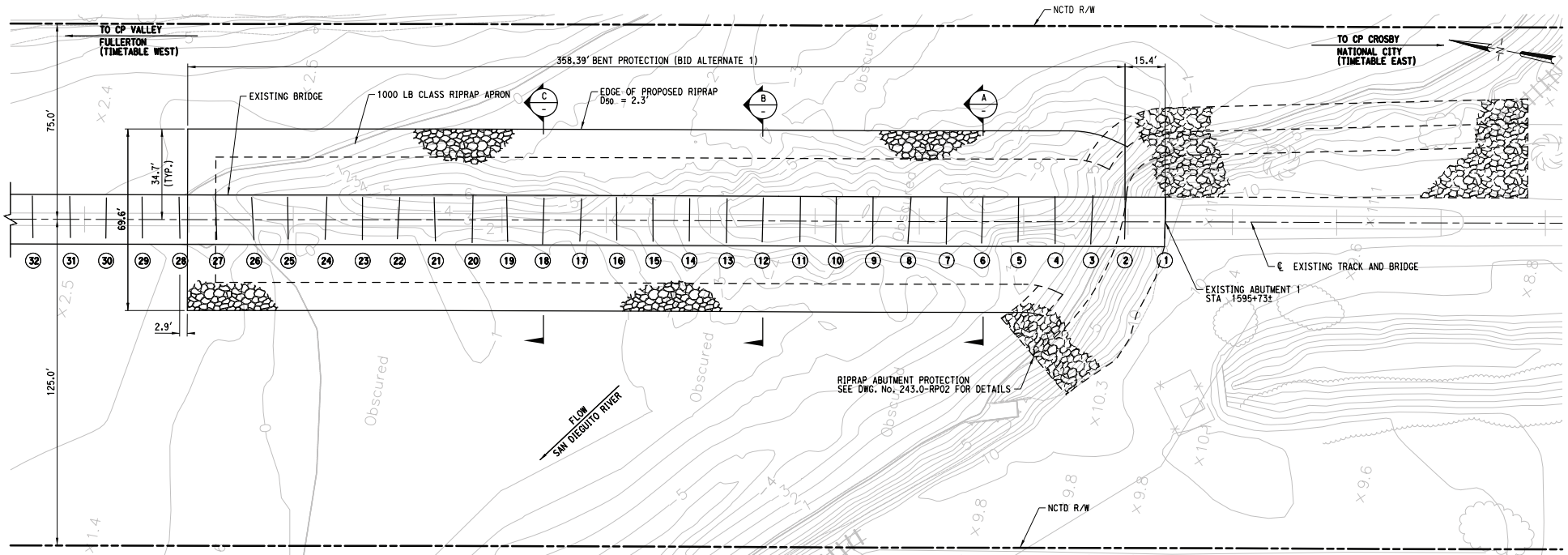
APPROVED: _____

REGISTERED PROFESSIONAL ENGINEER BRIAN J. DOEING No. C48984 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

BRIDGE 243.0 RIPRAP PROTECTION OVER SAN DIEGUITO RIVER AREA OF POTENTIAL EFFECTS, CONSTRUCTION ACCESS AND DRAFT SEDIMENT AND EROSION CONTROL PLAN

CONTRACT NO.
DRAWING NO. 243.0-RP01
REVISION
SHEET NO. 2 OF 4
SCALE AS NOTED

c:\pwworking\sdc\d060311\9\243.0-RP01.dgn DATE



LEGEND:

(#) EXISTING ABUT OR BENT

PLAN

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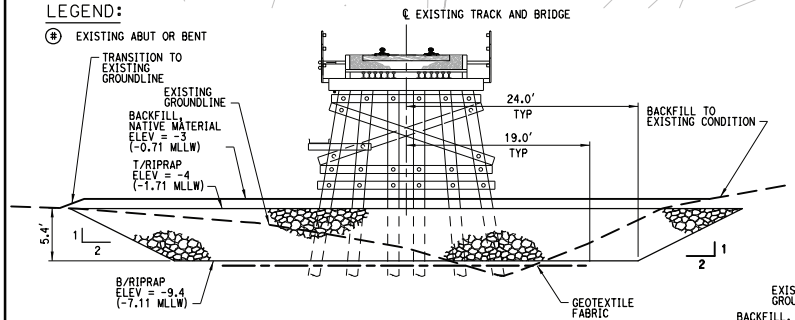

SECTION A-A @ BENT #6

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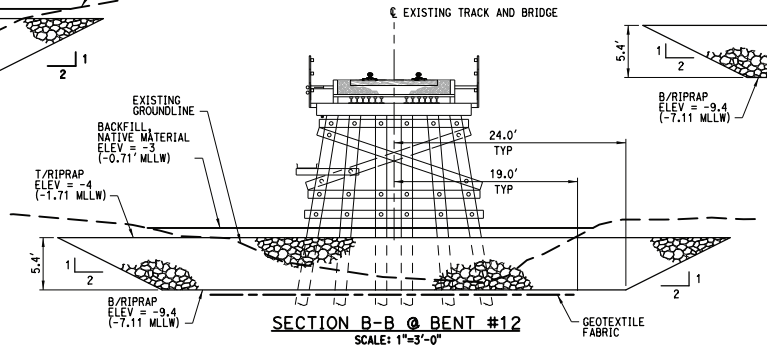

SECTION B-B @ BENT #12

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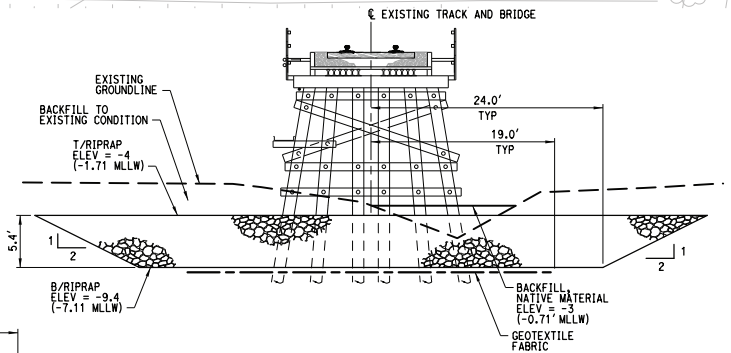

SECTION C-C @ BENT #18

SCALE: 1"=3'-0"

Exhibit 6
CC-0006-14

DESCRIPTION	BY	APP.

Information contained in these plans, drawings, specifications, and or information furnished herewith shall remain the property of the North San Diego County Transit District and shall be held confidential and shall not be used for any purpose not provided for in agreements with the North San Diego County Transit District.

DESIGNED BY	J. HYLES
DRAWN BY	M.R. GRANADO
CHECKED BY	R. McNAUGHT
APPROVED BY	B. DOEING
DATE	NOVEMBER 2014

HDR ENGINEERING, INC.
3230 EL CAMINO REAL, SUITE 200
IRVINE, CALIFORNIA 92602
(619) 237-1885

NCTD

APPROVED: _____

REGISTERED PROFESSIONAL ENGINEER
BRIAN J. DOEING
No. C48984
Exp. 9/30/16
CIVIL
STATE OF CALIFORNIA

BRIDGE 243.0 RIPRAP PROTECTION
OVER SAN DIEGUITO RIVER
BENT PROTECTION PLAN AND DETAILS

CONTRACT NO.	
DRAWING NO.	243.0-RP03
REVISION	
SHEET NO.	4 OF 4
SCALE	AS NOTED

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NORTH COUNTY TRANSIT DISTRICT

810 Mission Avenue
Oceanside, CA 92054

(760) 966-6500
(760) 967-2001 (fax)
www.GoNCTD.com

November 18, 2014

Mr. Larry Simon
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, California 94105-2219

SUBJECT: SAN DIEGUITO RIVER BRIDGE 243.0 SCOUR REPAIR AND PROTECTION, DEL MAR, SAN DIEGO COUNTY (CC-0006-14)

Dear Mr. Simon:

As directed by Coastal Commision staff and for consistency with the Coastal Act, the North County Transit District (NCTD) will require the removal of the rip rap bed associated with the San Dieguito River Bridge 243.0 Scour Repair and Protection Project, as well as the rip rap at the southern abutment associated with the Bridge 243.0 Revetment Project (CC-006-11) as part of a future Bridge 243.0 bridge replacement project. Additionally, NCTD agrees to place all suitable excess dredged material associated with the San Dieguito River Bridge 243.0 Scour Repair and Protection Project on a beach as soon as possible and in accordance with all federal laws, including but not limited to the Coastal Zone Management Act and Clean Water Act. The duration of the stockpile will be minimized to the extent feasible.

If you have any questions or need additional information, please contact me at (760) 435-7277 or via email at jgibson@nctd.org.

Sincerely,

Jill Gibson

Jill Gibson
Senior Transporation Planner

cc. Robert Smith, Army Corps of Engineers
Peykan Abbassi, North County Transit District
Erich Lathers, BRG Consulting

Exhibit 7
CC-0006-14