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F7b & F8a

MEMORANDUM

Date: May 15, 2014

To: Commissioners and Interested Persons

From: Alison Dettmer, Deputy Director
Bob Merrill, District Manager
Melissa Kraemer, Coastal Planner

Subject: **Addendum to Commission Meeting for Friday, March 16, 2014**
North Coast District and Federal Consistency Items F7b & F8a,
De Novo Appeal Application and Consistency Certification
A-1-DNC-12-021 and CC-0001-14
Elk Valley Rancheria, Del Norte County

This purpose of this staff report addendum is to: (1) present minor changes to the May 2, 2014 staff report, including (a) minor modifications to Special Conditions 1 and 2 and the findings related to final mitigation success criteria and construction timing, respectively; and (b) certain corrections to the findings related to wetland mitigation area sizes and proposed enhancement area ratios; and (2) present and respond to public comments received since publication of the staff report.

1. CHANGES TO THE STAFF RECOMMENDATION

After reviewing the staff recommendation, the Applicant expressed concerns that the recommended final success criterion for the wetland mitigation site related to invasive and nonnative species [Special Condition 1 subpart (b)(ii)(6)(c)] would not be achievable. As recommended in the May 2, 2014 staff report, the condition requires a final success criterion of *no invasive species and no more than 10% ground cover of nonnative species* in the wetland mitigation area. Staff agrees that given the adjacency of the proposed wetland mitigation sites to existing disturbed habitats that have significant invasive and nonnative species components, it would be difficult to obtain absolute elimination of all invasive species and to achieve only 10% ground cover of nonnative species. Furthermore, highly functioning and relatively undisturbed wetlands in this former pastureland area often have a much greater component of naturalized nonnative species. Therefore, staff believes it is appropriate to change this wetland mitigation final success criterion to allow for some invasive and nonnative species presence in the

mitigation area, provided all of the highly invasive and ecologically damaging invasive plants are removed and the diversity of plant species achieved is similar to the diversity of species found at highly functioning and relatively undisturbed wetlands in the area. Staff recommends that Special Condition 1 be modified to allow for the presence in the mitigation area of some invasive species, though none ranked as "high" by the California Invasive Plant Council in the current edition of its California Invasive Plant Inventory. Species ranked as "high" in the inventory are those considered to have "…severe ecological impacts on physical processes, plant and animal communities, and vegetation structure" with "…reproductive biology and other attributes conducive to moderate to high rates of dispersal and establishment…"[1] The recommended change also would delete the specified threshold for nonnative species cover and instead allow for a level of nonnative species cover equivalent to the high functioning, relatively undisturbed reference site that the condition requires be compared to the mitigation site.

In addition, the Applicant requested a change to Special Condition 2 to allow for ground-disturbing activities to commence as early as May 1 if no northern red-legged frog breeding habitat is present in the project area as confirmed by a pre-construction survey. Staff believes the recommended change is appropriate since it would adequately provide for protection of water quality (by limiting ground-disturbing activities to the dry season period of May through October) and environmentally sensitive northern red-legged frog breeding habitat areas (by maintaining the requirement that a pre-construction frog survey be completed).

Finally, the Applicant informed Commission staff that the description of the proposed wetland mitigation for the project was partly inaccurate. The proposed total size of all mitigation areas is described as 2.41 acres on pages 3 and 16 of the May 2, 2014 staff report. The correct proposed total size of all mitigation areas is 1.84 acres. The reduction in acreage relates to the Applicant's proposal to enhance 0.30-acre rather than 0.87-acre of existing riparian habitat along the north stream through the removal of invasive plant species and the replanting of native riparian species, as described on page 32 of the staff report. The corrections to the proposed mitigation acreages do not affect the proposed wetland mitigation ratio of area of wetland creation to area of wetland fill as described on page 32 of the report, although the proposed wetland enhancement ratio is reduced from 2.3:1 to 1.3:1. Staff continues to recommend that the Commission find that mitigation at the proposed ratios is appropriate and provides feasible mitigation to minimize the adverse environmental effects of the filling of emergent and riparian wetlands as part of the proposed road safety improvement project.

The Applicant is in agreement with the changes recommended by staff and staff continues to recommend that the Commission approve the project with the special conditions included in the recommendation of May 2, 2014, as modified by the changes recommended herein.

A. Revisions to Special Conditions

Text to be deleted is shown in ~~strikethrough~~; text to be added appears in **bold double-underline**):

[1] See http://www.cal-ipc.org/paf/ to access the current California Invasive Plant Inventory Database.

- ***Modify Special Condition 1–b on pages 6-7 as follows:***

1. Revised Final Wetland Mitigation and Monitoring Plan.

a. The Applicant shall mitigate for development impacts to wetlands as proposed in the draft plans and concepts provided in the draft Wetland Mitigation and Monitoring Plan (MMP) titled "Elk Valley Rancheria, California Humboldt Road Safety Improvement Project Wetland Mitigation and Monitoring plan" prepared by GHD dated February 2014, except that the revised final plan shall be revised to include the changes required in subsection (b) below.

b. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, and prior to commencement of construction of any development on "trust" lands, the Applicant shall submit, for the review and written approval of the Executive Director, a revised final MMP prepared by a qualified wetland biologist or ecologist. The revised final plan shall substantially conform to the draft plans and concepts provided in the draft MMP, except the revised final plan shall be revised to include, at a minimum, the following:

i. Final plans: The revised final MMP shall include mitigation designs and analyses for reestablishing or creating wetland habitat as required by this condition, including: (1) goals, objectives, and performance standards for the mitigation; (2) dimensioned, to-scale mapping of compensatory wetlands sites, including the on-site wetland restoration areas; (3) existing and proposed hydrologic, soil, and vegetative conditions at the mitigation sites; (4) engineering/grading plans and schedule; (5) erosion control plans and schedule; (6) weeding plans and schedule; (7) planting plans and schedule; (8) short- and long-term irrigation needs; (9) on-going maintenance and management plans; (10) implementation plans demonstrating there is sufficient scientific expertise, supervision, and financial resources to carry out the proposed project and monitoring program in a specified and realistic time frame; (11) provisions for submittal of initial as-builts within 30 days of completion of the initial mitigation work; and (12) monitoring, reporting, and remediation plans consistent with the requirements detailed in this special condition. Final plans for contractor construction of the mitigation area(s) shall be submitted prior to commencement of construction of mitigation area(s).

ii. A final monitoring and maintenance plan. The revised final MMP shall include a plan for monitoring and maintenance of each wetland creation site, including the following: (1) a monitoring and maintenance schedule; (2) interim performance standards; (3) a description of field activities; (4) a minimum 5-year monitoring period; (5) identification and description, including photographs and the results of quantitative sampling, of a high functioning, relatively undisturbed reference site for each habitat type for comparison to the mitigation site(s); (6) final success criteria for the wetland mitigation site(s), including, at a minimum, all of the following: a) plant species diversity similar to that at the reference sites; b) total ground cover of native vegetation similar to that at the reference sites; c) no invasive species **ranked as "high" in the current Invasive Plant Inventory of the California Invasive Plant Council** and ~~no more than 10%~~ ground cover of nonnative species **at a level equivalent to or less than the reference site**; d) annually, at least 14 continuous

days of inundation or soil saturation in the upper 12 inches of the soil column; and (7) a description of the method by which "success" will be judged, including: a) type of comparison; b) the field sampling design to be employed, including a description of the randomized placement of sampling units and the planned sample size; c) detailed field methods; d) where a statistical test will be employed, a statistical power analysis to document that the planned sample size will provide adequate statistical power to detect the maximum allowable difference. Generally, sampling should be conducted with sufficient replication to provide 90% power with alpha = 0.10 to detect the maximum allowable difference; and e) a statement that final monitoring for success will occur after at least three years with no remediation or maintenance activities other than weeding; and

… … …

- ***Modify Special Condition 2-b on pages 8-9 as follows:***

2. Construction Requirements, Restrictions, and Responsibilities. The authorized development shall be implemented consistent with the following construction-related responsibilities. PRIOR TO COMMENCEMENT OF ANY DEVELOPMENT AUTHORIZED BY THIS PERMIT AND CONSISTENCY CERTIFICATION, the applicant shall submit, for the review and written approval of the Executive Director, evidence that all of the following construction-related water quality and wildlife protection measures have been incorporated into the final construction plans, final Stormwater Pollution Prevention Plans (SWPPPs), and final erosion, sediment, and water pollution control plans for the project:

a. Pre-construction responsibilities. The Applicant shall ensure that all on-site workers and contractors understand and agree to observe the standards for work outlined in this permit and in the detailed project description included as part of the application submittal and as revised by these conditions. PRIOR TO COMMENCEMENT OF GROUND-DISTURBING ACTIVITIES, the Applicant shall ensure that (i) appropriate erosion, sediment, and runoff control measures shall be deployed in accordance with the final SWPPPs, and all measures shall be properly maintained throughout the duration of construction activities, and (ii) the limits of the work areas and staging areas shall be delineated with temporary fencing in cooperation with a qualified biologist, limiting the potential areas affected by construction and ensuring that all wetland and other environmentally sensitive habitats adjacent to construction areas are avoided during construction.

b. Schedule of construction. Ground-disturbing activities for the authorized improvements shall be restricted to the latter part of the dry season (July through October) and to periods when the ground is driest to minimize the potential for wetland and water quality impacts and to avoid disturbance to breeding northern red-legged frogs (*Rana aurora*). **If no northern red-legged frog breeding habitat is present in the project area as confirmed by a pre-construction survey, ground-disturbing activities may commence as early as May 1.** An extension to this construction restriction may be granted by the Executive Director for good cause (such as a continued dry season into November) upon written request;

… … …

B. Revisions to Findings

- ***Modify Finding G(3)(c), "Impacts to sensitive amphibians," on page 34 as follows:***

(c) Impacts to sensitive amphibians

As previously discussed, the proposed project will impact about one-half acre of wetland and riparian habitats and will involve construction impacts and permanent impacts (including about 0.83-acre of new impervious paved surfaces) to areas immediately adjacent to environmentally sensitive wetlands, including northern red-legged frog (*Rana aurora*) breeding and dispersal habitat. Because of the potential for northern red-legged frog to be present in the project area during construction, the CEQA document completed for the project (mitigated negative declaration) includes Mitigation Measure "BIO-2", which states as follows:

> *"Pre-construction surveys for the northern red-legged frog (Rana aurora) shall be conducted by a qualified biologist prior to construction activities. If the species is found to be present, a qualified biologist shall remove the frog(s) from the Project area to other suitable habitat outside of the Project area. The Project shall not cause a permanent net loss to habitat for this species. If any suitable habitat impacts cannot be avoided, additional suitable habitat areas shall be created such that there is no net loss of suitable habitat for any species status frog."*

To protect any environmentally sensitive northern red-legged frog habitat areas from significant disruption of habitat values and to ensure that the Applicant follows through on its commitment to conduct pre-construction frog surveys, the Commission includes **Special Condition 2(c)**, which in part requires that no more than one week prior to commencement of ground disturbance in a particular work area, a qualified biologist shall survey the ground-disturbance area for northern red-legged frog and shall coordinate with California Department of Fish and Wildlife staff to relocate any animals that occur within the work impact zone to nearby suitable habitats. In addition, **Special Condition 2(b)** limits ground-disturbing activities to the latter part of the dry season in part to avoid disturbance to breeding frogs. **If no northern red-legged frog breeding habitat is present in the project area as confirmed by a pre-construction survey, ground-disturbing activities may commence as early as May 1.** Further, **Special Condition 2(h)** prohibits the use of erosion and sediment control products with plastic netting, which can entangle wildlife and degrade habitat quality. As conditioned, the Commission finds that the proposed project provides feasible mitigation measures to protect sensitive species and the biological productivity and quality of coastal streams and wetlands consistent with sections 30230, 30231 and 30233 of the Coastal Act and the corresponding policies and recommendations of the marine and water resources chapter of the certified LUP.

- ***Change references to the total size of all proposed mitigation areas found on pages 3, 16, and 18 from 2.41 acres to 1.84 acres.***

- ***Change the reference to the size of the proposed riparian habitat enhancement area along the north stream on page 32 from 0.87-acre to 0.30-acre.***

- ***Change the reference to the total size of the proposed wetland enhancement area on page 32 from 1.26 acres to 0.69 acres.***

- ***Change the reference to the proposed wetland enhancement ratio found on page 32 from 2.3:1 to 1.3:1. The proposed 2.1:1 wetland creation ratio remains unchanged.***

2. COMMENTS & RESPONSES

The Commission received one comment letter in response to the May 2, 2014 staff report, from Friends of Del Norte (FODN) (Appellant), which is attached to this addendum packet. The comments relate to two issues: (1) the accuracy of characterizing the "all-way stop control" alternative as not a less environmentally damaging feasible alternative in the Coastal Act Section 30233(a) alternatives analysis on page 29 of the May 2, 2014 staff report; and (2) the lighting proposed for one of the proposed cross-walks.

The first point raised in the comment letter relates to the alternative of using stop signs versus the proposed roundabout at the intersection of Humboldt Road and Sandmine Road. Under the "all-way stop control" alternative, stop signs would be assigned to traffic in all directions at the intersection. The comment letter notes that the all-way stop control alternative would require less wetland fill. The staff recommendation acknowledges that the alternative involves less wetland fill, but discusses how the alternative is not feasible. According to the Applicant's traffic engineer, the intersection does not meet the criteria under the California Manual on Uniform Traffic Control Devices to enable the use of all-way stop control, and therefore this alternative was deemed infeasible. The comment letter relays information obtained from staff with the engineering division of Caltrans in Sacramento stating that if an intersection qualifies for a traffic circle, it also qualifies for stop signs, and thus the all-way stop control alternative should be considered a feasible alternative. The Applicant's senior traffic engineer offered the following response to the comment:

> *As provided in the FODN comment letter, the conversation with Caltrans staff has no bearing on the project. While the Department is given authority by the CVC to direct policy, the project is not located within State ROW and the decision to install traffic control devices is set to the local jurisdiction (County) per page Section 1A.08 Ca MUTCD. Additionally, the federal policy document amended by Caltrans, the California Manual on Uniform Traffic Control Devices (CaMUTCD) does not provide warrants for the installation of roundabouts.*
>
> *Further, the statement provided in the memo "If you qualify for a traffic circle, you qualify for stop signs, under the California Manual on Uniform Control Devices" is incorrect, as there is no warrant for the installation of stop signs* [when not part of a full all-way stop control system]. *These control devices should be placed with sound*

> *engineering judgment at locations to appropriately control traffic flows and conflict. However, if we are speaking about the installation of all-way stop controls (AWSC)* ***the converse of the statement may be true****. If all-way stop controls are warranted by the CaMUTCD, a roundabout may be installed. The same may be said for a traffic signal, as a roundabout provides safety, operational, and environmental benefits over signal and all-way stop controls. However, the decision to install a roundabout at a particular location is based on engineering judgment and site considerations, as the CaMUTCD provides in Section 1A.09.*
>
> *The technical memo (dated 3/29/13) in and of itself is the engineering study providing analysis and justification for the installation of the roundabout at the location to control the misleading operational considerations in light of the predominant movements. The memo also outlines the distinct advantages the roundabout has over other types of intersections.*

As the intersection does not meet the criteria for the installation of all-way stop controls, the all-way stop control alternative is not a feasible alternative to address the traffic safety concerns at the existing intersection. As none of the other alternatives evaluated in Finding V-G(2), pages 28-30 of the May 2, 2014 staff report are feasible less environmentally damaging alternatives to the proposed project as conditioned, staff continues to recommend that the Commission find that the proposed project as conditioned is consistent with Section 30233(a) of the Coastal Act and the corresponding policies of the certified LCP.

The second point raised in the comment letter relates to the lighting proposed for one of the proposed cross-walks. Specifically, the commenter states that the use of 16-foot-tall lighting poles for the southern crosswalk is excessive given its adjacency to wetland marsh habitat and instead suggests the use of foot-level lighting. Staff notes that the proposed project, as revised for the Commission's *de novo* and federal consistency review, does not include a cross-walk or lighting at the southern end of the project area (the project originally approved by the County, which was appealed to the Commission, did include a cross-walk in the southern project area). As currently proposed, cross-walks would be located at the northern end of the project area (adjacent to wetland habitat) and in the vicinity of the proposed roundabout.

Assuming the commenter is referring to the proposed lighting associated with the northern cross-walk, which is adjacent to wetland marsh habitat, as discussed in Finding V-G(3)(e), pages 35-36 of the May 2, 2014 staff report, the lighting impacts will not be significant. The Applicant proposes to use "wildlife friendly" LED lighting with a relatively low lumen output (3000k) and relatively little blue in the spectrum. The proposed new lighting will also be downcast and shielded. For the purposes of the Commission's *de novo* and consistency certification reviews, the Applicant submitted photometric and lighting plans (Exhibit 9 of the staff report). The photometric plan modeled levels of illumination from the proposed project's nighttime lighting fixtures, estimating the amount of light for the development that would enter the environmentally sensitive areas adjoining the project site. The photometric plans demonstrate that as proposed, the project will minimize the encroachment of nighttime lighting illumination into surrounding environmentally sensitive habitat areas. Staff believes that as proposed, the proposed new

lighting would not significantly degrade adjacent marsh habitats and would maintain the biological productivity of surrounding coastal wetlands and streams, consistent with section 30240(b) of the Coastal Act and the corresponding policies of the certified LCP. As discussed in the May 2, 2014 staff report on page 36, staff recommends Special Condition 3 to require that the Applicant undertake development in substantial conformance with the proposed lighting plans.

Friends of Del Norte, *Committed to our environment since 1973*
***A nonprofit, membership based conservation group,* advocating sound environmental policies for our region. PO Box 229, Gasquet, CA 95543**

May 12, 2014: ATT: California Coastal Commission, Staff: M. Kraemer
A-1-DNC-12-021, Federal Consistency No.: CC-0001-14
Applicant: Elk Valley Rancheria, Agent: GHD Inc.
Appellants: (1) Friends of Del Norte; and (2) Commissioners Mark Stone and Esther Sanchez

The Friends of Del Norte appreciates the redesign of the project to greatly reduce wetland/riparian ESHA impacts. The fishery resource will be better conserved, as culverts will be extended rather than replaced. The lower trail through the wet marsh/riparian area has been eliminated, allowing for established drainage patterns that support hydraulic function. Overall, the changes are very positive. We have further comments on:

- stop signs vs. traffic circles
- south crosswalk lighting

An important point of decision is inaccurate, regarding feasible alternatives and the use of stop signs vs. traffic circles. According to the Sacramento Engineering division of Caltrans (phone conversation May 12, 2014):

"If you qualify for a traffic circle, you qualify for stop signs, under the California Manual on Uniform Control Devices. The Dept. of Transportation is promoting traffic circles because traffic circles slow traffic, but they do not stop the flow of traffic. It is a quality choice."

The applicant's traffic engineer and resultant staff analysis are not accurately based, as stated on page 29:

"All-way stop control. Under this alternative, stop signs would be assigned to traffic in all directions at the intersection. According to the Applicant's traffic engineer, however, the intersection does not satisfy the required all-way stop control warrants. Pursuant to the California Manual on Uniform Control Devices, all-way stop controls may be used at intersections where certain traffic conditions exist and must be supported by an engineering study indicating that installing a traffic control signal will improve the overall safety and/or operation of the intersection. The intersection within the project area does not meet the criteria for the use of all-way stop control. Therefore, this alternative is not a less environmentally damaging feasible alternative to the proposed project, as conditioned."

Perhaps because of the fact that northbound traffic along Humboldt Rd and eastbound traffic on Sandmine are climbing slightly uphill, a traffic circle would be desirable as it will save travelers a wee bit of gas by eliminating a stop. However, the tradeoff is that the traffic circle appears to result in slightly more wetland fill. This is a quality choice that should be made on accurate information.

As a resident of the Bertsch neighborhood, in discussion with neighbors, many people find it more difficult to navigate traffic circles. The use of a traffic circle is a quality choice, rather than an essential choice.

Regarding lighting: the use of 16 foot tall lighting poles seems excessive for the south crosswalk which is adjacent to the rich wetland marsh area. Perhaps foot level lighting would be a better choice.

Thank you, *Eileen Cooper*

Eileen Cooper, vice-president, FODN on behalf of the board

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F7b & F8a

Appeal Filed:	8/1/12
49th Day (appeal):	9/19/12
SI Hearing Date (appeal):	9/13/12
CC Filed:	4/4/14
3 Months (CC):	7/4/14
6 Months (CC)	10/4/14
Staff:	M. Kraemer-A
Staff Report:	5/2/14
Hearing Date:	5/16/14

STAFF REPORT AND RECOMMENDATION ON COMBINED *DE NOVO* APPEAL APPLICATION AND CONSISTENCY CERTIFICATION

Appeal No.:	**A-1-DNC-12-021**
Federal Consistency No.:	**CC-0001-14**
Applicant:	**Elk Valley Rancheria**
Agent:	**GHD Inc.**
Appellants:	(1) Friends of Del Norte; and (2) Commissioners Mark Stone and Esther Sanchez
Local Government:	Del Norte County
Location:	Along an approximately 3,000-foot-long stretch of Humboldt Road between Highway 101 and Roy Ave., and on the Elk Valley Rancheria's adjacent Trust property (formerly Martin Ranch, APN 115-020-28), approximately one mile southeast of Crescent City, Del Norte County.
Project Description (as amended *de novo*, including development under CC-0001-14):	(1) Resurface/reconstruct the roadway; (2) construct a roundabout with an inscribed circle diameter of 115 feet at the intersection of Humboldt and Sandmine Roads; (3) widen the existing road eastward by approximately 8 feet;

	(4) fill an existing roadside drainage on the east side of Humboldt Rd. and create a new drainage ditch east of the realigned road; (5) construct an 8-foot-wide paved separated bicycle/pedestrian trail (with 2-foot unpaved shoulders on each side) east of the new drainage ditch for a total length of ~1,900 feet; (6) construct new street lighting, road signage, and striping; and (7) undertake wetland mitigation for impacts to 0.54-acre of palustrine emergent and riparian wetland habitats associated with the project on the Elk Valley Rancheria property east of the project area through the creation and enhancement of palustrine emergent and riparian wetland habitats.
Staff Recommendations:	Approval with conditions (*de novo* appeal) Conditional concurrence (consistency certification)

SUMMARY OF STAFF RECOMMENDATION

The Elk Valley Rancheria is proposing various safety improvements to Humboldt Road in Del Norte County. The project site is located in a rural area outside of the incorporated limits of Crescent City in an area surrounded primarily by lands devoted to agricultural and natural resources uses.

The development is located partially on lands held in trust by the federal government for the Elk Valley Rancheria and partially on non-trust lands. The applicant must obtain both (1) Commission concurrence to a federal consistency certification, and (2) a coastal development permit for different parts of the project. A coastal development permit approved for the project by Del Norte County was appealed to the Commission. To facilitate Commission review of these items, both the *de novo* appeal and the consistency certification will be heard together at the May 16th meeting. Commission staff is recommending approval (with conditions) of the coastal development permit application for the *de novo* appeal and conditional concurrence with the consistency certification.

The Commission found at its September 2012 hearing that the appeal raised a substantial issue. The applicant has revised the project description for purposes of the Commission's *de novo* review of the appeal and for the Commission's consideration of a federal consistency certification. The project as revised differs from the project approved by the County under its coastal grading permit in the following ways: (1) the southern approximately 1,400-foot-long segment of proposed sidewalk/bike path (and its associated 0.53-acre of wetland impacts) has been deleted; (2) the southern-most crosswalk and street lighting has been deleted; (3) none of the existing culverts under Humboldt Road will be replaced as part of the proposed project (though four existing culverts will be extended in length to accommodate the proposed increased road width); and (4) the Applicant is proposing to implement a wetland mitigation plan on the

adjacent Elk Valley Rancheria property, involving both wetland creation and wetland enhancement activities, to compensate for the project's proposed 0.54-acre of wetland impacts, for a total mitigation area of approximately ~2.41 acres.

The portion of the project covered under the CDP appeal (A-1-DNC-12-021) includes those portions of the proposed roadway widening, roundabout construction, lighting, and other road- and trail-related improvements that will take place on property located outside the boundaries of the Elk Valley Rancheria's Trust property. The portion of the project covered under Consistency Certification CC-0001-14, conversely, is located entirely on land held in trust by the federal government for the Rancheria and is therefore not subject to coastal development permitting. This portion includes part of the proposed roadway widening (in part), roundabout construction (in part), the proposed new sidewalk/bike path, the new roadside drainage ditch, some of the proposed new lighting and other improvements, and the proposed development of the wetland mitigation area on the Applicant's property (see **Exhibit 3**, jurisdictional map).

Major Coastal Act and LCP issues associated with this project include (1) whether the wetland fill is for an allowable use; (2) whether feasible mitigation measures have been provided to minimize adverse environmental effects; (3) and whether the adjacent environmentally sensitive habitat areas will be adequately protected against significant disruption of habitat values. The project site is located immediately adjacent to the Crescent City Marsh Wildlife Area, an approximately 339-acre environmentally sensitive habitat area owned by the California Department of Fish and Wildlife that provides habitat to a wide variety of flora and fauna, including the federal- and state-listed endangered western lily (*Lilium occidentale*) and several other rare and unique plant species and vegetation associations.

Staff recommends the Commission find that the proposed project would not increase overall road capacity and instead is necessary to maintain existing capacity. Therefore, the development qualifies as an incidental public service, an allowable use for wetland fill under section 30233(a) of the Coastal Act and the corresponding policies of the certified LCP. Staff further recommends the Commission find that the project as conditioned is the least environmentally damaging feasible alternative, and the project as conditioned (1) minimizes adverse environmental wetland effects; (2) minimizes significant disruption of habitat values; (3) protects the biological productivity and the quality of coastal wetlands; and (4) protects adjacent environmentally sensitive habitat areas from impacts that would significantly degrade those areas consistent with sections 30230, 30231, 30233, and 30240 of the Coastal Act and the corresponding marine and water resources policies of the Del Norte County certified LCP.

Staff recommends (among other conditions) **Special Condition 1**, to require that the Applicant prepare and submit a revised final wetland mitigation and monitoring program that ensures adequate compensation for wetland impacts, and **Special Condition 2**, which lists various construction requirements, restrictions, and responsibilities to protect water quality, sensitive species, and adjacent environmentally sensitive habitat areas.

The motions to adopt the staff recommendation of approval of the CDP with special conditions and conditional concurrence with the federal consistency certification are found on page 5.

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APPENDICES

EXHIBITS

I. MOTIONS AND RESOLUTIONS

A. COASTAL DEVELOPMENT PERMIT A-1-DNC-12-021

Motion A:

> *I move that the Commission approve Coastal Development Permit No. A-1-DNC-12-021, subject to conditions, pursuant to the staff recommendation.*

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution A (to Approve Coastal Development Permit No. A-1-DNC-12-021):

> *The Commission hereby approves coastal development permit A-1-DNC-12-021 for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the certified Del Norte County LCP. Approval of the permit complies with the California Environmental Quality Act because either: 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment; or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.*

B. CONSISTENCY CERTIFICATION CC-0001-14

Motion B:

> *I move that the Commission conditionally concur with consistency certification CC-0001-14 on the grounds that, if modified in accordance with the following conditions, the project described therein would be consistent with the enforceable policies of the California Coastal Management Program (CCMP).*

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion will result in concurrence with the consistency certification if modified as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution B (to Conditionally Concur with Consistency Certification):

> *The Commission hereby conditionally concurs with the consistency certification by the Elk Valley Rancheria in CC-0001-14 on the grounds that, if modified in accordance with the following conditions, the project described therein would be consistent with the enforceable policies of the CCMP.*

II. APPLICANT'S CONSISTENCY CERTIFICATION

The Elk Valley Rancheria has certified that the proposed activity complies with the California Coastal Management Program and will be conducted in a manner consistent with such program.

III. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions, which apply to Coastal Development Permit (CDP) No. A-1-DNC-12-021:

1. **Notice of Receipt and Acknowledgment**. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration**. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable amount of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation**. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment**. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land**. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

IV. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions, as applicable to both Coastal Development Permit (CDP) No. A-1-DNC-12-021 and Consistency Certification (CC) No. CC-0001-14:

1. **Revised Final Wetland Mitigation and Monitoring Plan**.
   (a) The Applicant shall mitigate for development impacts to wetlands as proposed in the draft plans and concepts provided in the draft Wetland Mitigation and Monitoring Plan (MMP) titled "Elk Valley Rancheria, California Humboldt Road Safety Improvement Project Wetland Mitigation and Monitoring plan" prepared by GHD dated February 2014, except that the revised final plan shall be revised to include the changes required in subsection (b) below.

(b) PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, and prior to commencement of construction of any development on "trust" lands, the Applicant shall submit, for the review and written approval of the Executive Director, a revised final MMP prepared by a qualified wetland biologist or ecologist. The revised final plan shall substantially conform to the draft plans and concepts provided in the draft MMP, except the revised final plan shall be revised to include, at a minimum, the following:

i. Final plans: The revised final MMP shall include mitigation designs and analyses for reestablishing or creating wetland habitat as required by this condition, including: (1) goals, objectives, and performance standards for the mitigation; (2) dimensioned, to-scale mapping of compensatory wetlands sites, including the on-site wetland restoration areas; (3) existing and proposed hydrologic, soil, and vegetative conditions at the mitigation sites; (4) engineering/grading plans and schedule; (5) erosion control plans and schedule; (6) weeding plans and schedule; (7) planting plans and schedule; (8) short- and long-term irrigation needs; (9) on-going maintenance and management plans; (10) implementation plans demonstrating there is sufficient scientific expertise, supervision, and financial resources to carry out the proposed project and monitoring program in a specified and realistic time frame; (11) provisions for submittal of initial as-builts within 30 days of completion of the initial mitigation work; and (12) monitoring, reporting, and remediation plans consistent with the requirements detailed in this special condition. Final plans for contractor construction of the mitigation area(s) shall be submitted prior to commencement of construction of mitigation area(s).

ii. A final monitoring and maintenance plan. The revised final MMP shall include a plan for monitoring and maintenance of each wetland creation site, including the following: (1) a monitoring and maintenance schedule; (2) interim performance standards; (3) a description of field activities; (4) a minimum 5-year monitoring period; (5) identification and description, including photographs and the results of quantitative sampling, of a high functioning, relatively undisturbed reference site for each habitat type for comparison to the mitigation site(s); (6) final success criteria for the wetland mitigation site(s), including, at a minimum, all of the following: a) plant species diversity similar to that at the reference sites; b) total ground cover of native vegetation similar to that at the reference sites; c) no invasive species and no more than 10% ground cover of nonnative species; d) annually, at least 14 continuous days of inundation or soil saturation in the upper 12 inches of the soil column; and (7) a description of the method by which "success" will be judged, including: a) type of comparison; b) the field sampling design to be employed, including a description of the randomized placement of sampling units and the planned sample size; c) detailed field methods; d) where a statistical test will be employed, a statistical power analysis to document that the planned sample size will provide adequate statistical power to detect the maximum allowable difference. Generally, sampling should be conducted with sufficient replication to provide 90% power with alpha = 0.10 to detect the maximum allowable difference; and e) a statement that final monitoring for success will occur after at least three years with no remediation or maintenance activities other than weeding; and

iii. Reporting plans and schedule. The revised final MMP shall include details on the reports to be prepared to document the progress, monitoring results, and success of

each wetland creation site. The reporting plan shall include, at a minimum, the following: (1) provisions for submittal of annual reports of monitoring results to the Executive Director for the duration of the required monitoring period, beginning the first year after submittal of the "as-built" report. Each report shall be cumulative and shall summarize all previous results. Each report shall document the condition of the restoration with photographs taken from the same fixed points in the same directions. Each report shall also include a "Performance Evaluation" section where information and results from the monitoring program are used to evaluate the status of the mitigation project in relation to the interim performance standards and final success criteria; (2) provisions for the submittal of a final monitoring report to the Executive Director at the end of the five-year reporting period. The final report must be prepared in conjunction with a qualified restoration ecologist. The report must evaluate whether the restoration site(s) conforms to the goals, objectives, and performance standards set forth in the approved final restoration program. The report must address all of the monitoring data collected over the five-year period; and (3) a reporting schedule.

(c) If the final report indicates that the mitigation project has been unsuccessful, in part, or in whole, based on the approved performance standards, the Applicant shall submit a revised or supplemental MMP to compensate for those portions of the original program which did not meet the approved performance standards. The revised MMP shall be processed as an amendment to this coastal development permit, and/or a modification to this consistency certification, as appropriate, unless the Executive Director determines that no amendment and/or modification is legally required.

(d) The Applicant shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit and/or a modification to this consistency certification, as appropriate, unless the Executive Director determines that no amendment and/or modification is legally required.

2. Construction Requirements, Restrictions, and Responsibilities. The authorized development shall be implemented consistent with the following construction-related responsibilities. PRIOR TO COMMENCEMENT OF ANY DEVELOPMENT AUTHORIZED BY THIS PERMIT AND CONSISTENCY CERTIFICATION, the applicant shall submit, for the review and written approval of the Executive Director, evidence that all of the following construction-related water quality and wildlife protection measures have been incorporated into the final construction plans, final Stormwater Pollution Prevention Plans (SWPPPs), and final erosion, sediment, and water pollution control plans for the project:

(a) Pre-construction responsibilities. The Applicant shall ensure that all on-site workers and contractors understand and agree to observe the standards for work outlined in this permit and in the detailed project description included as part of the application submittal and as revised by these conditions. PRIOR TO COMMENCEMENT OF GROUND-DISTURBING ACTIVITIES, the Applicant shall ensure that (i) appropriate erosion, sediment, and runoff control measures shall be deployed in accordance with the final SWPPPs, and all measures shall be properly maintained throughout the duration of

construction activities, and (ii) the limits of the work areas and staging areas shall be delineated with temporary fencing in cooperation with a qualified biologist, limiting the potential areas affected by construction and ensuring that all wetland and other environmentally sensitive habitats adjacent to construction areas are avoided during construction.

(b) Schedule of construction. Ground-disturbing activities for the authorized improvements shall be restricted to the latter part of the dry season (July through October) and to periods when the ground is driest to minimize the potential for wetland and water quality impacts and to avoid disturbance to breeding northern red-legged frogs (*Rana aurora*). An extension to this construction restriction may be granted by the Executive Director for good cause (such as a continued dry season into November) upon written request;

(c) Sensitive species protection. No more than one week prior to commencement of ground disturbance in a particular work area within the project area, a qualified biologist shall survey the ground-disturbance area for northern red-legged frog (*Rana aurora*) and western pond turtle (*Emys marmorata*) and shall coordinate with California Department of Fish and Wildlife staff to relocate any animals that occur within the work impact zone to nearby suitable habitats. The results of the pre-construction sensitive species surveys and relocation efforts shall be reported to the Executive Director in writing within 30 days of completion of the survey and relocation efforts for each particular work area.

(d) Vegetation clearing. On-site native vegetation shall be maintained to the maximum extent possible during construction activities.

(e) Vehicle/equipment restrictions. (i) All vehicles and equipment shall be restricted to pre-established work areas and to established or designated staging areas. (ii) Maintenance and refueling of construction equipment and vehicles at the project site is prohibited.

(f) Stockpiles. (i) Stockpiled materials shall be stored a minimum of 50 feet from coastal wetlands, waters, concentrated stormwater flows or drainage courses, and storm drain inlets. (ii) All on-site stockpiles of soil and construction debris shall be contained at all times and shall be covered during storm events if necessary to minimize discharge of sediment and other pollutants.

(g) Sediment control. (i) Soil stabilization BMPs shall be implemented on graded or disturbed areas as soon as feasible where there is a potential for soil erosion to lead to discharge of sediment off-site or to coastal wetlands or waters. (ii) Erosion and sediment control measures shall be in place at the end of each work day, including fiber roll placement down-slope of the construction site as needed for effective sediment control.

(h) Plastic netting prohibition. To minimize wildlife entanglement and plastic debris pollution, the use of temporary rolled erosion and sediment control products with plastic netting (such as polypropylene, nylon, polyethylene, polyester, or other synthetic fibers used in fiber rolls, erosion control blankets, and mulch control netting) is prohibited. Any erosion-control associated netting shall be made of natural fibers and constructed in a loose-weave design with movable joints between the horizontal and vertical twines. When no longer required, temporary sediment control BMPs shall be removed and disposed of properly.

(i) Seeding/revegetation. (i) Disturbed areas shall be revegetated and/or reseeded with non-persistent erosion-control species (e.g., sterile barley) and native, regionally appropriate plants only. (ii) Only weed-free rice straw shall be used for mulching. (iii) No plant species listed as problematic and/or invasive by the California Native Plant Society, the California

Invasive Plant Council, or as may be identified from time to time by the State of California, shall be employed or allowed to naturalize or persist on the site. (iv) No plant species listed as a "noxious weed" by the governments of the State of California or the United States shall be utilized for erosion control, revegetation, landscaping, or other purposes.

(j) Rodenticide restrictions. The use of rodenticides containing any anticoagulant compounds, including but not limited to, Warfarin, Bromadiolone, Brodifacoum, or Diphacinone, is prohibited.

(k) Debris disposal. Any excess excavated material and other construction debris resulting from construction activities shall be removed immediately upon completion of component construction and shall be disposed of at a disposal site outside the coastal zone or within the coastal zone pursuant to a valid coastal development permit.

(l) Concrete BMPs. Concrete paving and grinding operations, and storm drain inlet protection best management practices shall be employed to prevent concrete grindings, cutting slurry, and paving rinsate from entering drop inlets or sheet-flowing into coastal waters. Concrete delivery vehicle wash-out maintenance at the project site is prohibited.

(m) Spill prevention and clean-up supplies. Adequate supplies of hazardous materials spill prevention and clean-up supplies shall be kept on site at all times during construction.

3. **Development in Accordance with Approved Plans.** The Applicant shall ensure that all construction is performed in substantial conformance with the proposed plans, attached hereto as Exhibits 5, 6, 8, and 9, as modified by the special conditions. The Executive Director may approve minor changes to the approved plans that are *de minimis* in nature and scope and are not inconsistent with the special conditions of this permit and consistency certification. Such minor changes may require an immaterial amendment approved by the Executive Director, unless the Executive Director determines no amendment is legally required. No other changes to the approved plans shall occur without a Commission approved material amendment to this coastal development permit.

4. **Archaeological Resources Protection.** (a) If an area of archaeological deposits is discovered during the course of the project, all construction shall cease and shall not recommence except as provided herein, and a qualified archaeological resource specialist shall analyze the significance of the find. (b) A permittee seeking to recommence construction following discovery of the archaeological deposits shall submit a supplementary archaeological plan for the review and approval of the Executive Director. If the Executive Director approves the Supplementary Archaeological Plan and determines that the Supplementary Archaeological Plan's recommended changes to the proposed development or mitigation measures are *de minimis* in nature and scope, construction may recommence after this determination is made by the Executive Director. If the Executive Director approves the Supplementary Archaeological Plan but determines that the changes therein are not *de minimis*, construction may not recommence until after an amendment to this permit is approved by the Commission.

5. **U.S. Army Corps of Engineers**. The Applicant shall submit a copy of a permit from the Corps for the proposed development to the Executive Director upon its approval by the Corps, or evidence that no such permit is required. The Applicant shall inform the Executive Director of any changes to the project required by the Corps' permit. Such changes shall not

be incorporated into the project until the Applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

6. **North Coast Regional Water Quality Control Board**. The Applicant shall submit a copy of a permit (water quality certification) from the NCRWQCB for the proposed development to the Executive Director upon its approval by the Board, or evidence that no such permit/certification is required. The Applicant shall inform the Executive Director of any changes to the project required by the Board's permit. Such changes shall not be incorporated into the project until the Applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

7. **Final Grading Permit.** The Applicant shall submit a copy of an updated or modified grading permit, if applicable, issued by Del Norte County, or evidence that no updated or modified grading permit is required. The Applicant shall inform the Executive Director of any changes to the project required by the County. Such changes shall not be incorporated into the project until the permittee obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

8. **Conditions Imposed By Local Government.** This action has no effect on conditions imposed by a local government pursuant to an authority other than the Coastal Act.

V. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares as follows:

A. INCORPORATION OF SUBSTANTIAL ISSUE FINDINGS

The Commission hereby incorporates by reference the Substantial Issue Findings contained in the Commission staff report dated August 24, 2012.[1]

B. STANDARD OF REVIEW AND PROCEDURES

Commission Review Process

De Novo Appeal. The Coastal Commission effectively certified the County of Del Norte's LCP in 1983. Since the proposed project is in part within an area for which the Commission has certified a Local Coastal Program (excluding the portion of the project area outside of the coastal zone under federal consistency review, as described below and depicted in **Exhibit 3**) and not between the first public road and the sea, the applicable standard of review for the Commission to consider is whether the development is consistent with Del Norte County's certified Local Coastal Program (LCP).

[1] Accessible from the Commission's website: http://documents.coastal.ca.gov/reports/2012/9/Th21a-9-2012.pdf

On September 13, 2012, the Coastal Commission found that the appeal of the County of Del Norte's approval of Coastal Development Grading Permit No. #GP2011-32C for the subject development raised a substantial issue with respect to the grounds on which the appeal had been filed, pursuant to Section 30625 of the Coastal Act and Section 13115 of Title 14 of the California Code of Regulations. As a result, the County's approval is no longer effective, and the Commission must consider the project *de novo*. The Commission may approve, approve with conditions (including conditions different than those imposed by the County), or deny the application. Testimony may be taken from all interested persons at the *de novo* hearing.

Consistency Certification. The applicable standard of review for consistency certifications is whether the activity is consistent with Chapter 3 of the Coastal Act. The Del Norte County LCP can be used as guidance. Also, if the Commission conditionally concurs, the following procedures are triggered under the federal consistency regulations (which are located in Part 930 of Title 15 of the Code of Federal Regulations, hereinafter "15 CFR Part 930"):

A. Conditional Concurrences.

(a) Federal agencies, applicants, [and other project proponents] should cooperate with State agencies to develop conditions that, if agreed to during the State agency's consistency review period and included in a Federal agency's …approval under Subpart D … would allow the State agency to concur with the federal action. If instead a State agency issues a conditional concurrence:

(1) The State agency shall include in its concurrence letter the conditions which must be satisfied, an explanation of why the conditions are necessary to ensure consistency with specific enforceable policies of the management program, and an identification of the specific enforceable policies. The State agency's concurrence letter shall also inform the parties that if the requirements of paragraphs (a)(1) through (3) of the section are not met, then all parties shall treat the State agency's conditional concurrence letter as an objection pursuant to the applicable Subpart and notify, pursuant to §930.63(e), applicants, persons and applicant agencies of the opportunity to appeal the State agency's objection to the Secretary of Commerce within 30 days after receipt of the State agency's conditional concurrence/objection or 30 days after receiving notice from the Federal agency that the application will not be approved as amended by the State agency's conditions; and

(2) The … applicant (for Subparts D and I), … shall modify the applicable plan, project proposal, or application to the Federal agency pursuant to the State agency's conditions. The Federal agency, applicant, person or applicant agency shall immediately notify the State agency if the State agency's conditions are not acceptable; and

(3) The Federal agency (for Subparts D, E, F and I) shall approve the amended application (with the State agency's conditions). The Federal agency shall

> *immediately notify the State agency and applicant or applicant agency if the Federal agency will not approve the application as amended by the State agency's conditions.*
>
> *(b) If the requirements of paragraphs (a)(1) through (3) of this section are not met, then all parties shall treat the State agency's conditional concurrence as an objection pursuant to the applicable Subpart.*
>
> 15 CFR § 930.4.

B. Right of Appeal.

Pursuant subsection (a)(1) quoted in the prior section and Subpart H of the federal consistency regulations, within 30 days from receipt of notice of a Commission conditional concurrence to which the Rancheria does not agree, the Rancheria may request that the Secretary of Commerce override this objection. 15 CFR §§ 930.4(a)(1) & 930.125(a). In order to grant an override request, the Secretary must find that the proposed activity for which the Rancheria submitted a consistency certification is consistent with the objectives or purposes of the Coastal Zone Management Act, or is necessary in the interest of national security. A copy of the request and supporting information must be sent to the California Coastal Commission, the Environmental Protection Agency, and the U.S. Army Corps of Engineers. The Secretary may collect fees from the Rancheria for administering and processing its request. [Note: This right of appeal does not apply to the CDP, but only to the activity authorized under the consistency certification.]

Federal Agency Review

The project requires approvals from two federal agencies, which triggers the Commission's federal consistency review authority:

U.S. Army Corps of Engineers. The project involves work within Waters of the U.S, which requires approval by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act. The Applicant has submitted a Section 404 application to the Corps for its review.

Environmental Protection Agency. For tribally owned lands, the U.S. Environmental Protection Agency retains Clean Water Act (CWA) Section 401 certification authority. (Outside tribal lands, for the area covered under the CDP, the RWQCB conducts CWA 401 certification reviews (see Section F below). The applicant has submitted a Pre-Construction Notification (PCN) to EPA for its review.

C. PROJECT HISTORY

Prior Commission actions related to the project site

In September of 2005,[2] the Commission conditionally concurred with the Bureau of Indian Affairs' (BIA) federal consistency determination submitted pursuant to the requirements of the

[2] See http://www.coastal.ca.gov/cd/W17a-10-2005.pdf and http://www.coastal.ca.gov/cd/W8a-9-2005.pdf.

federal Coastal Zone Management Act ("CZMA") 16 U.S.C. Sections 1451-1464, which asserted that the placement of the ~203-acre Martin Ranch property into Trust status and development of the Elk Valley Rancheria's resort-casino project would be consistent with California's coastal management program. Major Coastal Act issues associated with the action included public views, traffic/roads, sewer/water, wetlands/water quality, agriculture, and the change in status of the coastal zone portion of the parcel. Through the federal consistency action, the BIA and Elk Valley Rancheria agreed to modify the project to include the following agreement (excerpt):

> *Prior to commencement of construction, the Tribe will prepare Tribal Ordinances or other equivalent mechanism providing for Commission staff review of detailed project plans, including plans for water quality, hydrology, lighting, signs, roads, sewer and water infrastructure, landscaping and revegetation, and building plans, as applicable…*

The above commitment was incorporated into the project as part of the BIA's submittal. In addition, the Tribe agreed to adopt an ordinance granting a limited waiver of its sovereign immunity and providing an opportunity for the Commission to review and consent to certain aspects of the site development, including detailed project plans, including plans for water quality, hydrology, lighting, signs, roads, sewer and water infrastructure, landscaping and revegetation, and building plans. The Elk Valley Rancheria adopted the required Tribal Ordinance on October 12, 2005. With the project modification described above, combined with the agreement to waive sovereign immunity and provide an opportunity for the Commission to review and consent to subsequent plans, the Commission conditionally concurred with the BIA federal consistency determination. (The Commission is not treating the subject project as a part of the casino-resort project, but rather a separate project.)

The Martin Ranch property is bisected by the coastal zone boundary. The effect of placing the land in trust renders the entire property "outside" the coastal zone for purposes of coastal development permitting reviews.

In June of 2011[3] the Commission certified with suggested modifications an LCP amendment request by Del Norte County to amend the land use plan text to allow for the extension of municipal water and sewer lines to accommodate the development of the applicant's resort-casino project on the former Martin Ranch property. The Commission's action was approved in part on the basis that the extension of sewer service would avoid reliance on septic systems to serve future development at the sites to better protect water quality consistent with Section 30230 and 30231 of the Coastal Act.

Project as originally approved by Del Norte County

On July 11, 2012, the Del Norte County Planning Commission approved Coastal Development Grading Permit #GP2011-32C with conditions for the development of infrastructure improvements along an approximately 3,000-foot-long stretch of Humboldt Road between Highway 101 and Roy Avenue, located approximately one mile southeast of Crescent City

[3] See http://documents.coastal.ca.gov/reports/2011/6/F10a-6-2011.pdf.

(**Exhibit 11**). The approved development included the following: (1) resurfacing/reconstructing the roadway; (2) constructing a roundabout with an inscribed circle diameter of 115 feet at the intersection of Humboldt and Sandmine Roads; (3) filling an existing roadside drainage on the east side of Humboldt Road and creating a new drainage ditch east of the realigned road; (4) widening the existing road eastward by at least 8 feet to provide for 4-foot-wide shoulders along each side of the road; (5) constructing a ~3,300-ft-long, 12-foot-wide separated bicycle/pedestrian trail (8-ft-wide trail with 2-ft-wide shoulders on each side) on the east side of the new drainage ditch; and (6) constructing new street lighting, road signage, and striping. The County granted its approval of the permit subject to numerous special conditions.

Appeal of County Permit

The Commission received two appeals of the County of Del Norte's decision to approve Coastal Development Grading Permit #GP2011-32C with conditions. Friends of Del Norte filed an appeal on August 1, 2012. Commissioners Mark Stone and Esther Sanchez filed an appeal on August 6, 2012. Both appeals were filed in a timely manner, within 10 working days of receipt of the County's Notice of Final Local Action on July 23, 2012. The contentions raised by the appellants, which the Commission found to be valid grounds for appeal, related to wetland fill, alternatives, wetland mitigation, and protection of adjacent environmentally sensitive habitat areas. On September 13, 2012, the Commission opened the public hearing on the appeal of the County of Del Norte's approval of Coastal Development Grading Permit #GP2011-32C. The Commission found that a "substantial issue" exists with respect to the grounds on which the appeal had been filed and continued the *de novo* portion of the appeal hearing on the project.

Additional information provided for *de novo* review of the appeal

For the purposes of *de novo* review by the Commission, the Applicant has provided Commission staff with supplemental information consisting of the following: (1) property and right-of-way boundary information; (2) clarification of the extent of wetland impacts (**Exhibit 6**); (3) an alternatives analysis (**Exhibit 7**); (4) additional information demonstrating that the project involves an allowable use for wetland fill (**Exhibit 7**); (5) draft wetland mitigation plans (**Exhibit 8**); (6) drainage and hydrology plans and a draft SWPPP; (7) lighting plans (**Exhibit 9**); (8) a roundabout landscaping plan (**Exhibit 5**); (9) an updated fish habitat assessment for watercourses and ditches in the project area (**Exhibit 10**); and (10) an analysis of the effects of the project on the approved watershed hydrological monitoring plan and provisions for minimizing disruption to the ongoing plan. The supplemental information addresses issues raised by the appeal and provides additional information that was not a part of the record when the County originally acted to approve the coastal development permit.

D. DESCRIPTION OF PROPOSED PROJECT

Project purpose and need

The project is proposed as a roadway safety improvement project. Humboldt Road consists of two travel lanes and serves as (1) a direct connector from Highway 101 to the Elk Valley Rancheria, Bertsch-Oceanview neighborhood and Redwood National Park, (2) a bypass of Crescent City to Highway 199 (via Howland Hill Road and Elk Valley Road), and (3) an indirect connector to Jedediah Smith Redwoods State Park and several beach trails. Humboldt Road is

maintained by Del Norte County. The posted speed limit on the road is 45 miles-per-hour (**Exhibits 1-2**).

Humboldt Road can generally be split into two segments. The northern road segment runs contiguous to the residential neighborhood and extends north from Roy Avenue to Howland Hill Road. This segment is outside of the proposed safety improvement area, as it has existing sidewalks in areas adjacent to residential structures and dedicated bike lanes on both sides of the road. The southern segment of Humboldt Road, which includes the proposed project area, extends south from Roy Avenue and terminates at Highway 101. This segment has no sidewalks or bike lanes, deteriorating asphalt-paved surface, no shoulders or street lights, and is unsafe for pedestrian usage (pedestrians are forced to walk in the travel lanes, or when avoiding vehicular traffic, are forced into the steep roadside ditch).

Humboldt Road is the most direct route from Highway 101 and the coast to the Elk Valley Rancheria and the surrounding neighborhoods. South of Humboldt Road, across Highway 101, is Enderts Beach Road, which provides many access points to beaches and other coastal recreation locations. From Roy Avenue to the north, Humboldt Road travels through the Bertsch-Oceanview neighborhood and terminates at the southern boundary of the Elk Valley Rancheria.

Amended project description submitted for *de novo* review and for CC-0001-14

The Applicant has revised the project for purposes of the Commission's *de novo* review to resolve the substantial issues raised by the appeals. The project as revised differs from the project approved by the County under its coastal grading permit in the following ways: (1) the southern ~1,400-foot-long segment of proposed sidewalk/bike path (and its associated 0.53-acre of wetland impacts) has been deleted; (2) the southern-most crosswalk and street lighting has been deleted; (3) none of the existing culverts under Humboldt Road will be replaced as part of the proposed project (though three existing culverts will be extended in length to accommodate the proposed increased road width); and (4) the Applicant is proposing to implement a wetland mitigation plan on the adjacent Elk Valley Rancheria property, involving both wetland creation and wetland enhancement activities, to compensate for the project's proposed 0.54-acre of wetland impacts, for a total mitigation area of approximately ~2.41 acres.

The portion of the project covered under coastal development permit (A-1-DNC-12-021) includes portions of the proposed roadway widening, roundabout construction, lighting, and other road and trail-related improvements that will take place on property located outside the boundary of the Elk Valley Rancheria trust parcel. The coastal development permit is a companion to Consistency Certification CC-0001-14, which covers activities on "trust" lands: the proposed roadway widening (in part), roundabout construction (in part), the proposed new sidewalk/bike path, the new roadside drainage ditch, some of the proposed new lighting and other improvements, and the proposed development of the wetland mitigation area on the Applicant's property (see **Exhibit 3**). All of the proposed project components are discussed in more detail below and depicted in **Exhibits 4, 5, 8,** and **9**.

Roadway widening. The existing paved roadway surface of Humboldt Road is 22 feet, and there are no shoulders. The proposed total roadway width would be 30 feet, maintaining the existing 22-foot travel lanes and adding 4-foot shoulders to each side of the road (though road widening

would occur eastward only to minimize significant wetland fill and ESHA impacts to the CDFW Crescent City Marsh and Wildlife Area located adjacent to the west side of the road).

Roundabout construction. At the intersection of Humboldt and Sandmine Roads, a roundabout is proposed. The roundabout would include sidewalks, crosswalks and a raised center planter surrounded by a truck apron. Landscaping within the planter would include native vegetation. The roundabout would have an outer radius (inscribed circle diameter) of approximately 115 feet. Two proposed crosswalks would connect Humboldt Road to the proposed pedestrian path and another proposed crosswalk would cross Sandmine Road.

Culvert extensions. Four of the five culverts under Humboldt Road within the project area will be extended to accommodate the proposed road widening. The project does not propose to replace any of the project area culverts.

Sidewalk/bike path. An approximately 1,900-foot-long sidewalk/bike path and associated drainage swale would be established east of the existing road alignment. The main portion of the proposed path improvements would generally be 12 feet in width, with approximately eight feet of paved path and an additional two feet of unpaved shoulder on each side of the walkway. The path would be separated from Humboldt Road by about 20 feet. At the northern path terminus, approximately 200 feet south of Roy Avenue, the path would rejoin Humboldt Road at a proposed pedestrian mid-block crosswalk, which would bisect Humboldt Road and connect to a paved pedestrian refuge on the west side of the road. At the southern path terminus, the path would rejoin Humboldt Road at the southernmost extent of the proposed south roundabout channeling island. A proposed drainage swale would be placed on the east side of the path to convey runoff to one of six proposed culverts. The path culverts would discharge into the proposed new manmade ditch that would be constructed parallel to the east side of Humboldt Road. The majority of the path alignment would be outside the current County right-of-way of Humboldt Road and within the Martin Ranch tribal trust property line.

Drainage. Existing drainage ditches on the east side of Humboldt Road would be filled to accommodate road widening and reconstructed to convey runoff from the improved roadway. Four existing culverts are proposed to be extended to the east of Humboldt Road. There would be no modifications to the two existing 36-inch culverts at the north end of the project area.

Lighting. Street lights are proposed at the corners of the proposed roundabout and at mid-block crosswalk at the northern end of the proposed path. A total of five new decorative street light standards would be mounted on 16-foot-tall poles. Luminaries are proposed to be downcast and shielded to reduce light pollution. Flashing pedestrian crossing beacons also would be constructed at the northern crosswalk.

Other improvements. The proposed project includes asphalt concrete reconstruction, overlay, and other surfacing repairs to Humboldt Road and the driveway approach on the Applicant's property, new roadway signage (including yield signs, pedestrian crossing signs, and roundabout traffic signage), new striping and reflective delineators on the road, and relocation of existing fencing on the Applicant's property.

Major vegetation removal. In addition to the wetland, riparian, and other vegetation that will be cleared for the proposed road widening, one 24-inch-diameter spruce tree within the road right-of-way would be removed on the west side of Humboldt Road at the Sandmine Road intersection. Further vegetation clearing would be performed within the right-of-way along the existing fence west of Humboldt Road and north of Sandmine Road (see plans, **Exhibit 5**).

Ongoing maintenance. The County would be responsible for maintenance of the road structural pavement, striping, roundabout, and pedestrian infrastructure. Maintenance activities planned in association with the continued operation of Humboldt Road include periodic culvert cleaning and vegetation control (cutting and trimming by hand or mechanical means), ditch clearing and/or excavation, street sweeping, and litter and debris removal. These activities generally would be performed by the County on a scheduled basis with some maintenance occurring on an as needed basis as warranted by the site conditions. Because of the lack of detail provided regarding the ongoing maintenance work, its timing, and frequency, ongoing maintenance activities that are not exempt from CDP requirements pursuant to PRC Section 30610 are not included under the scope of this CDP application.

Wetland mitigation. The Applicant is proposing mitigation for impacts to 0.54-acre of palustrine emergent and riparian wetland habitats associated with the project (0.46-acre of impacts to wetlands on tribal trust land and 0.08-acre of impacts to wetlands on County (right-of-way) land within the coastal zone). The project as proposed would result in impacts to 0.12-acre of riparian wetlands and 0.42-acre of palustrine emergent wetlands (including impacts to 0.15-acre of man-made one-parameter ditch wetlands). Mitigation would consist of wetland creation and riparian habitat enhancement on the Elk Valley Rancheria trust property east of the project area (**Exhibit 8**). The existing habitat of the proposed mitigation area is upland grassland, which is proposed to be graded and planted to create palustrine emergent and riparian wetland habitats at a generally 2:1 ratio (ratio of mitigation wetlands created to existing wetlands impacted by the proposed project), plus additional enhancement activities (weed removal and riparian planting in existing riparian habitat) across 1.26 acres, for a total mitigation area of approximately ~2.4 acres. In addition, the existing 0.32-acre of roadside wetland ditches to be filled to accommodate the proposed road widening will be replaced in-kind with 0.32-acre of new roadside drainages to be established along the east side of the improved roadway.

E. ENVIRONMENTAL SETTING

The project site is located in a rural area outside of the incorporated limits of Crescent City in an area surrounded primarily by lands devoted to agricultural and natural resources uses. Lands to the east of Humboldt Road adjacent to the project area consist of the former Martin Ranch, a 203-acre parcel acquired by the Elk Valley Rancheria in 2001 for purposes of relocating the Rancheria's existing gaming facility and developing related resort amenities. The site, which has been devoted primarily to agricultural uses for many decades, currently contains a single-family residence, associated outbuildings, and a barn. At least 29 acres of wetlands (meeting both the Army Corps wetland definition and the Coastal Act wetland definition) were delineated on the Martin Ranch property in 2004. The property drains through various culverts under Humboldt Road and Highway 101 to offsite wetlands, including to the Crescent City Marsh Wildlife Area (CCMWA).

Lands to the west of Humboldt Road adjacent to the project area are part of the CCMWA, a 339-acre fish and wildlife refuge owned and managed by the California Department of Fish and Wildlife (CDFW). The CCMWA consists of a mosaic of freshwater, intertidal brackish, and riparian wetlands interspersed with islands of upland. The area provides habitat to a wide variety of flora and fauna, including the federal- and state-listed endangered western lily (*Lilium occidentale*) and several other rare and unique plant species and vegetation associations. According to the California Native Plant Society:

> *The Crescent City Marsh and environs are home to more than 230 plant species, at least a dozen of which are considered rare, threatened, or endangered. Many of these species are absent or rare elsewhere along California's coast. Some are plants of montane habitats or more northern latitudes, including vanilla grass (Hierochloe odorata), stream orchid (Epipactis gigantea), great burnet (Sanguisorba officinalis), buckbean (Menyanthes trifoliata), Sitka alder (Alnus viridus), Arctic starflower (Trientalis arctica), white-stemmed gooseberry (Ribes inerme var. inerme), and slender bog-orchid (Platanthera stricta). The Crescent City Marsh consists of 335 acres of coastal freshwater wetlands, open water, brackish marsh, beach and dunes, prairie, coastal scrub, and spruce forest… The area also contains suitable habitat for several threatened and endangered animals, including marbled murrelet, northern spotted owl, bald eagle, Oregon silverspot butterfly, and tidewater goby. Several plant communities occur in the Marsh that are rare in northwestern California: buckbean marsh, Pacific reed grass marsh, and Labrador tea marsh. All three marsh types are home to the endangered western lily…*

In addition, according to the U.S. Fish and Wildlife Service (FWS), the CCMWA is "*arguably the most botanically-unique wetland complex in northwest California and perhaps the entire State*" due to its diverse and unique flora and vegetation associations that are absent or rare elsewhere along other ecologically similar portions of the California coast.

Highway 101 is immediately south of the project area. Open-space beaches and coastal strand habitats extend seaward (south and west) of the highway. Approximately 300 feet north of the project area's northern limit is the southern boundary of the Bertsch and Ocean View Tracts residential subdivisions, unincorporated suburban lands platted and built-out in the 1960s.

The northern end of the project area spans a fish-bearing creek, which flows under Humboldt Road through two 36-inch culverts westward through the marsh. The creek supports habitat for sensitive fish species, including coastal cutthroat trout and steelhead.

F. OTHER REQUIRED APPROVALS

U.S. Army Corps of Engineers. The project involves work within waters of the U.S, which requires approval by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act. The applicant has submitted a Section 404 application to the Corps for its review. (This federal permit also triggers the Commission's federal consistency review authority.) **Special Condition 5** is attached to require that the Applicant obtain the Corps' approval for the proposed project prior to

commencement of development. The condition requires that the Applicant inform the Executive Director of any changes to the project required by the Corps, and such changes shall not be incorporated into the project until a CDP amendment is obtained (unless the Executive Director determines that no amendment is legally required).

Environmental Protection Agency. For tribally owned lands, the U.S. Environmental Protection Agency retains Clean Water Act (CWA) Section 401 certification authority. (Outside tribal lands, for the area covered under the CDP, the RWQCB conducts CWA 401 certification reviews, as discussed below). The Applicant has submitted a Pre-Construction Notification (PCN) to the EPA for its review. (This federal authorization also triggers the Commission's federal consistency review authority for the portion of the project on the Rancheria.)

State and Regional Water Quality Control Boards. The North Coast Regional Water Quality Control Board is responsible for ensuring that the project complies with the State Water Resources Control Board's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit, Order No. 2009-0009-DWQ). The applicant has prepared draft Stormwater Pollution Prevention Plans (dated February 2014) to comply with state general permit requirements and federal water quality protection requirements. The draft SWPPPs address pollutants and their sources, all non-stormwater discharges, and site BMPs effective to result in the reduction or elimination of pollutants in stormwater and authorized non-stormwater discharges. As discussed in more detail in in Finding V-G below, the Commission includes **Special Condition 2** to require that the final SWPPPs prepared for the project include certain addition mitigation measures not included in the draft SWPPPs, which will help sustain the biological productivity and quality of coastal waters in the project area. The Regional Board also requires a water quality certification (WQC) for projects involving dredging and/or filling activities under Section 401 of the Clean Water Act. It is unclear whether or not the Regional Board will require a WQC for the portion of the project within state jurisdiction. **Special Condition 6** is attached to require that the Applicant obtain any necessary approvals from the Regional Board for the proposed project prior to commencement of development. The condition requires that the Applicant inform the Executive Director of any changes to the project required by the Board's permit, and such changes shall not be incorporated into the project until a CDP amendment is obtained (unless the Executive Director determines that no amendment is legally required).

Del Norte County. The County may need to issue a modification to the grading permit or a new grading permit for the proposed project. **Special Condition 7** is included to require that the Applicant obtain any necessary approvals from the County for the proposed project prior to commencement of development. The condition requires that the Applicant inform the Executive Director of any changes to the project required by the County's permit, and such changes shall not be incorporated into the project until a CDP amendment is obtained (unless the Executive Director determines that no amendment is legally required).

G. ANALYSIS OF PROJECT CONSISTENCY WITH WATER QUALITY, WETLANDS, AND ESHA PROTECTION POLICIES OF LCP AND CCMP

Applicable LCP and CCMP policies

Section 30230 of the Coastal Act states:

> *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. Uses 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 of the Coastal Act states:

> *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 of the Coastal Act states, in applicable part, as follows (<u>emphasis added</u>):

> *(a) <u>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</u>:*
>
> *(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
>
> *(2) Maintaining existing, or restoring previously dredged depths on existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
>
> *(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*
>
> *(4) <u>Incidental public service purposes</u>, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*
>
> *(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*
>
> *(6) Restoration purposes.*
>
> *(7) Nature study, aquaculture, or similar resource dependent activities.*
>
> …

(c) In addition to the 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…

…

Section 30108 of the Coastal Act defines "feasible" as follows:

'Feasible' means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

Section 30240 of the Coastal Act states the following (emphasis added):

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Section 30107.5 of the Coastal Act defines "environmentally sensitive area" as follows:

'Environmentally sensitive area' means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in the ecosystem and which could be easily disturbed or degraded by human activities and developments.

Del Norte County certified Land Use Plan (LUP) "Marine and Water Resources" chapter Section VI-C (LCP Policies) in part states as follows (emphasis added):

1. *The County seeks to maintain and where feasible enhance the existing quality of all marine and water resources.*

… … …

3. *All surface and subsurface waters shall be maintained at the highest level of quality to insure the safety of public health and the biological productivity of coastal waters.*

… … …

6. *Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. Development in areas adjacent to environmentally sensitive habitat areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.*

… … …

LUP "Marine and Water Resources" chapter, section VII-D ("Wetlands"), part 4 ("Policies and Recommendations") states in part as follows (emphasis added):

a. The diking, filling, or dredging of wetlands shall be permitted in accordance with other applicable provisions of this program, where there is no feasible less environmentally damaging alternative and where feasible mitigation measures have been provided to minimize adverse environmental effects. Such projects shall be limited to those identified in Section 30233 of the Coastal Act.

… … …

d. Performance standards shall be developed and implemented which will guide development in and adjacent to wetlands, both natural and man-made, so as to allow utilization of land areas compatible with other policies while providing adequate protection of the subject wetland.

… … …

f. Development in areas adjacent to environmentally sensitive habitat areas shall be sited and designed to prevent impacts which could significantly degrade such areas, and shall be compatible with the continuance of such habitat areas. The primary tool to reduce the above impacts around wetlands between the development and the edge of the wetland shall be a buffer of one-hundred feet in width. A buffer of less than one-hundred feet may be utilized where it can be determined that there is no adverse impact on the wetland. A determination to utilize a buffer area of less than one-hundred feet shall be done in cooperation with the California Department of Fish and Game and the County's determination shall be based upon specific findings as to the adequacy of the proposed buffer to protect the identified resource...

… … …

Consistency Analysis

As summarized in the project description finding above, the proposed project will result in dredging and/or filling impacts to approximately 0.54-acre of riparian and palustrine emergent wetland habitats. In addition, the project area also spans a fish-bearing creek that supports habitat for sensitive fish species, including coastal cutthroat trout (*Oncorhynchus clarki clarki*) and Northern California ESU steelhead (*O. mykiss*). The applicable provisions of sections 30230, 30231, 30233, and 30240 of the Coastal Act and the related LCP policies cited above set forth a number of different limitations on what development projects may be allowed in coastal wetlands and waters. For analysis purposes, the limitations can be grouped into five general categories or tests: (1) the purpose of the wetland diking, dredging, or filling must be for one of the seven uses allowed under section 30233 and the corresponding LCP policies; (2) the project must have no feasible less environmentally damaging alternative; (3) feasible mitigation measures must be provided to minimize adverse environmental effects; (4) the biological productivity and functional capacity of the habitat must be maintained and enhanced and, where feasible, restored; and (5) the project must protect adjacent environmentally sensitive habitat areas and park and recreation areas against any significant disruption of habitat values. Each category or "test" is discussed below.

(1) ALLOWABLE USE

Under the first of these tests, a project must qualify as one of the seven stated uses allowed under section 30233(a) and the corresponding LUP policy cited above. Section 30233(a)(4) authorizes diking, dredging, and filling of coastal wetlands for "*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*." The Applicant maintains that the project qualifies for this allowable use for the follow reasons:

> *The proposed Humboldt Road Safety Improvement Project does have a public service purpose. This project will bring Humboldt Road, an existing public facility that provides essential transportation services to the public, up to current Del Norte County road design and safety standards…Humboldt Road is designated as a collector road on the California Road Systems (CRS) maps. The Del Norte County Code (section 12.04.070) requires collector roads have a minimum 24 foot wide paved surface with four foot graded or paved shoulders, for a total minimum width of 32 feet. The section of roadway that is proposed for widening has travel lanes of 11 feet with nonexistent shoulders, a sharp drop off at the edge of pavement, no bike or pedestrian facilities (even though the road is a designated bike route), no clear recovery area, poor intersection sight distance, non-standard intersection alignment, no intersection lighting, and fog lines that are too close to pavement edges. The substandard road conditions increase the potential for accidents when drivers are confronted with an emergency and have no room to recover.*
>
> *Traffic collision data for the last five years of available data*…[shows]…*eight (8) collisions in the vicinity of the Humboldt Road/Sandmine Road intersection.…*
>
> *A collision rate analysis was conducted for the intersection of Humboldt Road/Sandmine Road (see Attachment 5). The average crash rate was calculated to be 2.04 per Million Entering Vehicles (MEV). Based on the 2002 and 2007 Collision Data on California State Highway, published by Caltrans, the statewide average rate for similar intersections was 0.22 MEV. Based on the analysis, the collision rate for the Humboldt Road/Sand Mine Road intersection is nearly ten times the state average for an intersection of this type, which is considered "high."*
>
> *The proposed project alternative includes 11 foot travel lanes and four foot paved shoulders with one foot of shoulder backing for a total width of 32 feet, which meets the minimum width required by Del Norte County Code for a collector road. According to the American Association of State Highway and Transportation Officials (AASHTO), road shoulders (besides being required by Del Norte County Code) provide the following safety benefits for motorized and non-motorized users:*
>
> - *Provide room for vehicles to make evasive maneuvers (clear recover zone)*
> - *Accommodate bicycles and pedestrians who choose not to utilize the multi-use path*
> - *Reduce passing conflicts between motorized and non-motorized users*

- *Provide parking for disabled and emergency vehicles*

In addition, shoulders provide for structural support to pavement, increasing the life expectancy of the road surface, and provide space for roadway maintenance operations to occur.

Fill associated with this project adjacent to the roadway to improve the road for public safety purposes is incidental to the existing road's primary transportation purpose…

The Commission's 1981 "Statewide Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Habitat Areas" analyze the allowable uses in wetlands under section 30233 of the Coastal Act, including the provision regarding "incidental public service purposes." The Guidelines state that fill is allowed for:

Incidental public service purposes which temporarily impact the resources of the area, which include, but are not limited to, burying cables and pipes, inspection of piers, and maintenance of existing intake and outfall lines (roads do not qualify).

A footnote (no. 3) to the above-quoted passage further states:

When no other alternative exists, and when consistent with the other provision of this section, limited expansion of roadbeds and bridges necessary to maintain existing traffic capacity may be permitted.

The Court of Appeal concurred with the Commission's interpretation in the Guidelines of the term "incidental public service purposes" as a permissible one. *Bolsa Chica Land Trust et al. v. Superior Court* ("*Bolsa Chica*") (1999) 71 Cal.App.4th 493, 516 ("*We agree with these aspects of Commission's guidelines*"). In Bolsa Chica, the court held 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.

Several past actions of the Commission involved assessments of whether proposed projects were for incidental public service purposes pursuant to section 30233(a)(4) and the Commission's 1981 statewide interpretive guidelines, including, but not limited to, the following:

- CC-016-13 for the Eureka-Arcata Route 101 Corridor Improvement Project in Humboldt County, involving about 10 acres of wetland fill, with the relevant Commission finding being:

> *The Commission agrees with Caltrans that the "operational conflicts" posed by the uncontrolled crossings at the intersections on Route 101 between Eureka and Arcata are indeed safety problems that warrant resolution, that the project would not increase the number of through lanes or the overall capacity on Route 101, and that no reasonable or feasible alternatives are available to resolving the safety conflicts that would avoid wetland fill…*
>
> *…The Commission further accepts Caltrans' assertion that the proposed improvements, including the Indianola interchange, would not increase capacity or increase the number of through lanes on both Route 101 and Indianola, and that, in terms of the allowable use question, the project could be considered comparable to the Alton and I-5/I-8//Sea World Dr. intersection improvements cited by Caltrans.*

- CDP 1-07-013 for the Mad River Bridge Replacement on Route 101 between Arcata and McKinleyville in Humboldt County, involving 2 acres of wetland fill, with the relevant Commission finding being:

> *The Commission has in the past determined that the fill for certain highway safety improvement projects that did not increase vehicular capacity was considered to be for an "incidental public service" pursuant to the requirements of Coastal Act Section 30233(a)(4). In reaching such conclusion, the Commission has typically determined that a bridge replacement is a public safety project – and thus is undertaken for a public purpose -- and further, that the project is incidental to "something else as primary." That is, the project is a public safety project incidental to the primary transportation service provided overall by the existing highway. This finding is supported in part on the basis that the subject bridge project is not part of new route or highway expansion.*

- CDP 1-90-295, Highway 1 widening, realignment and left turn lanes 2 mi. north of Fort Bragg, Mendocino Co., involving 1 acre of wetland fill, with the relevant Commission finding being:

> *In this case, the fill is proposed in conjunction with a project designed to improve a dangerous access to beaches and parks. The highway rebuilding project is a public service. Therefore, the Commission finds that the purpose of the fill is consistent with subsection (5) of Section 30233.* [Note: subsection 30233(a)(5) from 1990 is the same as subsection (a)(4) today]

- CC-007-95 Route 150 realignment and replacement of two bridges over Rincon Creek, at the Ventura/Santa Barbara Co. line, involving 0.02-acre of wetland fill for slope protection for the bridges, with the relevant Commission finding being:

> *The project is consistent with Coastal Act wetland policies (Section 30233) because it: is an allowable use as an incidental public service, because it is consistent with the Commission's wetland guidelines allowing fill for highways where no capacity increases are proposed, where it is the*

> *least environmentally damaging feasible alternative, and where adequate mitigation is provided.*

- CC-074-05 Highway 1 Ten Mile River Bridge replacement, north of Fort Bragg, Mendocino Co., involving primarily temporary wetland effects but also 113. sq. ft. of permanent wetland fill, with the relevant Commission finding being:

  > *Construction and demolition activities for the project will occur in the river and within and adjacent to freshwater and brackish water wetlands found along the south bank of the river. The project includes new fill of coastal waters and is an allowable use under the "incidental public service" provision of Section 30233(a)(5)* [now (4)] *as the project is a limited expansion of an existing transportation facility necessary to maintain existing capacity.*

The key tests to determine whether the proposed project qualifies as an incidental public service under these historic interpretations, and thus with the above cited cases and applicable findings, are the questions of whether the proposed improvements are "necessary to maintain existing traffic capacity" and whether there is "no other alternative" available that would avoid or reduce wetland impacts. The Commission believes both of these tests are met in this situation.

The Commission agrees with the Elk Valley Rancheria that the Humboldt Road Safety Improvement Project is a public transportation project that will improve roadbed and intersection safety and function and that the proposed improvements are necessary to maintain the existing operation of the road. The project is intended to serve existing users and not intended to increase operational capacity of the road or intersection. The roadway travel lanes will maintain existing width, and the shoulder widening is required to meet Del Norte County Code but will also increase safety for both motorized and non-motorized users.

The Applicant's consultant states that the proposed roundabout at the intersection of Humboldt Road and Sandmine Road is needed for safety reasons and will not increase capacity:

> *According to the traffic study prepared by W-Trans (dated March 6, 2006) for the Elk Valley Rancheria, the intersection of Sand Mine Road/Humboldt Road currently operates acceptably at LOS A, and is expected to continue to operate acceptably into the future at LOS B without any improvements. The study indicates that a roundabout could be installed at the Sandmine Road/Humboldt Road intersection to serve as an entry feature to the area, but that it is not necessary from a capacity standpoint, which demonstrates that the capacity of the roadway is not a concern. Therefore, the function of the proposed roundabout would be to improve safety, not to increase capacity.*

The Applicant's revised CDP application under *de novo review* and its federal consistency certification confirm that the project's primary purpose is as follows:

> *The stated purpose of the development is twofold: (1) to improve safety along the corridor for motor vehicles, pedestrians, and bicyclists; and (2) to upgrade the road to current County standards.*

The Commission further accepts the Applicant's assertion that the proposed improvements, including the proposed roundabout at the intersection of Humboldt Road and Sandmine Road, would not increase capacity or increase the number of through lanes. Given that the design of the project is driven primarily by safety needs, combined with the fact that the overall number of lanes is not being increased, the Commission concludes that the proposed project would not increase overall road capacity, qualifies as an incidental public service, and is therefore consistent with the first test of section 30233(a) and the corresponding certified LCP policies as *necessary to maintain existing capacity*.

(2) LEAST ENVIRONMENTALLY DAMAGING FEASIBLE ALTERNATIVE

The applicable provisions of sections 30230, 30231, 30233, and 30240 of the Coastal Act and the marine and water resources policies of the certified LUP cited above require that the proposed project be the least environmentally damaging feasible alternative. The proposed alternative for this project involves the following primary components: (1) resurfacing/reconstructing an approximately 3,300-foot-long segment of Humboldt Road; (2) constructing a roundabout at the intersection of Humboldt and Sandmine Roads; (3) widening the existing road by 8 feet (primarily in the eastward direction); (4) filling an existing roadside drainage on the east side of Humboldt Road to accommodate the widening and creating a new roadside drainage ditch east of the realigned road; (5) constructing an 8-foot-wide paved separated bicycle/pedestrian trail with 2-foot shoulders on each side east of the new drainage ditch in the northern portion of the project area, for a total length of ~1,900 feet; and (6) constructing new street lighting, road signage, and striping. As previously discussed, the proposed alternative will result in approximately 0.54-acre of wetland fill impacts, including 0.12-acre of riparian wetlands and 0.42-acre of palustrine emergent wetlands (including impacts to 0.15-acre of man-made one-parameter ditch wetlands). As modified for the Commission's *de novo* review and as submitted for consistency certification review, the project will not replace any of the five existing culverts in the project area, and the project as proposed involves no direct impacts to fish-bearing waters.

The Applicant explored several intersection alternatives and road configuration alternatives before settling on the proposed roundabout and 8-foot road widening and ~1,900-foot-long trail alternative. As discussed below, the Commission concludes that the proposed project is, as conditioned, the least environmentally damaging feasible alternative for improving public safety along the high-speed rural roads within the project area. The evaluated alternatives are described in **Exhibit 7** and include the following:

Intersection alternatives

> *Realignment of intersection*. Under this alternative, the intersection of Humboldt Road and Sandmine Road would be realigned such that a stop sign would be assigned to traffic along Humboldt Road, while the existing stop sign assigned to eastbound traffic on Sandmine Road would be removed. This would result in uncontrolled eastbound traffic from Sandmine Road

to Humboldt Road. In order to accommodate this uncontrolled or "free" movement of these turns at prevailing speeds, a large radius curve would be required at the northwest side of the intersection, resulting in substantial adverse impacts to wetlands, riparian habitat, and environmentally sensitive rare plant habitat of the Crescent City Marsh. The Applicant's traffic engineer rejected this alternative due to these habitat impacts as well as right-of-way requirements. Therefore, this alternative is not a less environmentally damaging feasible alternative to the proposed project, as conditioned.

All-way stop control. Under this alternative, stop signs would be assigned to traffic in all directions at the intersection. According to the Applicant's traffic engineer, however, the intersection does not satisfy the required all-way stop control warrants. Pursuant to the California Manual on Uniform Control Devices, all-way stop controls may be used at intersections where certain traffic conditions exist and must be supported by an engineering study indicating that installing a traffic control signal will improve the overall safety and/or operation of the intersection. The intersection within the project area does not meet the criteria for the use of all-way stop control. Therefore, this alternative is not a less environmentally damaging feasible alternative to the proposed project, as conditioned.

Signalization. Under this alternative, new traffic signals would be installed to control traffic. According to the Applicant's traffic engineer, however, the required traffic signal volume and operational warrants would not be satisfied under either existing or future conditions, and the unwarranted installation of such a traffic control device could have serious implications to operation, safety, and liability. Therefore, this alternative is not a less environmentally damaging feasible alternative to the proposed project, as conditioned.

"No project" alternative. The no-action or no project alternative would maintain the status quo and would not adequately address safety needs, in part because the project area roadway segment, particularly the intersection, is already well above the statewide accident average. The Applicant therefore rejects the no build alternative. Therefore, this alternative is not a less environmentally damaging feasible alternative to the proposed project, as conditioned.

Road configuration alternatives

Alternate location for Class 1 trail. This alternative is generally identical to the proposed project, except the Class 1 trail would be located further eastward than its proposed configuration east of the realigned roadside ditch. Because of the expanse of existing wetlands and riparian habitat east of the existing roadway (not to mention west of the roadway, which is the CDFW marsh and wildlife area), this alternative would result in more wetland fill and greater wetland impacts than the proposed project. Therefore, this alternative is not a less environmentally damaging feasible alternative to the proposed project, as conditioned.

5-foot shoulders (Class 2 bike lane) and raised sidewalk. Under this alternative, two 5-foot shoulders would be added to the existing road width, and a raised 6.5-foot sidewalk would be constructed east of the widened roadway. As with the above alternative, because of the expanse of existing wetlands and riparian habitat east of the existing roadway, this alternative

would result in more wetland fill and greater wetland impacts than the proposed project. In addition, this alternative would be less safe for bicyclists, who would not be separated from roadway traffic, and there would be greater water quality impacts due to the inability for stormwater to sheet flow off of the roadway due to the sidewalk curb (instead stormwater would be conveyed underground through drop inlets). Furthermore, the existing roadside ditch, which would be filled to accommodate the road widening, would not be reconstructed under this alternative, and therefore additional off-site wetland mitigation would be needed. Therefore, this alternative is not a less environmentally damaging feasible alternative to the proposed project, as conditioned.

4-foot shoulders and no designated pedestrian facilities. Under this alternative, there would be no separated trail or designated pedestrian/bike facilities. This alternative does not meet the project goals of making the roadway safer for multi-modal access (including pedestrians, bicyclists, and equestrians). The Applicant already greatly minimized the length of the proposed separated trail by deleting the southern portion of the sidewalk (i.e., no sidewalk from slightly south of the roundabout to the southern end of the project area). Deletion of this southern portion of the trail, as the Applicant had originally proposed in the project approved by the County, resulted in a reduction of the project's wetland impacts by over one half of an acre. The remaining proposed trail, from the roundabout area northward, will provide a safe multi-modal access along the segment of Humboldt Road where pedestrian use is greatest, the segment that connects the residential neighborhood north of the project area with Sandmine Road, which leads into Crescent City, and the Rancheria's property, where a future casino development is planned. Therefore, the alternative of completely eliminating all designated pedestrian facilities from the project is not a less environmentally damaging feasible alternative to the proposed project, as conditioned.

"No project" alternative. The no-action or no project alternative would maintain the status quo and would not adequately address safety needs. This alternative does not meet the project goals of making the road safer for multi-modal access and redesigning the roadway to meet AASHTO (American Assoc. of State Highway and Transportation Officials) standards. Therefore, this alternative is not a less environmentally damaging feasible alternative to the proposed project, as conditioned.

Conclusion

In conclusion, based on the alternatives analysis above, the Commission finds that there are no less environmentally damaging feasible alternatives to the proposed project as conditioned, and the proposed project is consistent with the alternatives test of section 30233(a) of the Coastal Act and the corresponding policies of the certified LCP.

(3) FEASIBLE MITIGATION MEASURES

Sections 30230, 30231, 30233, and 30240 of the Coastal Act and the corresponding marine and water resources policies of the certified LUP cited above require that the proposed project (a) minimize adverse environmental wetland effects; (b) minimize significant disruption of habitat values of environmentally sensitive rare species habitat; (c) protect the biological productivity

and the quality of coastal wetlands and waters; and (d) protect adjacent environmentally sensitive habitat areas from impacts that would significantly degrade those areas.

As previously discussed, the proposed project will impact about one-half acre of wetland and riparian habitats and will involve construction impacts and permanent impacts (including about 0.83-acre of new impervious paved surfaces) to areas immediately adjacent to environmentally sensitive wetlands, riparian areas, and rare species habitat areas and park and recreation areas (Crescent City Marsh Wildlife Area). Environmentally sensitive habitat areas in the project vicinity include habitat for rare plants (e.g., western lily *Lilium occidentale;* marsh violet *Viola palustris;* marsh pea *Lathyrus palustris;* great burnet *Sanguisorba officinalis*; and several others), rare wetland habitats (coastal freshwater marsh habitat of the CCMWA), northern red-legged frog (*Rana aurora*) breeding and dispersal habitat, coastal streams that support coastal cutthroat trout (*Oncorhynchus clarki clarki*) and potentially other sensitive fish (e.g., steelhead, *O. mykiss*), western pond turtle (*Emys marmorata*), and sensitive mollusks (*Juga chacei*).

As proposed, the project could have several significant adverse environmental effects, including: (a) a net loss of 0.54-acre of palustrine emergent and forested (riparian) wetland habitat resulting from filling wetland areas to accommodate the proposed road widening, roundabout, and new sidewalk/trail; (b) impacts to the biological productivity and quality of coastal waters in the project area; (c) impacts to sensitive frogs and turtles potentially inhabiting the project area; (d) impacts to other sensitive species potentially inhabiting the project area; and (e) impacts to adjacent environmentally sensitive habitat areas (i.e., the Crescent City Marsh Wildlife Area). The potential adverse environmental impacts and feasible mitigation measures to minimize those adverse impacts are discussed in the following sections.

(a) Impacts to 0.54-acre of coastal wetlands

The applicant has prepared a draft mitigation and monitoring plan (MMP, **Exhibit 8**), which "provides guidance for the implementation of a wetland restoration to offset permanent and temporary impacts associated with the [project]." The stated overall goal of the "mitigation package" is

> *…to establish and preserve self-sustaining natural palustrine emergent and forested wetlands; establish and preserve riparian habitat; and rehabilitate the adjacent disturbed creek channel that has been invaded by Himalayan blackberry (Rubus armeniacus) and other exotic species.*

The proposed "mitigation package" outlined in the draft MMP includes a combination of proposed wetland and riparian habitat creation and enhancement in areas of the Applicant's property adjacent to the project area (outside of the coastal zone) and creation of new roadside ditch wetlands adjacent to the improved roadway to compensate for the permanent loss of 0.54-acre of wetland habitats, as required by section 30233 of the Coastal Act and the corresponding policies and recommendations of the marine and water resources chapter of the certified LUP. The proposed mitigation includes a combination of different mitigation ratios for different types of wetlands impacts to be undertaken in different areas, as detailed in Table 1 and Figure 5 of the MMP. Specifically, the Applicant is proposing the following:

(1) Creation of 0.79-acre of palustrine emergent wetlands in two proposed mitigation areas within existing upland grasslands on the north side of the Applicant's property near a fish-bearing watercourse (hereafter "north stream") that flows under Humboldt Road and through the Crescent City Marsh Wildlife Area;

(2) Creation of 0.36-acre of riparian/forested wetland habitat adjacent to existing riparian habitat and the proposed aforementioned mitigation wetlands;

(3) Planting of 0.39-acre of riparian tree and shrub plantings in existing upland grassland habitat adjacent to the proposed mitigation wetlands to buffer the mitigation area from the remainder of the Applicant's property to the south; and

(4) Enhancement of 0.87-acre of existing riparian habitat along the north stream through the removal of several invasive plant species and the replanting of native riparian species.

In sum, the Applicant proposes to create a total of 1.15 acres of new mitigation wetlands (a 2.1-to-1 wetland mitigation ratio) plus undertake enhancement activities (weed removal and riparian species planting) on an additional 1.26 acres (an additional 2.3:1 wetland enhancement ratio). In addition, the Applicant proposes to relocate/create ~0.32-acre of new ditch wetlands to compensate for impacts to ditch wetlands that are proposed to be filled. The Applicant does not propose the new ditch wetlands to be part of the mitigation package, and proposes no monitoring for these new roadside drainage features. Finally, in addition to the proposed MMP, the CEQA document completed for the project (mitigated negative declaration) also includes Mitigation Measure "BIO-3", which states in part as follows:

> *…the applicant shall develop an on-site compensatory wetland mitigation and monitoring plan approved by the Corps, DFG, Del Norte County, the California Coastal Commission and any other resource agency with jurisdiction…At a minimum, the plan shall: result in no net loss of wetland area or function; include a planting plan that reflects the native plant species within the wetland types to be impacted; and include maintenance and monitoring of the mitigation site for a minimum of 5 years.*

The Commission finds that because of the expected low temporal loss of wetland habitat (minimal time between wetland impact and wetland restoration) coupled with a high likelihood of restoration success (due to large part to the relatively high average annual rainfall in the region and the type of wetlands to be restored), mitigation at the proposed ratios summarized above is appropriate to sufficiently mitigate for the filling of emergent and riparian wetlands as part of the proposed road safety improvement project. Although the conceptual ideas and techniques presented in the proposed MMP will help accomplish the mitigation goals of reestablishing wetland habitat and compensating for the project's wetland impacts, the proposed plan lacks sufficient specificity and detail to ensure that feasible mitigation measures will be provided to minimize adverse environmental effects on coastal wetlands, as required by section 30233 of the Coastal Act and the corresponding policies and recommendations of the marine and water resources chapter of the certified LUP. Therefore, the Commission attaches **Special Condition 1**

to require that the Applicant submit a revised final wetland mitigation and monitoring program for the review and approval of the Executive Director that ensures adequate compensation for wetland impacts and ultimately implement the approved plan. The revised final plan must include final plans, including final monitoring, maintenance, reporting, and remediation plans, to ensure that the project as conditioned minimizes the adverse environmental effects of the project's proposed 0.54-acre of wetland fill impacts.

As conditioned in the manner discussed above, the Commission finds that the proposed project provides feasible mitigation measures to minimize adverse environmental effects consistent with sections 30230, 30231 and 30233 of the Coastal Act and the corresponding policies and recommendations of the marine and water resources chapter of the certified LCP.

(b) Impacts to the biological productivity and quality of coastal streams

The project site spans several watercourses, which pass under Humboldt Road through existing culverts – several of which are proposed to be extended to accommodate the road widening project. The northern-most waterway in the project area, which flows under Humboldt Road through two 36-inch culverts westward through the Crescent City Marsh Wildlife Area, supports habitat for sensitive fish species, including coastal cutthroat trout and steelhead.

The CEQA document completed for the project (mitigated negative declaration) includes Mitigation Measure "BIO-1", which states as follows:

> *Construction activities within the streams on the Martin Ranch property shall include the implementation of BMPs to avoid sedimentation and polluted runoff from draining to the creeks and sloughs from the construction sites.*

To address water quality protection concerns, and to comply with the State Water Resources Control Board's and Environmental Protection Agency's requirements, the Applicant has prepared two draft Stormwater Pollution Prevention Plans (SWPPPs) for the project (the SWRCB SWPPP applies to approximately 0.66-acre of the project outside of the Elk Valley Rancheria Trust lands and the EPA SWPPP applies to approximately 4 acres of project area within Trust lands). The draft SWPPPs (both dated February 2014) are similar, and both are designed to address construction-related sediment sources and control, the control of non-stormwater discharges, and site Best Management Practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from construction activities associated with the entire project. The SWPPPs include several plan sheets (drawings ECP-1 through ECP-7 in each, included with Exhibit 5) detailing the types and locations of proposed erosion and sediment control measures. In addition, various water pollution control details also are included on other sheets the draft plans developed for the project.

In general, the measures and BMPs proposed in the SWPPPs are appropriate. However, there are additional mitigation measures not included in the SWPPPs or erosion, sediment, and water pollution control plans that could be provided to sustain the biological productivity and quality of coastal waters in the project area. These measures include: (1) prohibiting the use of erosion and sediment control products with plastic netting (thereby minimizing plastic debris pollution), (2)

restricting the timing of construction to the dry season, and (3) prohibiting equipment fueling and maintenance and concrete wash-out at the project site. These additional measures, among other construction requirements, restrictions, and responsibilities, are required by **Special Condition 2**. The applicant must demonstrate that these additional measures have been included in the final construction plans, final SWPPPs, and final erosion, sediment, and water pollution control plans for the project prior to commencement of construction. As conditioned, the Commission finds that the proposed project provides feasible mitigation measures to protect the biological productivity and quality of coastal streams and wetlands consistent with sections 30230, 30231 and 30233 of the Coastal Act and the corresponding policies and recommendations of the marine and water resources chapter of the certified LUP.

(c) Impacts to sensitive amphibians

As previously discussed, the proposed project will impact about one-half acre of wetland and riparian habitats and will involve construction impacts and permanent impacts (including about 0.83-acre of new impervious paved surfaces) to areas immediately adjacent to environmentally sensitive wetlands, including northern red-legged frog (*Rana aurora*) breeding and dispersal habitat. Because of the potential for northern red-legged frog to be present in the project area during construction, the CEQA document completed for the project (mitigated negative declaration) includes Mitigation Measure "BIO-2", which states as follows:

> *"Pre-construction surveys for the northern red-legged frog (Rana aurora) shall be conducted by a qualified biologist prior to construction activities. If the species is found to be present, a qualified biologist shall remove the frog(s) from the Project area to other suitable habitat outside of the Project area. The Project shall not cause a permanent net loss to habitat for this species. If any suitable habitat impacts cannot be avoided, additional suitable habitat areas shall be created such that there is no net loss of suitable habitat for any species status frog."*

To protect any environmentally sensitive northern red-legged frog habitat areas from significant disruption of habitat values and to ensure that the Applicant follows through on its commitment to conduct pre-construction frog surveys, the Commission includes **Special Condition 2(c)**, which in part requires that no more than one week prior to commencement of ground disturbance in a particular work area, a qualified biologist shall survey the ground-disturbance area for northern red-legged frog and shall coordinate with California Department of Fish and Wildlife staff to relocate any animals that occur within the work impact zone to nearby suitable habitats. In addition, **Special Condition 2(b)** limits ground-disturbing activities to the latter part of the dry season in part to avoid disturbance to breeding frogs. Further, **Special Condition 2(h)** prohibits the use of erosion and sediment control products with plastic netting, which can entangle wildlife and degrade habitat quality. As conditioned, the Commission finds that the proposed project provides feasible mitigation measures to protect sensitive species and the biological productivity and quality of coastal streams and wetlands consistent with sections 30230, 30231 and 30233 of the Coastal Act and the corresponding policies and recommendations of the marine and water resources chapter of the certified LUP.

(d) Impacts to other sensitive species potentially inhabiting the project area

In addition to sensitive amphibian species, the project area also supports habitat for sensitive fish, western pond turtle, and sensitive mollusks, as discussed above. The various water quality protection conditions previously discussed (and as required in **Special Condition 2**) will ensure that aquatic habitat that may support sensitive fish and mollusk species is protected from degradation. Also as discussed above, **Special Condition 2(c)**, requiring pre-construction surveys, will protect western pond turtles (as well as northern red-legged frog) by requiring that a qualified biologist will survey ground-disturbance areas for western pond turtle no more than one week prior to commencement of construction and coordinate with CDFW staff to relocate any animals that occur within the work impact zone to nearby suitable habitats. As conditioned, the Commission finds that the proposed project provides feasible mitigation measures to protect sensitive species and the biological productivity and quality of coastal streams and wetlands consistent with sections 30230, 30231 and 30233 of the Coastal Act and the corresponding policies and recommendations of the marine and water resources chapter of the certified LUP.

(e) Impacts that would significantly degrade adjacent ESHA

The project area is located immediately adjacent to the Crescent City Marsh Wildlife Area, a ~339-acre environmentally sensitive habitat area owned by CDFW that provides habitat to a wide variety of flora and fauna, including several rare species and habitats. The proposed project could cause adverse environmental effects to adjacent and nearby ESHA, including the sensitive species that inhabit these areas, incompatible with the continuance of those areas, unless feasible mitigation measures are provided.

First, the adjacent and nearby ESHA could be adversely affected if nonnative, invasive plant species were introduced to the site for revegetation or erosion control purposes. If any of the proposed revegetation/seeding were to include introduced invasive exotic plant species, the weedy plants could colonize (e.g., via wind or wildlife dispersal) nearby ESHAs and the adjacent recreation area over time and displace native vegetation, thereby disrupting the functions and values of the ESHAs. The applicant has proposed to plant mostly native plants as part of the project's revegetation needs, but it is unclear if potentially invasive exotic plants would be used in erosion control and/or hydroseed mixes. Thus, the Commission attaches **Special Condition 2(i)** to prohibit the use of any plants or seeds other than native and/or non-invasive plant species.

Second, the Commission notes that certain rodenticides, particularly those utilizing blood anticoagulant compounds such as brodifacoum, bromadiolone and diphacinone, have been found to pose significant primary and secondary risks to non-target wildlife present in urban and urban/wildland interface areas. As these target species are preyed upon by raptors or other environmentally sensitive predators and scavengers, the pest control compounds can bio-accumulate in the animals that have consumed the rodents to concentrations toxic to the ingesting non-target species. The Applicant has not proposed the use of any rodenticides as part of this project, but such pest control techniques often are employed in conjunction with planting or revegetation activities to limit herbivory impacts. To avoid this potential cumulative impact to environmentally sensitive wildlife species that inhabit the surrounding area, **Special Condition 2(j)** contains a prohibition on the use of such anticoagulant-based rodenticides.

Third, the plastic netting prohibition required by **Special Condition 2(h)**, discussed above, will minimize the potential for wildlife entanglement and plastic debris pollution to surrounding coastal streams and wetlands, including the Crescent City Marsh downstream of the project site.

Fourth, **Special Condition 2(a)** explicitly restricts construction activities to pre-established work areas that will be delineated by a qualified biologist with temporary fencing prior to commencement of construction so that construction equipment and activities do not encroach into adjacent environmentally sensitive marsh, riparian, or stream habitat areas.

Finally, the new roundabout and street lighting proposed for the project could have adverse environmental effects on the surrounding marsh, riparian, and stream habitat areas. Commission staff research has determined that artificial night lighting can have a variety of significant direct and cumulative effects on flora and fauna, including disruption of light-dark photosynthesis cycles and circadian rhythms, disruption of foraging behaviors and increased risks of predation, and inference with vision and migratory orientation. These impacts can result in reductions in biological productivity, reduce the population of otherwise threatened, endangered, or rare species, elevate incidences of collisions between birds and structures, or cause large numbers of arthropods to fixate on the lighting source attraction to the point of fatal exhaustion, negatively affecting their populations and reproductive success, as well as the food web they support.

For the purposes of the Commission's *de novo* and consistency certification reviews, the Applicant submitted photometric and lighting plans for the proposed new lighting associated with the roundabout and cross-walks (**Exhibit 9**). The photometric plan modeled levels of illumination from the proposed project's nighttime lighting fixtures, estimating the amount of light for the development that would enter the environmentally sensitive areas adjoining the project site. The Applicant proposes to use "wildlife friendly" LED lighting with a relatively low lumen output (3000k) and relatively little blue in the spectrum. As proposed, the new lighting will be downcast and shielded to minimize encroachment into surrounding environmentally sensitive habitat areas.

The Commission finds that as proposed, the proposed new lighting for the road improvement project will not significantly degrade adjacent marsh habitats and will maintain the biological productivity of surrounding coastal wetlands and streams. The Commission includes **Special Condition 3** to require that the Applicant undertake development in substantial conformance with the proposed plans.

Thus, the Commission finds that the proposed project, as conditioned in the manner discussed above, will be designed to prevent impacts that would significantly degrade adjacent ESHA and to be compatible with the continuance of those areas, consistent with section 30240(b) of the Coastal Act and the corresponding policies of the certified LCP.

Conclusion

In conclusion, the Commission finds that the project as conditioned herein (1) uses the least environmentally damaging feasible alternative; (2) provides feasible mitigation measures to minimize adverse environmental effects; (3) minimizes disruption of habitat values; (4) protects the biological productivity and the quality of coastal wetlands and waters; and (5) protects

adjacent environmentally sensitive habitat areas and park and recreation areas against any significant disruption of habitat values, consistent with sections 30230, 30231, 30233, and 30240 of the Coastal Act and the corresponding policies and recommendations of the marine and water resources chapter of the certified LUP.

H. ARCHAEOLOGICAL RESOURCES

Section 30244 of the Coastal Act states the following:

> *Where development would adversely impact archeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

According to the Initial Study and Mitigated Negative Declaration prepared for the project (dated May 2011), Roscoe and Associates, a cultural resources consulting firm, conducted an initial Phase I historic properties investigation for the proposed project to identify known or previously unknown cultural resources within or adjacent to the project's area of potential effects (APE). No historic/cultural resources were identified in or adjacent to the APE. Nevertheless, because the proposed project includes ground disturbance for road, trail, and mitigation area construction, there is the potential to unearth previously undiscovered buried archaeological or paleontological resources or human remains. As such, the CEQA document included mitigation measures stating that earthmoving and excavation activities should be monitored for the presence of uncovered artifacts and/or remains, and if any discoveries are made, ground-disturbing activities should cease until appropriate representatives (a qualified archaeologist in the case of archaeological or paleontological resources and the County and Tribal representatives in the case of human remains) are contacted.

Due to the ground disturbance proposed and to ensure protection of any archaeological resources that may be inadvertently discovered at the site during construction, the Commission attaches **Special Condition 4**. This condition requires that if an area of archaeological deposits is discovered during the course of the project, all construction must cease, and a qualified cultural resource specialist must analyze the significance of the find. To recommence construction following discovery of cultural deposits, the permittee is required to submit a supplementary archaeological plan for the review and approval of the Executive Director to determine whether the changes are de minimis in nature and scope, or whether an amendment to this permit is required.

Therefore, the Commission finds that the proposed project is consistent with Coastal Act section 30244, as the proposed project will include reasonable mitigation measures to ensure that there are no significant adverse impacts to archaeological resources.

I. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Del Norte County is the lead agency for the purposes of CEQA review for the portion of the project covered under the coastal development permit. The County adopted a Mitigated Negative Declaration for the project on July 11, 2012.

Section 13096 of the Commission's administrative regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable requirement of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment.

The Commission incorporates its findings on conformity with Coastal Act policies at this point as if set forth in full. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As discussed herein, in the findings addressing the consistency of the proposed project with the certified Del Norte County LCP, the proposed project has been conditioned to be found consistent with the certified Del Norte County LCP and Section 30010 of the Coastal Act. All feasible mitigation measures, which will minimize all significant adverse environmental impacts have been required. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the proposed project can be found to be consistent with the requirements of the Coastal Act to conform to CEQA.

APPENDIX A

Past Approvals

1. CD-054-05 (Bureau of Indian Affairs) approved on 10/12/05 for the placement of 203.5 acre Martin Ranch Parcel into Trust for Elk Valley Rancheria, and development of Elk Valley Rancheria Resort-Casino
2. DNC-MAJ-1-10 (County of Del Norte) certified on 6/17/11 to amend the text of the Land Use Plan's (LUP) "general" public works policy to add a fifth exception to the list of locations where the prohibition on the extension of community services beyond the mapped urban services boundary may be authorized to specifically allow such service extensions to the casino-resort parcel.

Substantive File Documents

1. Local record for County of Del Norte Coastal Grading Permit No. GP2011-32C approved by the Del Norte County Planning Commission on 7/11/12.
2. Application file for Appeal No. A-1-DNC-12-021.
3. Application file for Consistency Certification No. CC-0001-14.
4. County of Del Norte Local Coastal Program.
5. Initial Study and Mitigated Negative Declaration prepared for the project by Winzler & Kelly dated December 2011.
6. Wetland delineation for Elk Valley Rancheria prepared by Winzler & Kelly dated July 2011.
7. Humboldt Road Safety Improvement Project: Feasibility of Wetland Mitigation memo to Randy Hooper (Del Norte Co. Planning Dept.) prepared by Robert Holmlund (Winzler & Kelly) dated November 30, 2011.
8. Delineation of waters of the United States Elk Valley Rancheria Martin Ranch Fee-to-Trust project prepared by Analytical Environmental Services dated March 2004.
9. Conceptual wetland mitigation and monitoring plan Elk Valley Rancheria Martin Ranch Fee-to-Trust project prepared by Analytical Environmental Services dated March 2004.
10. Final Environmental Impact Statement Elk Valley Rancheria Martin Ranch Fee-to-Trust and Casino Project dated September 2006, including both Volumes I and II (appendices).
11. Staff Report for Consistency Determination CD-054-05 conditionally approved on September 14, 2005 and Adopted Findings on CD-054-05 approved October 12, 2005.
12. Draft Watershed Hydrological Monitoring Plan, Crescent City Marsh, prepared by David Imper, U.S. Fish and Wildlife Service, Arcata Field Office, February 24, 2006.
13. *Lilium occidentale* (western lily) 5-Year Review: Summary and Evaluation, prepared by U.S. Fish and Wildlife Service, Arcata Field Office, January 2009.

APPENDIX B
Excerpts from the Del Norte County LCP

Relevant Land Use Plan (LUP) Policies and Standards

LUP "Marine and Water Resources" chapter Section IV-C ("Sensitive Habitat Types") in part states as follows:

… … …

B. Designation Criteria: The following criteria are proposed for designating biologically sensitive habitats in the marine and coastal water environments and related terrestrial habitats of Del Norte County:

1. *Biologically productive areas important to the maintenance of sport and commercial fisheries.*
2. *Habitat areas vital to the maintenance and enhancement of rare and/or endangered species.*
3. *Fragile communities requiring protective management to insure their biological productivity, species diversity and/or continued maintenance.*
4. *Areas of outstanding scientific or educational value that require protection to insure their viability for future inquiry and study.*

C. Sensitive Habitat Types: Several biologically sensitive habitat types, designated through the application of the above criteria, are found in the Coastal Zone of Del Norte County. These include: offshore rocks; intertidal areas; estuaries; wetlands; riparian vegetation systems; sea cliffs; and coastal sand dunes. A brief description of these sensitive habitat types is given below:

… … …

4. *Wetlands: Also termed marshes, swamps and bogs, wetlands in the coastal zone vary from brackish to freshwater and range from seasonally flooded swales to year=round shallow lakes. Like estuaries, wetlands tend to be highly productive regions and are important habitats and feeding grounds for numerous wildlife species.*
5. *Riparian Vegetation Systems: The habitat type located along stream and river banks usually characterized by dense growth of trees and shrubs is termed riparian. Riparian systems are necessary to both the aquatic life and the quality of water courses and are important to a host of wildlife and birds.*

… … …

LUP "Marine and Water Resources" chapter Section IV-C (Sensitive Habitat Types) Table 1 ("Sensitive Habitat Types and Their Principal Locations") specifically lists "Sandmine Road" as a "principal location" for the wetland sensitive habitat type.

LUP "Marine and Water Resources" chapter Section VI-C (LCP Policies) in part states as follows:

1. *The County seeks to maintain and where feasible enhance the existing quality of all marine and water resources.*

… … …

3. *All surface and subsurface waters shall be maintained at the highest level of quality to insure the safety of public health and the biological productivity of coastal waters.*

… … …

6. *Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. Development in areas adjacent to environmentally sensitive habitat areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.*

… … …

LUP "Marine and Water Resources" chapter, Section VII-D ("Wetlands"), part 1 defines "Wetland" as follows:

1. *<u>Definition</u>: "Wetland" means lands within the Coastal Zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, bogs, and fens. The land use category will be Resource Conservation Area.*

LUP "Marine and Water Resources" chapter, Section VII-D ("Wetlands"), part 2 identifies "major wetland areas of the Coastal Zone" in part as follows:

2. *<u>Principal Distributions</u>: Wetland habitats are found throughout the generally flat-lying coastal plain of Del Norte County. The following identifies the major wetlands areas of the Coastal Zone.*

… … …

n. Sandmine Road Wetland

… … …

LUP "Marine and Water Resources" chapter, section VII-D ("Wetlands"), part 4 ("Policies and Recommendations") states in part as follows:

a. The diking, filling, or dredging of wetlands shall be permitted in accordance with other applicable provisions of this program, where there is no feasible less environmentally damaging alternative and where feasible mitigation measures have been provided to minimize adverse environmental effects. Such projects shall be limited to those identified in Section 30233 of the Coastal Act.

… … …

d. Performance standards shall be developed and implemented which will guide development in and adjacent to wetlands, both natural and man-made, so as to allow utilization of land areas compatible with other policies while providing adequate protection of the subject wetland.

… … …

f. Development in areas adjacent to environmentally sensitive habitat areas shall be sited and designed to prevent impacts which could significantly degrade such areas, and shall be compatible with the continuance of such habitat areas. The primary tool to reduce the above impacts around wetlands between the development and the edge of the wetland shall be a buffer of one-hundred feet in width. A buffer of less than one-hundred feet may be utilized where it can be determined that there is no adverse impact on the wetland. A determination to utilize a buffer area of less than one-hundred feet shall be done in cooperation with the California Department of Fish and Game and the County's determination shall be based upon specific findings as to the adequacy of the proposed buffer to protect the identified resource...

… … …

LUP "Marine and Water Resources" chapter, section VII-E ("Riparian Vegetation"), part 4 ("Policies and Recommendations") states in part as follows:

a. Riparian vegetation shall be maintained along streams, creeks and sloughs and other water courses within the Coastal Zone for their qualities as wildlife habitat, stream buffer zones, and bank stabilization

… … …

LUP "Recreation" chapter, section I ("Introduction"), part A describes "Coastal Recreation" as follows:

A. <u>Coastal Recreation</u>: Coastal recreation may be defined as any outdoor leisure-time experience in the Coastal Zone from which an individual derives enjoyment…

… … …

LUP "Recreation" chapter, section III ("General Policies"), part C ("LCP Policies") states in part as follows

… … …

2. New recreational development shall be located and distributed throughout the Coastal Zone in a manner to prevent undue social impacts, overuse or overcrowding.

… … …

6. Fragile coastal resources shall be considered and protected to the greatest possible extent in all new coastal recreational development.

… … …

The LUP certified constraint maps designates areas immediately adjacent to the subject road, both east and west of the road, as "Resource Conservation Areas" (RCA), specifically as "farmed

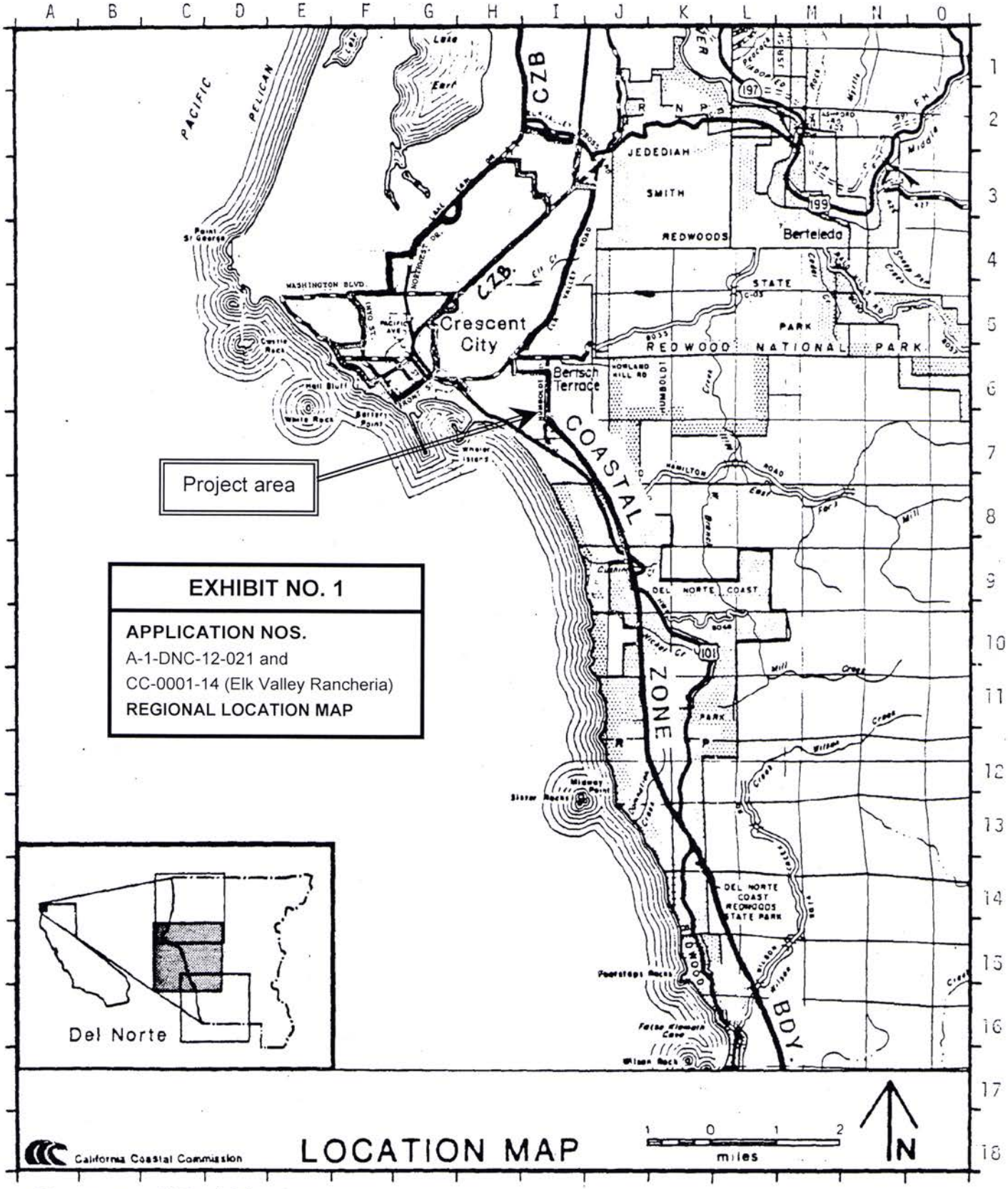
wetlands" and "riparian." RCAs are described in LUP "Land Use" chapter, section I ("Land Use Categories"), part D in part as follows:

> *D. Resource Conservation Areas: Resource Conservation Areas (RCA) are areas mapped on the accompanying constraint maps as wetlands and farmed wetlands, riparian, estuaries, and coastal sand dunes. Development within these areas is subject to the policies of the certified land use plan….*

Relevant Implementation Plan Policies and Standards

Chapter 14.05 of the coastal zoning regulations addresses grading, excavation and filling in part as follows:

> *14.05.010 Purpose. The purpose of this chapter is to promote and protect the public safety, convenience, comfort, prosperity, general welfare and Del Norte County's natural resources by establishing minimum requirements for grading, excavating and filling in order to:*
>
> *A. Control flooding, erosion and sedimentation and prevent damage to off-site property and resource conservation areas;*
>
> *B. Avoid creation of unstable slopes or unstable filled areas;*
>
> *C. Prevent impairment or destruction of potential leach fields for sewage disposal systems;*
>
> *D. Regulate de facto development caused by uncontrolled grading; and*
>
> *E. Implement the policies of the general plan coastal element within the county's designated California Coastal Zone. (Ord. 83-03 (part), 1983.)*
>
> …
>
> *14.05.040 Prohibited grading. No grading shall be done or caused to be done:*
>
> *A. That will endanger any public or private property, result in the deposit of debris on any public way or significantly affect any existing wetland, drainage or other resource conservation area unless the hazard is eliminated by construction of retaining structures, buttress fills, drainage devices, landscaping, vegetation buffers, or other means required as a condition of a building and grading permit or other entitlement;*
>
> …



County of Del Norte

Locations approximate.
For illustrative purposes only.

EXHIBIT NO. 2

APPLICATION NO.

A-1-DNC-12-021 and
CC-0001-14 (Elk Valley Rancheria)
VICINITY MAP

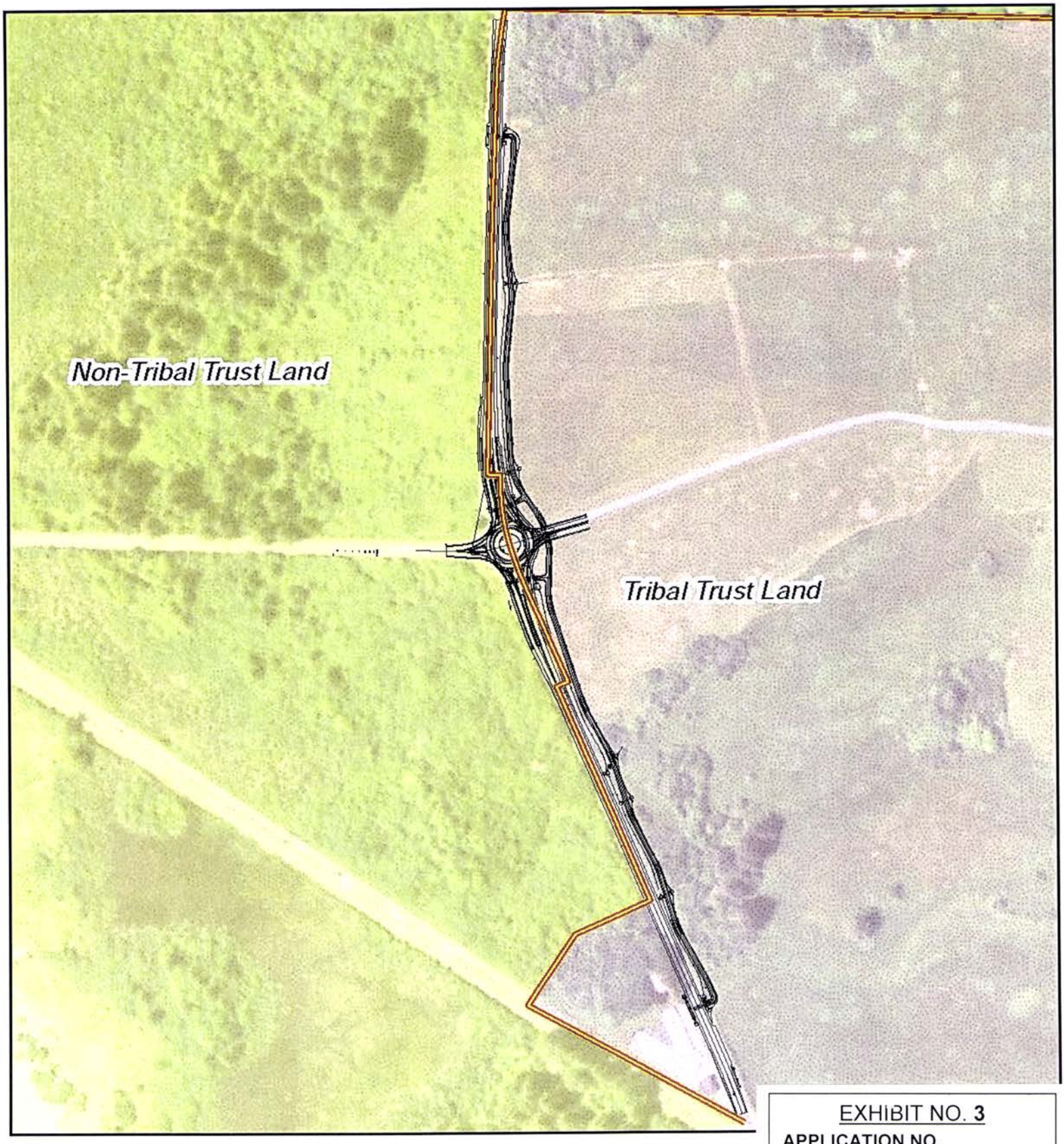
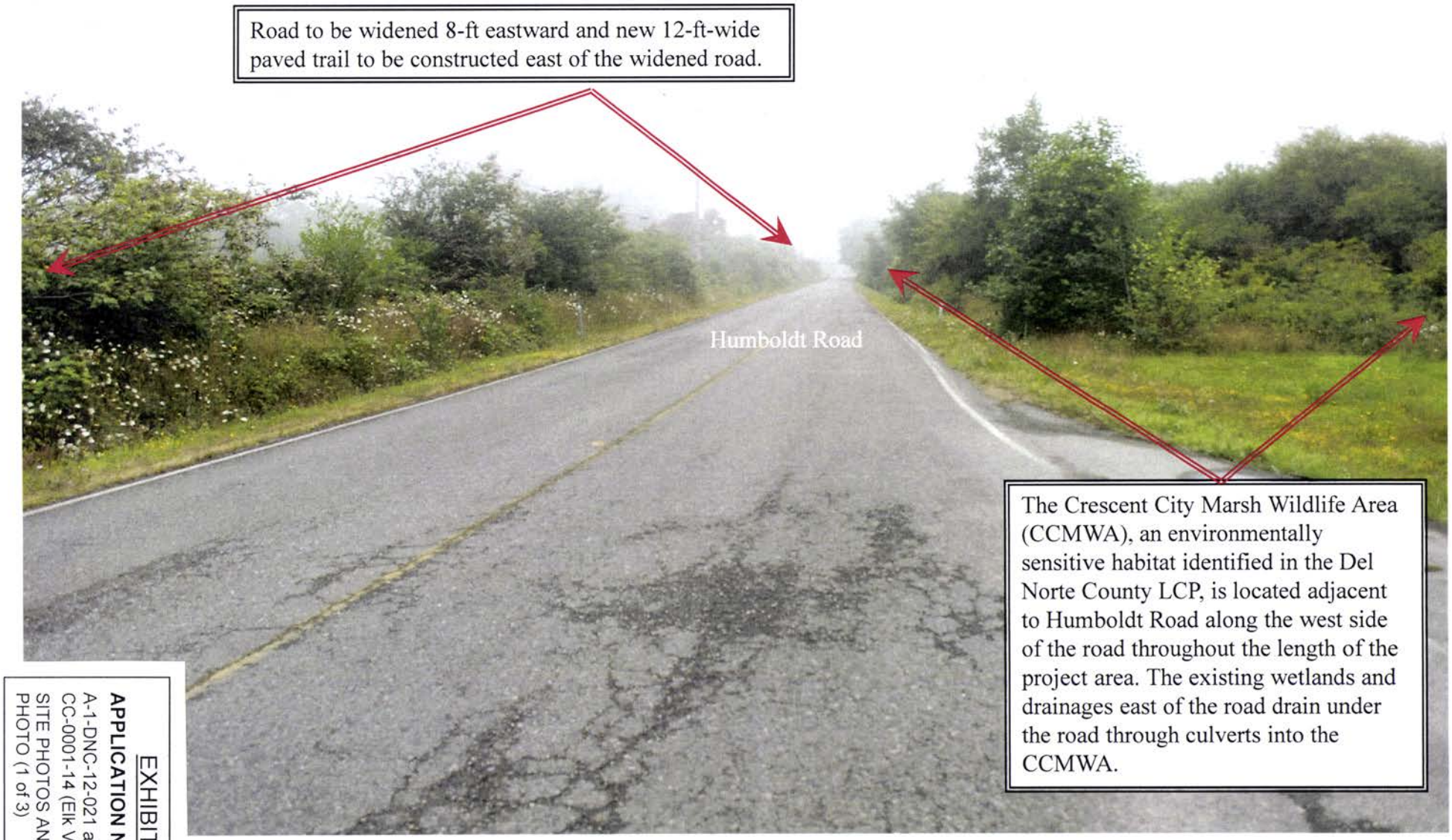


EXHIBIT NO. **3**

APPLICATION NO.

A-1-DNC-12-021 and
CC-0001-14 (Elk Valley Rancheria)

JURISDICTION MAP WITH
PROJECT FOOTPRINT



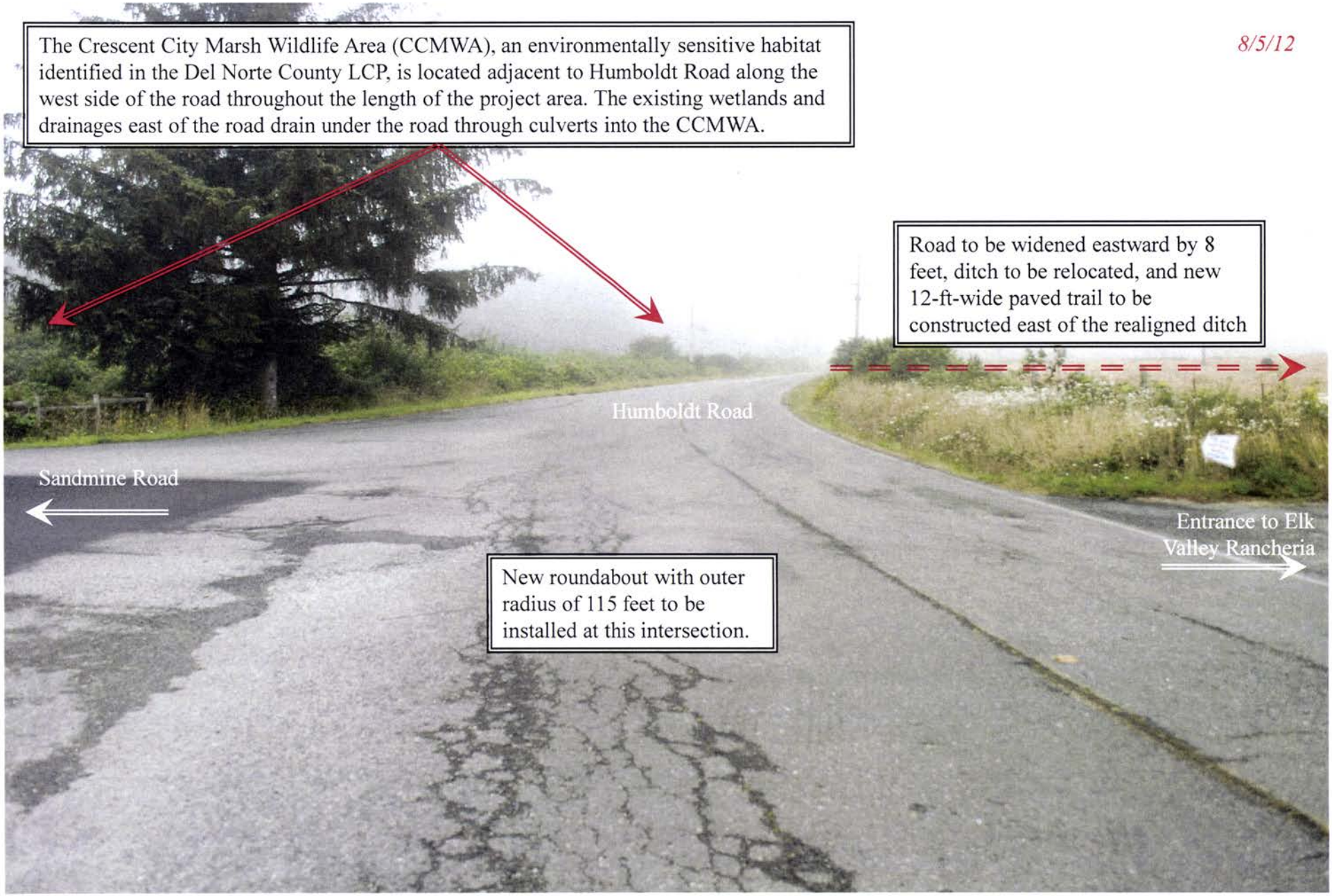
View southward of Humboldt Road from Sandmine Road intersection.

EXHIBIT NO. 4

APPLICATION NO.

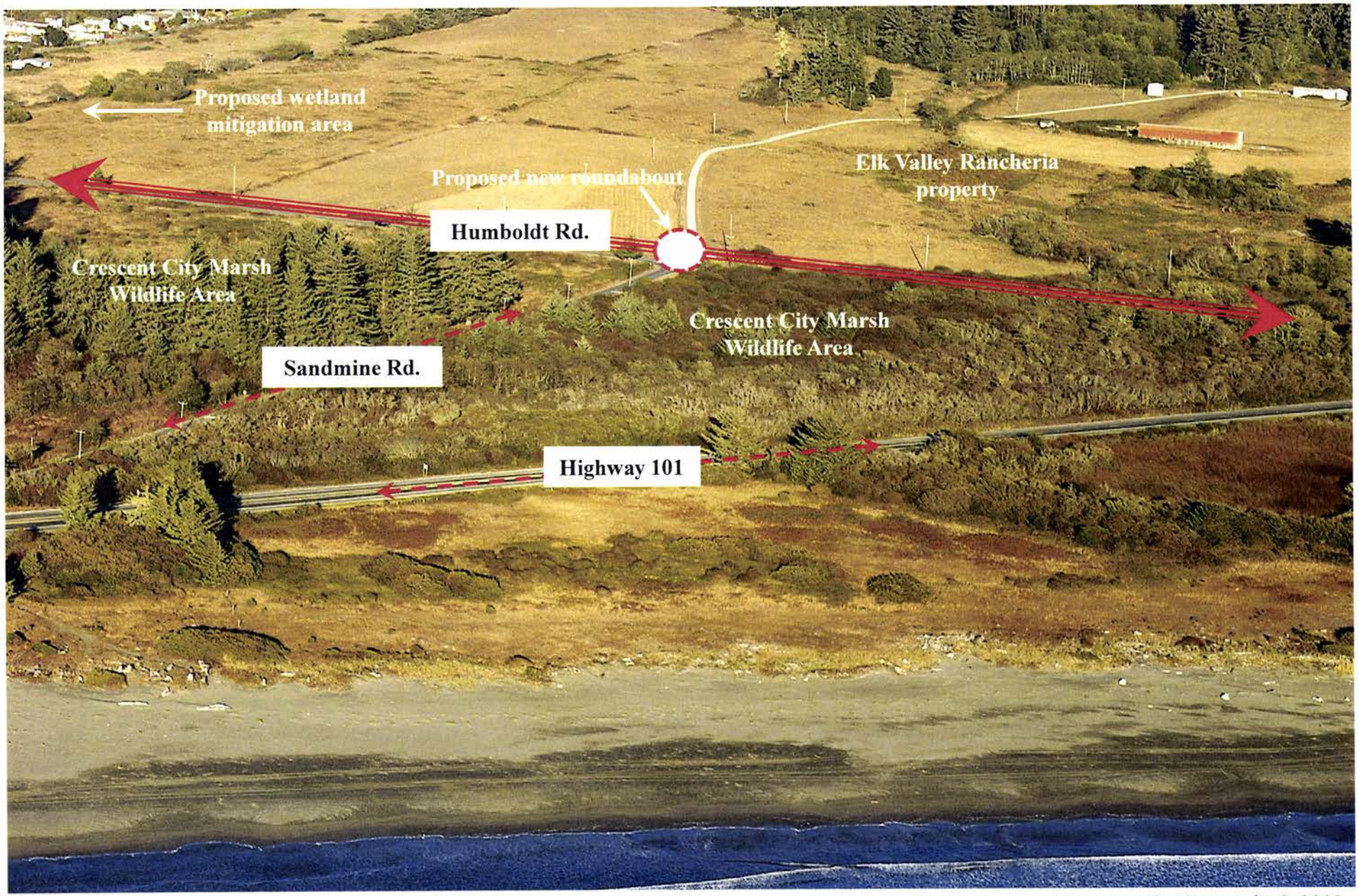
A-1-DNC-12-021 and
CC-0001-14 (Elk Valley Rancheria)
SITE PHOTOS AND AERIAL
PHOTO (1 of 3)

8/5/12



View northward of Humboldt Road from Sandmine Road at the location of the proposed new roundabout.

2 of 3



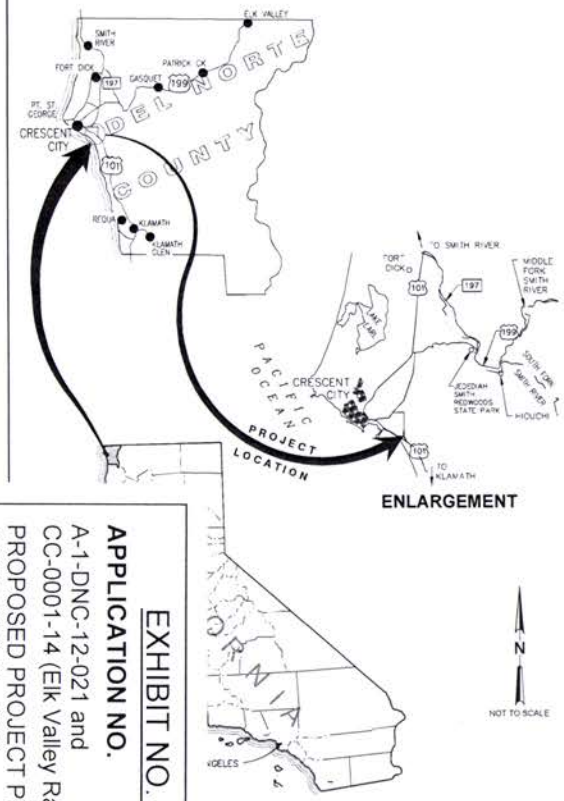
ELK VALLEY RANCHERIA, CALIFORNIA
DEL NORTE COUNTY, CALIFORNIA

HUMBOLDT ROAD IMPROVEMENT PROJECT

APRIL 2014

THIS PROJECT REQUIRES A CLASS 'A' GENERAL ENGINEERING CONTRACTORS LICENSE

AREA MAP



LOCATION MAP

SHEET INDEX

APPROVALS:

ENGINEER: GHD, Inc.
JOSHUA A. WOLF, P.E.

APPROVAL: _____ SIGNED _____ DATE

EXHIBIT NO. 5
APPLICATION NO.
A-1-DNC-12-021 and
CC-0001-14 (Elk Valley Rancheria)
PROPOSED PROJECT PLANS
(EXCERPT) (1 of 27)

GHD Inc.
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MARK	DATE	DESCRIPTION
-	-	ISSUE

ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD
IMPROVEMENT PROJECT
COVER SHEET

PROJ NO. 8410956
DRWN SJD CHKD JW

G-1

SHEET 1 OF 34

Cad File No. G:\2005 & Beyond\01828 ElkValleyRancheria\01828-10-001 HumboldtRdImprovement\CAD\01828-10-00101\01828100101-01_G-1_Cover.dwg

SYMBOLS

GENERAL:

- CENTERLINE
- DELTA
- DETAIL DESIGNATION (1 / C-1)
- SHEET WHERE SECTION OR DETAIL OCCURS

BOUNDARY:

- PROPERTY LINE (PL)
- RIGHT-OF-WAY LINE (R/W)
- RIGHT-OF-WAY CENTERLINE
- EASEMENT SIDELINE
- SURVEY CONTROL POINT
- FOUND RECORD MONUMENT
- MONUMENT (FOUND OR NOT FOUND) – TO BE LOCATED AND RESET

TOPOGRAPHIC:

NEW	EXISTING	
		FENCE
		ROAD CENTER
		AC PAVEMENT
		CONTOUR LINE
		TOP OF BANK
		TOE OF BANK
		DRIVEWAY
		CONCRETE SLAB
		DRAINAGE/CREEK/DITCH/SWALE
		BRUSH/VEGETATION LINE
		TREE
	TBM	TEMPORARY BENCH MARK
		ROAD SIGN
		BORING

UTILITY:

NEW	EXISTING	
		WATER MAIN
		STORM DRAIN/CULVERT
		SANITARY SEWER MAIN
		UNDERGROUND ELECT CONDUIT
		OVERHEAD ELECTRICAL LINE
		UNDERGROUND TELEPHONE
		OVERHEAD TELEPHONE
		CABLE TELEVISION (COMM) LINE
		UNDERGROUND TELEPHONE LINE
		OVERHEAD ELECTRIC AND TELEPHONE LINE
		SS MANHOLE
		SS CLEANOUT
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		STORM DRAINAGE INLET
		STORM DRAINAGE MANHOLE
		UTILITY POLE (PP=POWER), (TP=TELEPHONE), (JP=JOINT POLE)
		GUY POLE
		ELECTRICAL MANHOLE
		LIGHT POLE
		PULL BOX
		ELECTRICAL BOX
		TRANSFORMER PAD
		TELE-COMM MANHOLE
		ELECTRICAL PANEL
		TELEPHONE RISER PEDESTAL

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AGG	AGGREGATE
@	AT
BC	BEGIN CURVE
BM	BENCH MARK
BO	BLOW OFF
BOT	BOTTOM
BVC	BEGIN VERTICAL CURVE
CB	CATCH BASIN
CBC	CALIFORNIA BUILDING CODE
CL, ℄	CENTERLINE
CLR	CLEAR, CLEARANCE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CONT	CONTINUOUS
CONT'D	CONTINUED
COORD	COORDINATE
COR	CONTRACTING OFFICER'S REPRESENTATIVE
COR	CORNER
CPP	CORRUGATED PLASTIC PIPE
CU	CUBIC
DIA, ⌀	DIAMETER
DTL	DETAIL
DI	DROP (DRAINAGE) INLET
DWG	DRAWING
E	EAST
EA	EACH
EC	END CURVE
EF	EACH FACE
EL, ELEV	ELEVATION
EP	EDGE PAVING
EQ	EQUAL
ER	EDGE ROAD
ENGR	ENGINEER
EVC	END VERTICAL CURVE
EW	EACH WAY
EX, (E)	EXISTING
FIN	FINISH
FG	FINISH GRADE
FL, FL	FLOW LINE
FS	FINISHED SURFACE
FT	FOOT OR FEET
FTG	FOOTING
GALV	GALVANIZED
GR	GRADE
GB	GRADE BREAK
GRD	GROUND
HORZ	HORIZONTAL
HWY	HIGHWAY
IP	IRON PIPE
INV	INVERT
JCT	JUNCTION
L	LENGTH
LT	LEFT
MAX	MAXIMUM
MH	MAN HOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
(N)	NEW
N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTERS
OPNG	OPENING
PC	POINT OF CURVATURE
PCC	PORTLAND CONCRETE CEMENT
PE	POLYETHYLENE
PI	POINT OF INTERSECTION
PL	PLATE
P/L, ℄	PROPERTY LINE
PLCS	PLACES
PLWD	PLYWOOD
POC	POINT OF CONNECTION
PP	POWER POLE
PT	POINT OF TANGENT
PT	PRESSURE TREATED
R, RAD	RADIUS
RC	RELATIVE COMPACTION
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REQ'D	REQUIRED
REQ'T	REQUIREMENT
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
R/W	RIGHT-OF-WAY
S	SLOPE
SCH, SCHED	SCHEDULE
SD	STORM DRAIN
SHT	SHEET
SIM	SIMILAR
SO	SOUTH
SS	SANITARY SEWER
S. STL	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
THK	THICK
TG	TOP GRATE
TS	TOP OF SLAB
TW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W/	WITH
WD	WIDE
XING	CROSSING
YD	YARD

NOTE: CONTACT ENGINEER FOR ABBREVIATIONS NOT LISTED.

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BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"

MARK	DATE	DESCRIPTION
-	-	ISSUE

ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD IMPROVEMENT PROJECT

SYMBOLS AND ABBREVIATIONS

PROJ NO 8410956
DRWN EJB CHKD JMR

G-2

SHEET 2 OF 34

2 of 27

4/8/2014 9:11 AM

Plot Date: 10 April 2014 - 1:59 PM Plotted By: Scott Davis
Cad File No. G:\2005 & Beyond\01826 Elk Valley Rancheria\01826-10x001 Humboldt Rd Improvement\CAD\01826-10-001018261001-02_G-2_SymAbb.dwg

GENERAL NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS & SPECIFICATIONS, AND THE CONTRACT SPECIAL PROVISIONS FOR THIS PROJECT, UNLESS SHOWN OTHERWISE.
2. PROJECT REQUIRES A CLASS A GENERAL ENGINEERING CONTRACTOR'S LICENSE IN THE STATE OF CALIFORNIA.
3. QUANTITIES OF ITEMS, LENGTH OF PROJECT, AND SITE CONDITIONS SHOWN IN THE PLANS ARE APPROXIMATE. ALL MATERIALS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
4. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE TRIBE, COUNTY, GHD, AND THEIR REPRESENTATIVES HARMLESS FROM ANY AND ALL LIABILITY, REAL AND/OR ALLEGED, IN CONJUNCTION WITH THE PERFORMANCE OF THIS PROJECT.
5. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY AND ALL DAMAGES TO EXISTING STRUCTURES, ROADS, AND UTILITIES DURING CONSTRUCTION. ALL DAMAGE SHALL SHALL BE RESTORED TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
6. CONTRACTOR SHALL VERIFY LOCATIONS, ELEVATIONS, DISTANCES, AND FEATURES THAT MAY AFFECT THE WORK. SHOULD EXISTING CONDITIONS DIFFER FROM THOSE SHOWN OR INDICATED, OR IF IT APPEARS THAT THESE PLANS, STANDARD SPECIFICATIONS, AND SPECIAL PROVISIONS DO NOT ADEQUATELY DETAIL THE WORK TO BE DONE, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WITH ANY RELATED WORK. NO ALLOWANCE WILL BE MADE ON HIS BEHALF FOR ANY EXTRA EXPENSE RESULTING FROM FAILURE OR NEGLECT IN DETERMINING THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALE.
7. A SET OF SIGNED WORKING DRAWINGS AND A SET OF SPECIFICATIONS WILL BE KEPT AT ALL TIMES AT THE JOB SITE ON WHICH ALL CHANGES OR VARIATIONS IN THE WORK, INCLUDING ALL EXISTING UTILITIES, ARE TO BE RECORDED AND/OR CORRECTED DAILY AND SUBMITTED TO THE ENGINEER WHEN THE WORK TO BE DONE IS COMPLETED.
8. CONTRACTOR SHALL PROVIDE AND MAINTAIN SUFFICIENT TEMPORARY BARRIERS TO PROVIDE FOR THE SAFETY OF THE STAFF AND PUBLIC TO THE SATISFACTION OF THE COUNTY ENGINEER.
9. CONTRACTOR SHALL CONTACT THE COUNTY'S ENGINEER, OR HIS/HER DESIGNEE, TO ARRANGE A PRE-CONFERENCE FOR THE PURPOSE OF REVIEWING JOB REQUIREMENTS AND COUNTY PROCEDURES.
10. CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 72 HOURS IN ADVANCE OF COMMENCEMENT OF ANY PART OF THE WORK AND SHALL COORDINATE CONSTRUCTION SCHEDULE WITH COUNTY ENGINEER TO MINIMIZE IMPACT TO RESIDENTS.
11. UNSUITABLE EXCAVATED MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A MANNER CONSISTENT WITH APPLICABLE REGULATIONS SUCH AS COUNTY GRADING ORDINANCES. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY AND EXPENSE FOR PROPER DISPOSAL OF UNSUITABLE MATERIALS TAKEN FROM SITE.
12. THE DESIGN FEATURES INCLUDING HORIZONTAL AND VERTICAL ALIGNMENTS, TYPICAL SECTIONS, APPROACHES, AND OTHER DESIGN DETAILS SHOWN ON THESE DESIGN PLANS SHALL NOT BE ALTERED OR MODIFIED IN ANY WAY DURING CONSTRUCTION WITHOUT THE EXPRESSED, WRITTEN DIRECTION AND APPROVAL OF THE ENGINEER AND/OR CONTRACTING OFFICER. DRAINAGE STRUCTURES SHALL BE INSTALLED AS SHOWN THE PLANS WITH ONLY MINOR CORRECTIONS IN LOCATION SKEW AND/OR ELEVATIONS AS NEEDED TO FIT FIELD CONDITIONS AS DETERMINED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
13. THE CONTRACTOR SHALL READ AND MAKE CAREFUL EXAMINATION OF THE PLANS, SPECIFICATIONS, QUANTITIES AND MATERIAL ESTIMATES AND VISIT THE SITE OF THE PROPOSED CONSTRUCTION TO BECOME FAMILIAR WITH THE SITE CONDITIONS AND LIMITATIONS BEFORE MAKING A BID. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL ERRORS RESULTING FROM THE FAILURE TO MAKE SUCH AN EXAMINATION. ANY INFORMATION DERIVED FROM THE MAPS, PLANS, SPECIFICATIONS, PROFILES, DRAWINGS OR FROM THE ENGINEER WILL NOT RELIEVE THE CONTRACTOR FROM ANY RISK OR FROM FULFILLING THE TERMS OF THE CONTRACT.
14. NO WORK SHALL BE PERFORMED OUTSIDE OF THE DESIGNATED CONSTRUCTION LIMITS WITHOUT THE APPROVAL OF THE OWNER'S REPRESENTATIVE.
15. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING STAGING AREAS WITH THE COUNTY OF DEL NORTE AND ELK VALLEY RANCHERIA. ALL STAGING AREAS WITHIN THE RIGHT-OF-WAY SHALL BE PRE-APPROVED BY THE COUNTY ENGINEER.
16. UPON COMPLETION OF THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL LEAVE THE PROJECT AREA FREE OF DEBRIS AND UNUSED MATERIAL. ALL DAMAGE CAUSED BY THE CONTRACTOR SHALL BE RESTORED TO AN "AS GOOD OR BETTER" CONDITION.
17. THE CONTRACTOR SHALL BE REQUIRED TO OBLITERATE ALL EXISTING ASPHALT CONCRETE ROADS WITHIN THE RIGHT-OF-WAY OR AS CALLED FOR IN THESE PLANS. THIS WORK SHALL BE CONSIDERED A INCIDENTAL OBLIGATION OF THE CONTRACTOR UNDER THE ROADWAY EXCAVATION AND GRADING.
18. THE CONTRACTOR SHALL BE REQUIRED TO SAWCUT OR GRIND THE EXISTING ASPHALT PAVEMENT WHERE OLD ASPHALT IS TO TIE INTO THE NEW ASPHALT PAVEMENT. THE CONTRACTOR SHALL BE REQUIRED TO TAPER THE NEW ASPHALT CONCRETE SURFACING TO MATCH THE EXISTING PAVEMENT SECTION AT TIE-IN POINTS AND TO PROVIDE FOR A SMOOTH TRANSITION AS DIRECTED BY THE OWNER'S REPRESENTATIVE. THIS WORK SHALL BE INCIDENTAL TO THE PAVING ITEMS SHOWN.
19. EXISTING FENCING SHALL REMAIN IN PLACE AND UNDISTURBED BY CONSTRUCTION OPERATIONS UNLESS OTHERWISE SHOWN ON THE PLANS. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY AND ALL DAMAGES TO FENCES DURING CONSTRUCTION. ALL DAMAGE SHALL SHALL BE RESTORED TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
20. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER A MINIMUM OF 72 HOURS IN ADVANCE OF ANY EXCAVATION THAT WILL EXTEND 2 FEET OR DEEPER, AND WILL NOT PROCEED WITH ANY EXCAVATION WORK UNTIL CLEARED TO DO SO BY THE ENGINEER. A TRIBAL MONITOR OR ARCHAEOLOGIST MAY BE ON SITE DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR IS ADVISED THAT IF ANY ARCHAEOLOGICAL FINDINGS ARE DISCOVERED DURING CONSTRUCTION THAT THE MONITOR OR ARCHAEOLOGIST HAS THE AUTHORITY TO SLOW OR STOP CONSTRUCTION ACTIVITIES AS THEY DEEM NECESSARY.
21. EXISTING SIGN SYSTEMS SHALL BE PROTECTED THROUGHOUT CONSTRUCTION ACTIVITY UNLESS NOTED OTHERWISE ON PLANS. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY AND ALL DAMAGES TO SIGNS DURING CONSTRUCTION. ALL DAMAGE SHALL BE RESTORED TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.

UTILITY NOTES

1. THE LOCATION OF UTILITIES SHOWN IN THE PLANS IS APPROXIMATE AND IS ONLY SHOWN TO ASSIST THE CONTRACTOR IN COMPLETING THE WORK. THE CONTRACTOR SHALL VERIFY ALL UTILITIES WITH OWNERS PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES THROUGH THE NEGLIGENCE OF THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
2. THE CONTRACTOR SHALL COORDINATE UTILITY WORK WITH THE RESPONSIBLE UTILITY COMPANY (UTILITY OWNER).
3. THE ACTUAL LOCATION OF EXISTING UTILITIES MAY VARY FROM THAT SHOWN ON THE PLANS. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL POTHOLE AND LOCATE ALL EXISTING UTILITIES VARIATIONS IN LOCATION AND DEPTH SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER IMMEDIATELY SO THAT THE LOCATION OF UTILITIES MAY BE CHECKED WITH THE PROPOSED DESIGN. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT (800) 227-2600 A MIN. OF 48 HOURS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXACT LOCATION.
4. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION.
5. ALL EXISTING UTILITIES AND TIE-IN POINTS SHOULD BE CONSIDERED ACTIVE UTILITIES UNLESS OTHERWISE INDICATED.
6. STRUCTURAL EXCAVATION AND BACKFILL OF CULVERTS AND OTHER DRAINAGE STRUCTURES SHALL BE CONSIDERED INCIDENTAL TO INSTALLATION OF THE STRUCTURE. EXCESS MATERIAL REMOVED MAY BE USED TO REBUILD APPROACHES OR MAY BE PLACED ALONG ROADWAY SHOULDERS IN AREAS AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
7. THE CONTRACTOR AND OWNER'S REPRESENTATIVE SHALL ADJUST THE LENGTHS OF PIPES TO MATCH FIELD CONDITIONS.
8. THE LOCATIONS OF PIPES MAY BE MODIFIED AS NECESSARY TO FIT ACTUAL FIELD CONDITIONS AS DETERMINED BY THE OWNER'S REPRESENTATIVE.
9. EXISTING CULVERTS SHALL BE REMOVED, SALVAGED AND STORED AS DIRECTED BY THE OWNER'S REPRESENTATIVE, UNLESS OTHERWISE SPECIFIED.
10. CONSTRUCTION ACTIVITY WILL TAKE PLACE IN THE VICINITY OF OVERHEAD ELECTRIC TRANSMISSION LINES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE AWARE OF, AND OBSERVE, THE MINIMUM CLEARANCES FOR WORKERS AND EQUIPMENT OPERATING NEAR HIGH VOLTAGE ELECTRIC LINES AS SET OUT IN THE HIGH VOLTAGE SAFETY ORDERS OF THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY AS WELL AS OTHER APPLICABLE SAFETY REGULATIONS.

WATER POLLUTION CONTROL NOTES

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MINIMIZE EROSION AND PREVENT THE TRANSPORT OF SEDIMENT TO SENSITIVE AREAS.
2. SUFFICIENT EROSION CONTROL SUPPLIES SHALL BE AVAILABLE ON-SITE AT ALL TIMES TO DEAL WITH AREAS SUSCEPTIBLE TO EROSION DURING RAIN EVENTS.
3. MINIMIZE DISTURBANCE OF EXISTING VEGETATION TO THAT NECESSARY TO COMPLETE THE WORK.
4. THE CONTRACTOR SHALL MAKE ADEQUATE PREPARATIONS, INCLUDING TRAINING & EQUIPMENT, TO CONTAIN SPILLS OF OIL AND OTHER HAZARDOUS MATERIALS.
5. ACTIVITIES SUCH AS VEHICLE WASHING ARE TO BE CARRIED OUT AT AN OFF-SITE FACILITY WHEREIN THE WATER IS DISCHARGED INTO A SANITARY SEWER.
6. THE CONTRACTOR SHALL PROVIDE COVERED WASTE RECEPTACLE FOR COMMON SOLID WASTES AT CONVENIENT LOCATIONS ON THE JOB SITE AND PROVIDE REGULAR COLLECTION OF WASTES.
7. THE CONTRACTOR SHALL PROVIDE SANITARY FACILITIES OF SUFFICIENT NUMBER AND SIZE TO ACCOMMODATE CONSTRUCTION CREWS AND ENSURE ADEQUATE ANCHORAGE OF SUCH FACILITIES TO PREVENT THEM FROM BEING TIPPED BY THE WEATHER OR VANDALISM.
8. APPROPRIATE STORAGE AND DISPOSAL OF WATER FROM DEWATERING OPERATIONS SHALL BE EXERCISED IN THE EVENT THAT ACCUMULATED WATER MUST BE REMOVED FROM A WORK LOCATION.
9. COVERED AND SECURED STORAGE AREAS FOR POTENTIALLY TOXIC MATERIALS SHALL BE PROVIDED. ALL HAZARDOUS MATERIAL CONTAINERS SHOULD BE PLACED IN SECONDARY CONTAINMENT.
10. VEHICLE AND EQUIPMENT & MAINTENANCE SHOULD BE PERFORMED OFF-SITE WHENEVER PRACTICAL.
11. SOIL STOCKPILES SHALL BE COVERED, AND LOCATED AT LEAST 50 FEET AWAY FROM DRAINAGE CHANNELS AND STORMWATER SYSTEMS.
12. CONTRACTOR MUST ENSURE THAT THE CONSTRUCTION SITE IS PREPARED PRIOR TO THE ONSET OF ANY STORM.
13. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE SWEPT AT THE END OF EACH WORKING DAY, AS NECESSARY OR AS DIRECTED BY THE CITY'S REPRESENTATIVE. A STABILIZED CONSTRUCTION ENTRANCE MAY BE REQUIRED TO PREVENT SEDIMENT FROM BEING DEPOSITED ON PAVED ROADWAYS.
14. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN ACCORDANCE TO THEIR RESPECTIVE BMP FACT SHEET UNTIL DISTURBED AREAS ARE STABILIZED.
15. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS MAY BE MADE TO THE PLAN IN THE FIELD SUBJECT TO THE APPROVAL OF OR AT THE DIRECTION OF THE CITY'S REPRESENTATIVE.
16. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIX ANY DEFICIENCIES INDICATED BY THE CITY OR THE CITY'S REPRESENTATIVE TO PREVENT EROSION AND CONTROL SEDIMENT.
17. PRIOR TO FINAL ACCEPTANCE ALL AREAS OF THE SITE SHALL BE PERMANENTLY STABILIZED WITH HYDROSEED BY CONTRACTOR AND TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE REMOVED AS DIRECTED.

GRADING NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL SURVEY DATA. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING RIGHT-OF-WAY LINES, SLOPE EASEMENTS, AND ALL HORIZONTAL AND VERTICAL CONTROL PRIOR TO CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION STAKING AND SHALL ARRANGE FOR STAKING WITH A CALIFORNIA LICENSED SURVEYOR. STAKING WILL BE REVIEWED BY OWNER FOR CONFORMANCE TO DESIGN PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL CONSTRUCTION. ADEQUATE SHORING BRACING, TIES, AND SUPPORTS SHALL BE USED TO PROVIDE PROPER TEMPORARY INTEGRITY DURING ALL PHASES OF CONSTRUCTION.
4. ALL EXISTING LANDSCAPED AND UNPAVED AREAS WHICH ARE DISTURBED BY CONSTRUCTION OR EARTHWORK OPERATIONS SHALL BE HAND RAKED SMOOTH AND RETURNED TO ORIGINAL EXISTING CONDITIONS.
5. ALL DITCHES, SWALES, GUTTERS, ETC. SHOULD BE CONSIDERED ACTIVE STORM CONVEYANCES UNLESS OTHERWISE INDICATED. CONTRACTOR IS RESPONSIBLE FOR ADDRESSING STORM WATER DRAINAGE AND DEWATERING OF WORK AREAS DURING CONSTRUCTION.
6. ALL RIP RAP SHALL BE PLACED WITH GEOTEXTILE FABRIC IN ACCORDANCE WITH THE CONTRACT SPECIAL PROVISIONS.

TRAFFIC CONTROL NOTES

1. CONTRACTOR SHALL USE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CAMUTCD) FOR TRAFFIC CONTROL. SEE SPECIFICATIONS FOR OTHER TRAFFIC CONTROL REQUIREMENTS.
2. ALL PERMANENT AND TEMPORARY ROADSIDE SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE CALIFORNIA MUTCD AND IN ACCORDANCE WITH THE DETAILS IN THESE PLANS.
3. THE DETAILS SHOWN FOR TEMPORARY TRAFFIC CONTROL REFLECT GENERAL REQUIREMENTS FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING AND SUBMITTING A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THESE DETAILS, THE CONTRACTOR'S SEQUENCING PLAN, CAMUTCD, AND THE CONTRACT SPECIAL PROVISIONS FOR SECTION 635, TEMPORARY TRAFFIC CONTROL.
4. THE CONTRACTOR SHALL REMOVE ALL EXISTING ROADSIDE SIGNS AT THE TIME NEW PERMANENT ROADSIDE SIGNS ARE INSTALLED OR IF THEY ARE IN THE WAY OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AT LEAST THREE (3) WORKING DAYS IN ADVANCE OF SUCH SIGN REMOVAL.

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DRAFT

BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"

MARK	DATE	DESCRIPTION
-	-	-

ISSUE

ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD
IMPROVEMENT PROJECT

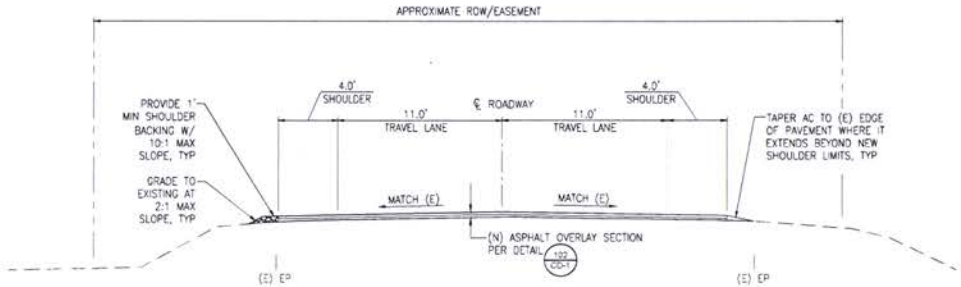
GENERAL NOTES

PROJ NO 8410956
DRWN JB CHKD JW

G-3

SHEET 3 OF 34

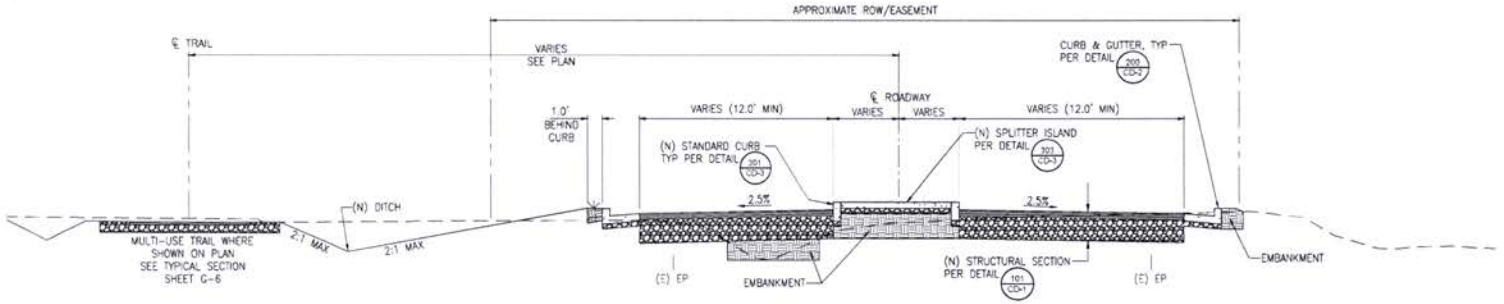
Plot Date 10 April 2014 - 1:59 PM   Plotted By Scott Davis   Cad File No. G:\2005 & Beyond\01328 ElkValleyRancheria\01328-10-001 HumboldtRdImprovement\CAD 01428-10-001\01828100001-03_G-3_Gen-Notes.dwg



HUMBOLDT ROAD TYPICAL ROAD SECTION - TYPE 1

SCALE: NTS

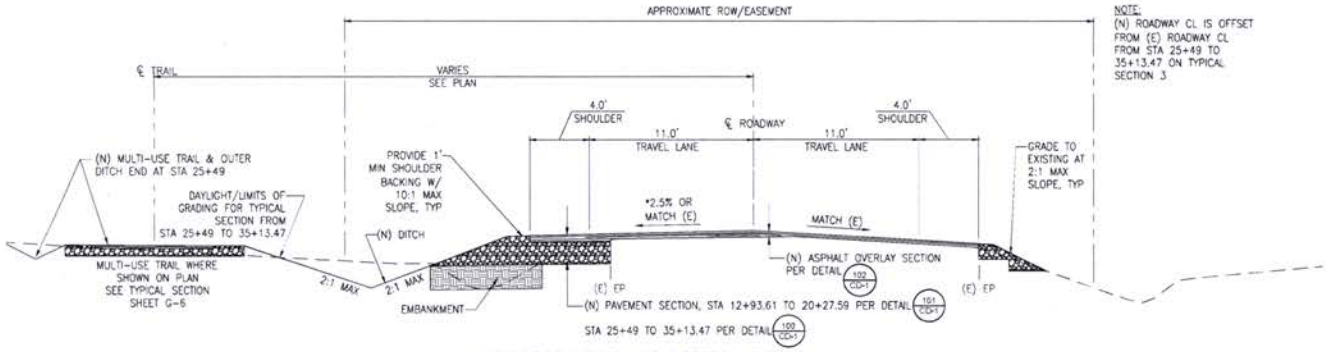
HUMBOLDT ROAD STATIONS 10+12.87 TO 12+93.61



HUMBOLDT ROAD TYPICAL ROAD SECTION - TYPE 2

SCALE: NTS

HUMBOLDT ROAD STATIONS 20+27.59 TO 22+31.44 & 23+50.48 TO 25+49



HUMBOLDT ROAD TYPICAL ROAD SECTION - TYPE 3

SCALE: NTS

HUMBOLDT ROAD STATIONS 12+93.61 TO 20+27.59 & *25+49 TO 35+13.47
(EXCEPT AT (E) UTILITY POLE LOCATIONS SEE TYPICAL ROAD SECTION TYPE 4)

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MARK	DATE	DESCRIPTION	ISSUE
-	-	-	-

ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD
IMPROVEMENT PROJECT

TYPICAL SECTIONS

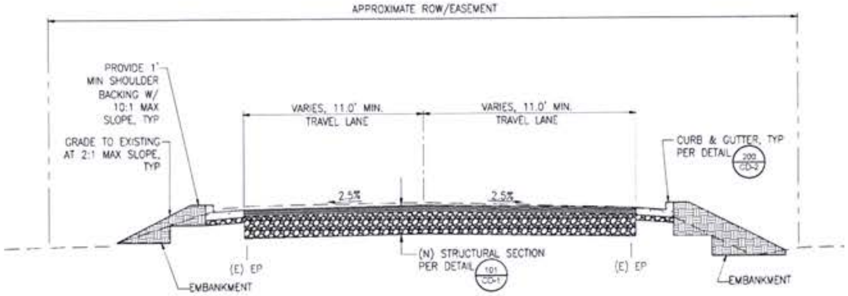
PROJ NO 8410956

DRWN JS CHKD JW

G-4

SHEET 4 OF 34

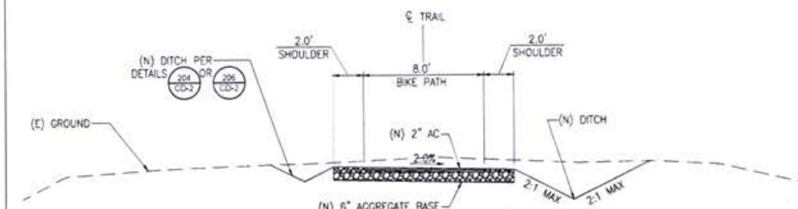
Plot Date: 10 April 2014 - 1:58 PM Plotted By: Scott Davis
Cad File No. G:\2005 & Beyond\01828 ElkValleyRancheria\01828-10-001 Humboldt Rd Improvement\CAD\01828-10-001\01828100010404-06_G-4_-Typ-Sect.dwg



SAND MINE ROAD TYPICAL ROAD SECTION

SCALE: NTS

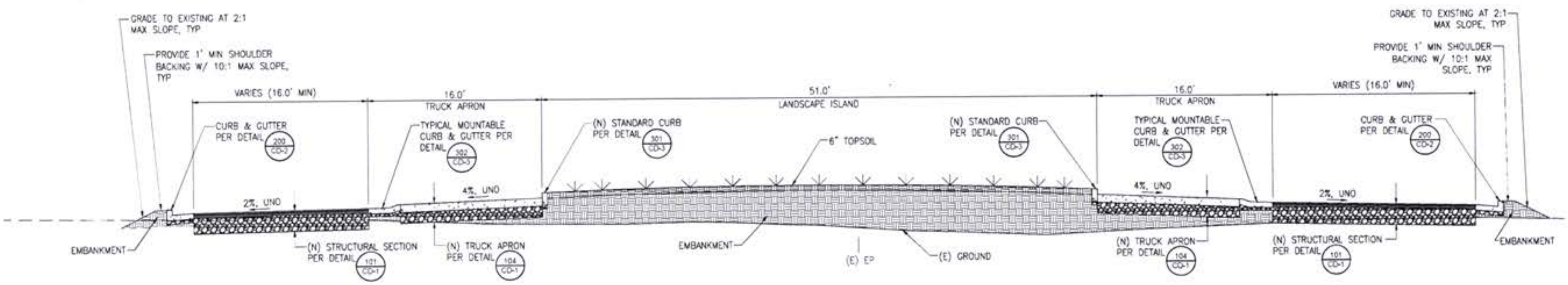
SAND MINE ROAD STATIONS 22+27.49 TO 22+84.40



TYPICAL MULTI-USE TRAIL SECTION

SCALE: NTS

STATIONS 30+16.00 TO 52+73.62



ROUNDABOUT TYPICAL SECTION

SCALE: NTS

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ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD IMPROVEMENT PROJECT

TYPICAL SECTIONS

PROJ NO 8410956
DRWN JB CHKD JW

G-6

SHEET 6 OF 34

Plot Date: 10 April 2014 - 1:59 PM Plotted By: Scott Davis Cad File No: G:\2005 & Beyond\01826 ElkValleyRancheria\01826-10-001 HumboldtRdImprovement\CAD 01826-10-001\01826100001-04-06_G-4_-Typ-Sect.dwg

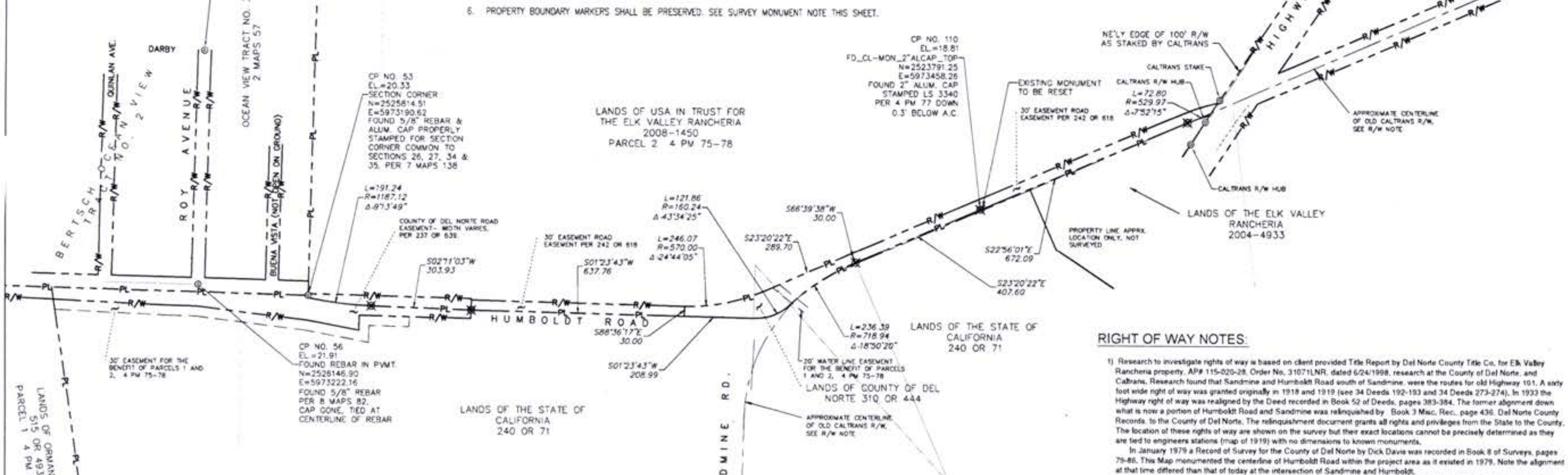
TOPOGRAPHIC SURVEY NOTES

1. THE TOPOGRAPHY, RIGHT-OF-WAY AND BOUNDARY INFORMATION SHOWN PROVIDED BY POINTS WEST SURVEYING COMPANY, OCTOBER 2010.
2. HORIZONTAL DATUM FOR THIS PROJECT IS CALIFORNIA STATE PLANE COORDINATE SYSTEM OF 1983 BASED ON GPS SURVEY HOLDING NGS PID DH6371, DESIGNATED "101 DN 23.64" EPOCH 2007.0. THIS POINT IS INDENTIFIED AS POINT 1 ON SHEET G-6. A COMBINED SCALE FACTOR OF 1.00001983 WAS DETERMINED AT THIS POINT. TO OBTAIN GROUND DISTANCES MULTIPLY GRID DISTANCES SHOWN BY 0.99998017.
3. VERTICAL DATUM: THE ELEVATION OF 54.00 FEET ON POINT 1, DESCRIBED ABOVE, ON SHEET G-6. THE ELEVATION OF THIS POINT IS BASED ON NAVD88 DATUM.
4. UNDERGROUND UTILITIES ARE SHOWN BASED VISIBLE PHYSICAL EVIDENCE AND PUBLIC RECORD MADE AVAILABLE TO THE SURVEYOR BY DEL NORTE COUNTY ENGINEERING DEPARTMENT, BERTSCH OCEAN VIEW COMMUNITY SERVICES DISTRICT, AND FRONTIER (FORMERLY VERIZON). THIS SURVEY INCLUDES AREAS ADJACENT TO ROAD THAT ARE COVERED IN THICK BRUSH. PHYSICAL EVIDENCE OF UNDERGROUND UTILITIES, OBSCURED BY BRUSH, MAY NOT BE SHOWN.
5. MANY FEATURES ARE SHOWN SYMBOLICALLY AND ARE NOT TO SCALE INCLUDING BUT NOT LIMITED TO POWER POLES, GUY WIRES, WATER VALVES, AND SIGNS. OVERHEAD POWER AND TELEPHONE AS WELL AS STORM AND SANITARY SEWERS ARE ALSO SHOWN SYMBOLICALLY, E.G. A SINGLE LINE AS SHOWN DOES NOT SHOW PIPE WIDTHS OR NUMBER AND WIDTH BETWEEN WIRES.
6. PROPERTY BOUNDARY MARKERS SHALL BE PRESERVED. SEE SURVEY MONUMENT NOTE THIS SHEET.

LEGEND

BOUNDARY:

Symbol	Description
— — — PL —	PROPERTY LINE
— — — R/W —	RIGHT-OF-WAY LINE
— - — - —	RIGHT-OF-WAY CENTERLINE
— — — — —	EASEMENT SIDELINE
◎	FOUND RECORD MONUMENT
⊠	MONUMENT (FOUND OR NOT FOUND) -TO BE LOCATED AND RESET (SEE SURVEY MONUMENT NOTE BELOW)



SURVEY MONUMENT NOTE:

THE CONTRACTOR SHALL PROTECT EXISTING SURVEY MONUMENTS WITHIN WORK LIMITS. A LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING SHALL BE RETAINED TO PREPARE CORNER RECORDS PER SECTION 8771 (B) OF THE PROFESSIONAL LAND SURVEYORS ACT REFERENCING ANY SURVEY MONUMENTS TO BE IMPACTED BY PROPOSED CONSTRUCTION PRIOR TO THEM BEING DISTURBED OR DESTROYED. UPON COMPLETION OF IMPROVEMENTS, MONUMENTS SHALL BE RESET IN ACCORDANCE WITH SAID CODE WITH CORNER RECORDS BEING FILED WITH DESCRIPTION OF NEW MONUMENTS. MONUMENTS SHALL BE SET IN STANDARD MONUMENT WELLS WHERE THEY FALL IN ROADBED.

RIGHT OF WAY NOTES:

1) Research to investigate rights of way is based on client provided Title Report by Del Norte County Title Co. for Elk Valley Rancheria property, AP# 115-020-28, Order No. 31071LNR, dated 6/24/1998, research at the County of Del Norte, and Caltrans. Research found that Sandmine and Humboldt Road south of Sandmine, were the routes for old Highway 101. A sixty foot wide right of way was granted originally in 1918 and 1919 (see 34 Deeds 192-193 and 34 Deeds 273-274). In 1933 the Highway right of way was realigned by the Deed recorded in Book 52 of Deeds, pages 383-384. The former alignment down what is now a portion of Humboldt Road and Sandmine was relinquished by Book 3 Misc. Rec., page 436, Del Norte County Records, to the County of Del Norte. The relinquishment document grants all rights and privileges from the State to the County. The location of these rights of way are shown on the survey but their exact locations cannot be precisely determined as they are tied to engineers stations (map of 1919) with no dimensions to known monuments.

In January 1979 a Record of Survey for the County of Del Norte by Dick Davis was recorded in Book 8 of Surveys, pages 79-86. This Map monumented the centerline of Humboldt Road within the project area as it existed in 1979. Note the alignment at that time differed than that of today at the intersection of Sandmine and Humboldt.

In October 1979, Owen Bauer, the owner of said surrounding properties conveyed an easement for road purposes to the County of Del Norte on Humboldt Road and Roy area for realignment of the road (see 237 Official Records 609-615).

In December of 1979, Owen Bauer subdivided his land via a Parcel Map, recorded in Book 4 of Parcel Maps, pages 75-78 by Dick Davis. This map created two parcels and a remainder parcel, one now owned by the Elk Valley Rancheria (Parcel 2 of said map). The parcel boundary created is the center of Humboldt Road; it was monumented by Dick Davis with rebar and cap set along the center of the Road. These monuments were paved over in an apparent overlay project at a later date.

The Remainder Parcel from the aforementioned Parcel Map was sold to the State of California (see 240 Official Records page 71-77), in December 1979, the same day the Parcel map recorded. Note that the Parcel Map has a note stating that Humboldt (outside above noted easement) and Sandmine Roads were prescriptive rights of way only being 22 feet wide. This map was recorded by the County without the normal requirement to convey an easement for the County Road and it ignores the fact that the southern portion of Humboldt and Sandmine roads are historic sixty foot rights of way from the old State Highway 101 deeds noted above.

Owen Bauer consequently conveyed sixty foot rights of way in March of 1980 to the County of Del Norte (see 242 Official Records, page 618-619), four months later. These rights of way included Sandmine and Humboldt Roads in the project area as they existed in 1979. It is surmised that the County realized their error in not requiring a dedication on the Parcel Map. Since he was not the owner of the Remainder parcel at that time (sold to State of California the prior December, as noted above) this road easement conveyance is only valid on the easterly side of the Road, adjacent to Parcel 2 which Bauer still owned.

In 1986, the intersection at Sandmine and Humboldt Roads was realigned. A fee conveyance of a portion of Parcel 2 of the Parcel Map was granted to the County of Del Norte (see 310 Official Records 444-447).

2) The County is apparently unaware of the historic rights to the old Highway 101 sixty foot right of way. The exact location of this old right of way is not precisely known due to the nature of the description and the mapping of 1919. The County claims a prescriptive right to area "maintained" along these roads. This survey assumes this to be the fence lines along the road on the westerly side of Humboldt Road as it is at the top of road side drainage ditch or toe of fill, needed for road bed. Any proposed construction on Sandmine or the westerly side of Humboldt Road beyond the "maintained area" should not be undertaken until right of way is perfected by deed with the State of California. This would likely involve a quitclaim of the old 101 right of way in portions no longer used for road purposes.

On the east side of Humboldt Road, the 1980 road easement conveyance, noted above, is valid and held from the property line (running down the center of the road per the Parcel Map). The exception to this statement is the intersection with Sandmine where the 1986 fee conveyance occurred with the County to realign the intersection.

Power Company easements for overhead electric, overhang easements, and guy wires are noted in the Title Report, noted above, a width of ten feet, centered on pole line is indicated in some documents while others do not specify a width. These easements are not shown on the survey.

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ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD
IMPROVEMENT PROJECT

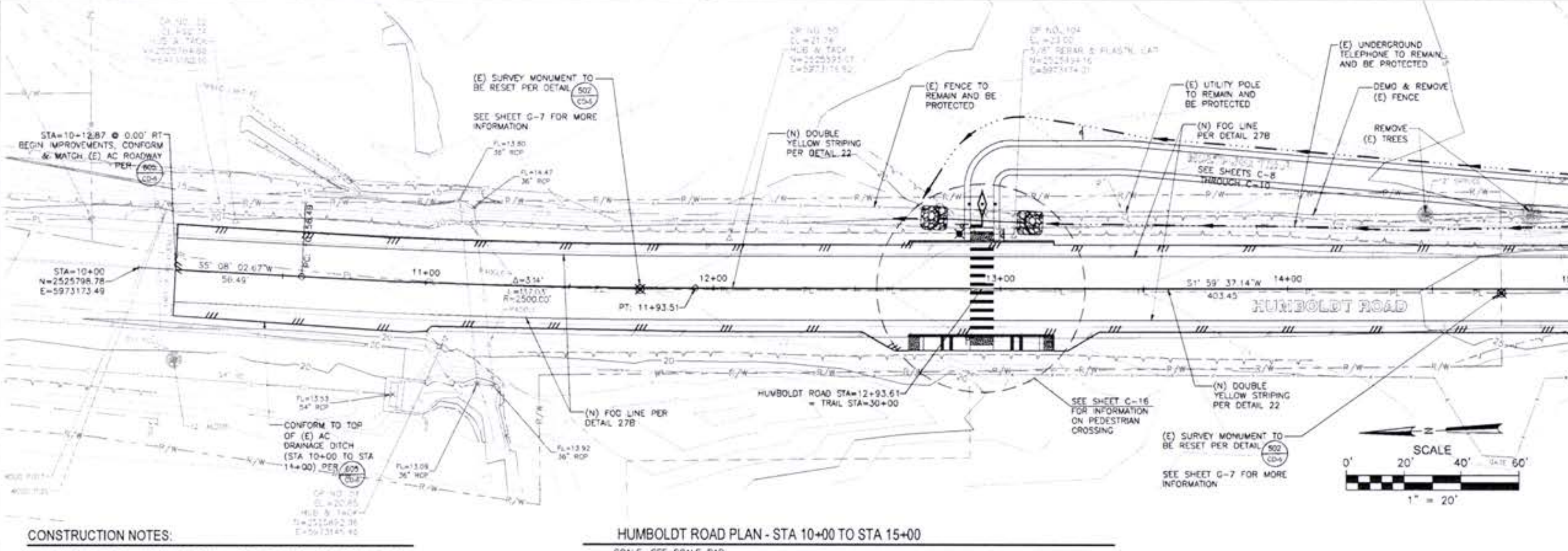
SURVEY CONTROL DIAGRAM

PROJ NO 8410956
DRWN JS CHKD JW

G-7

SHEET 7 OF 34

Plot Date: 10 April 2014 - 2:00 PM Plotted By: Scott Davis
Cad File No: G:\2005 & Beyond\01828 ElkValleyRancheria\01828-10-001 HumboldtRdImprovement\CAD 01828-10-001\01828100001-07_G-7_Surv-Cntrl.dwg

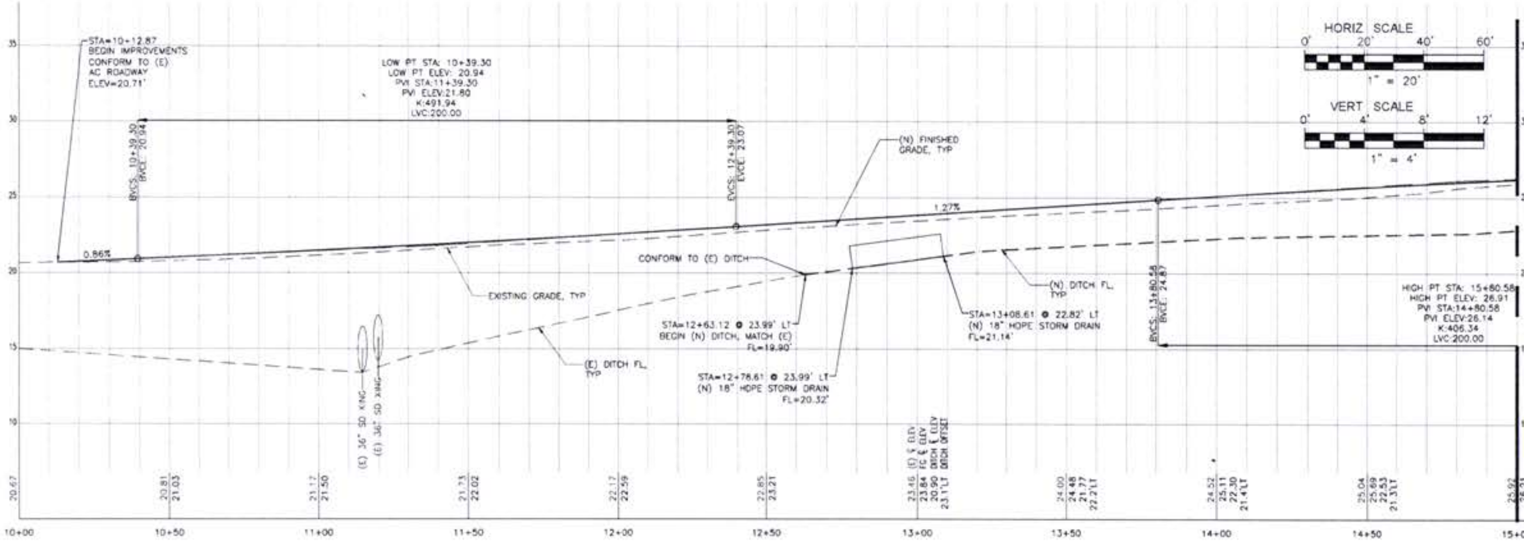


HUMBOLDT ROAD PLAN - STA 10+00 TO STA 15+00

SCALE: SEE SCALE BAR

CONSTRUCTION NOTES:

1. NEW STRIPING & MARKINGS SHALL BE THERMOPLASTIC PER SECTION 84 OF CALTRANS STANDARD SPECIFICATIONS AND FOLLOW NOTED STANDARD DETAILS AND PLANS, UNLESS NOTED OTHERWISE.



HUMBOLDT ROAD PROFILE - STA 10+00 TO STA 15+00

SCALE: SEE SCALE BAR

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ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD
IMPROVEMENT PROJECT

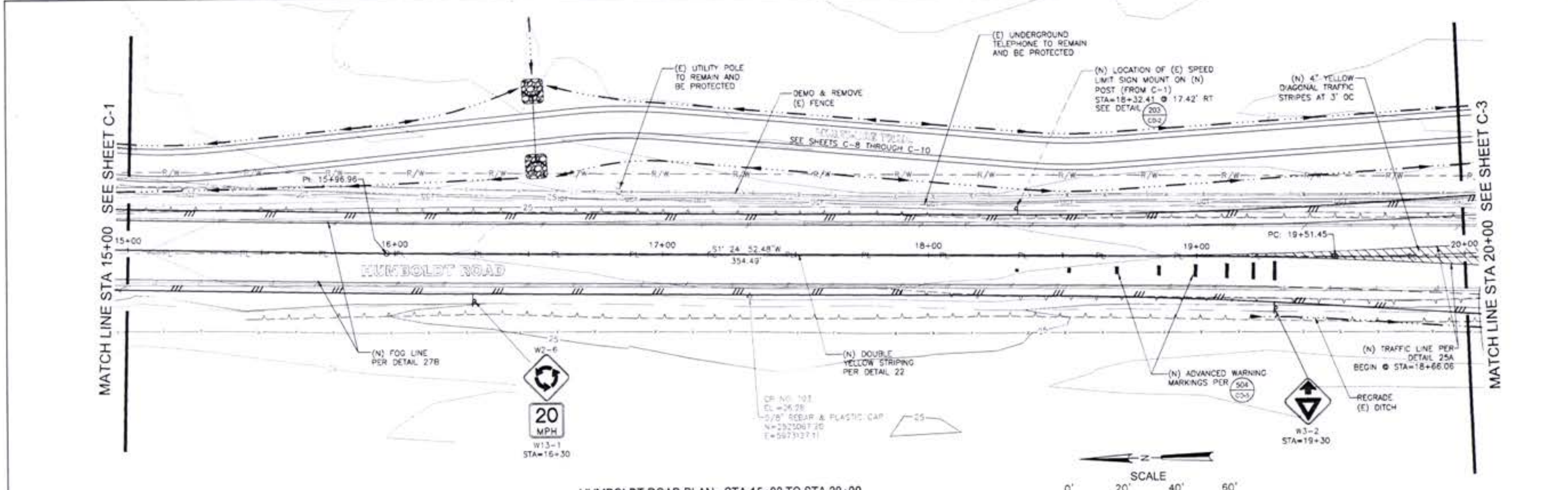
HUMBOLDT RD PLAN & PROFILE
STA 10+00 TO STA 15+00

PROJ NO 8410956
DRWN JS CHKD JW

C-1

SHEET 8 OF 34

Plot Date: 10 April 2014 - 2:00 PM Plotted By: Scott Davis Cad File No: G:\2005 & Beyond\01826 ElkValleyRancheria\01826-10-001 HumboldtRdImprovement\CAD\01826-10-001\01826100001-08-13_C-1_PLNPRF.dwg



CONSTRUCTION NOTES:

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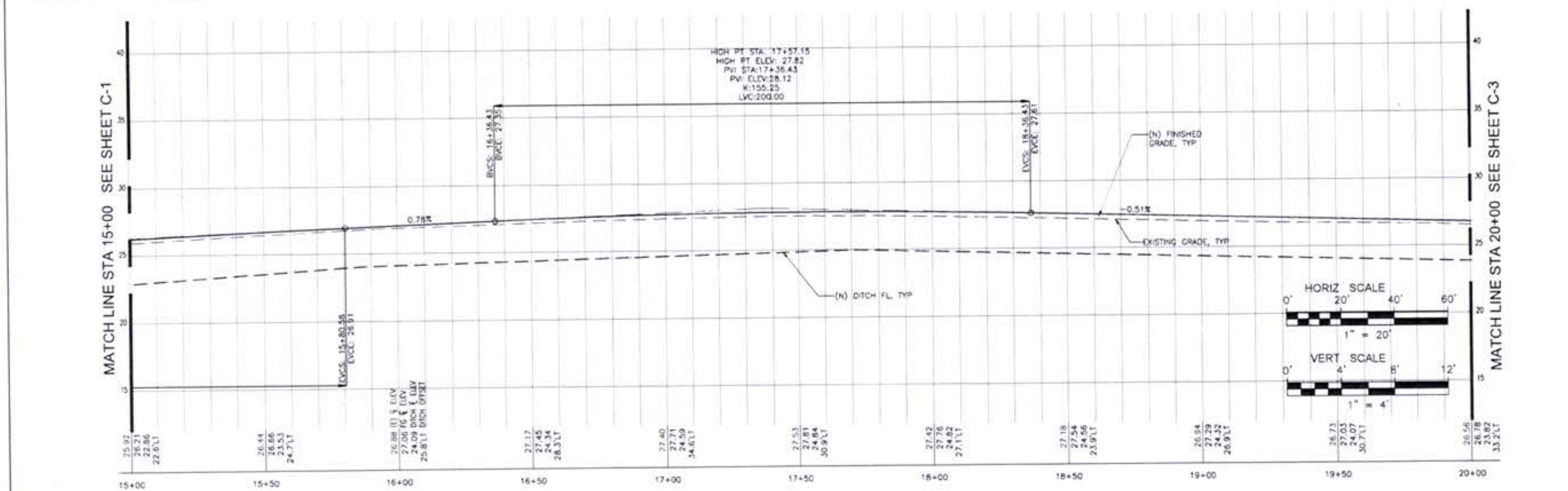
HUMBOLDT ROAD PLAN - STA 15+00 TO STA 20+00

SCALE: SEE SCALE BAR



HUMBOLDT ROAD PROFILE - STA 15+00 TO STA 20+00

SCALE: SEE SCALE BAR

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HUMBOLDT ROAD
IMPROVEMENT PROJECT

HUMBOLDT RD PLAN & PROFILE
STA 15+00 TO STA 20+00

PROJ NO 8410956
DRWN JB CHKD JW

C-2

SHEET 9 OF 34

Plot Date: 10 April 2014 - 2:00 PM Plotted By: Scott Davis

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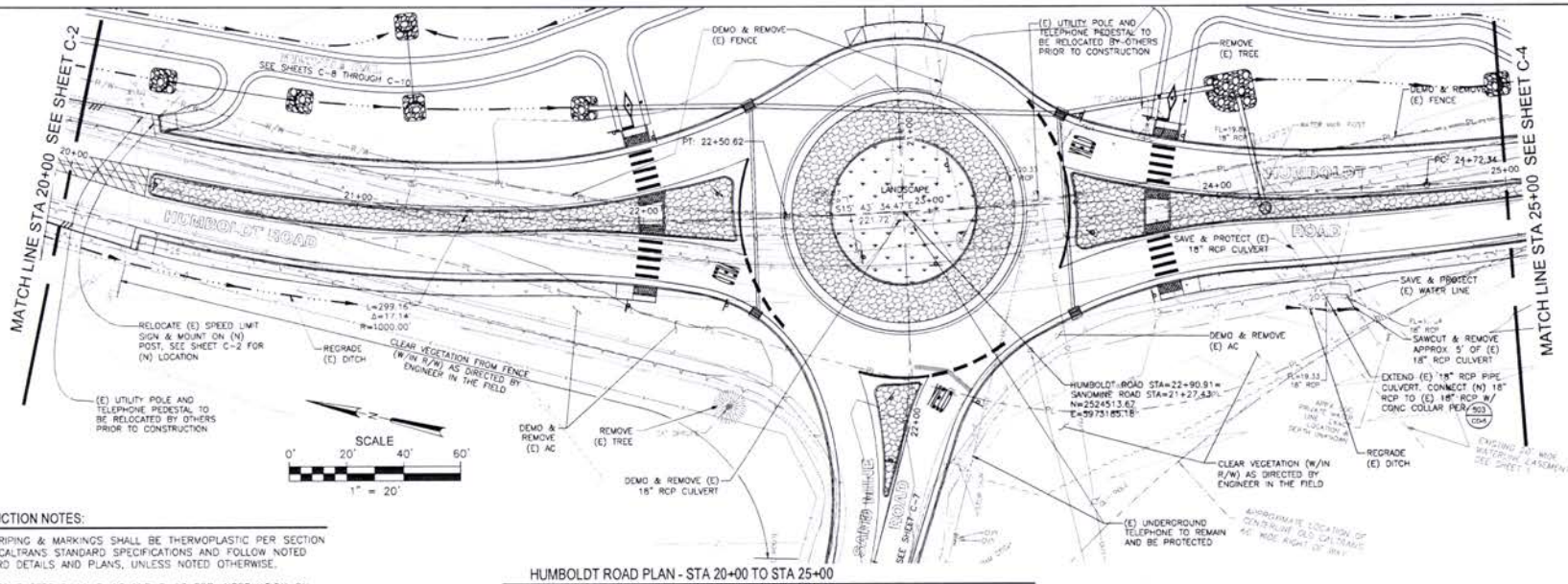
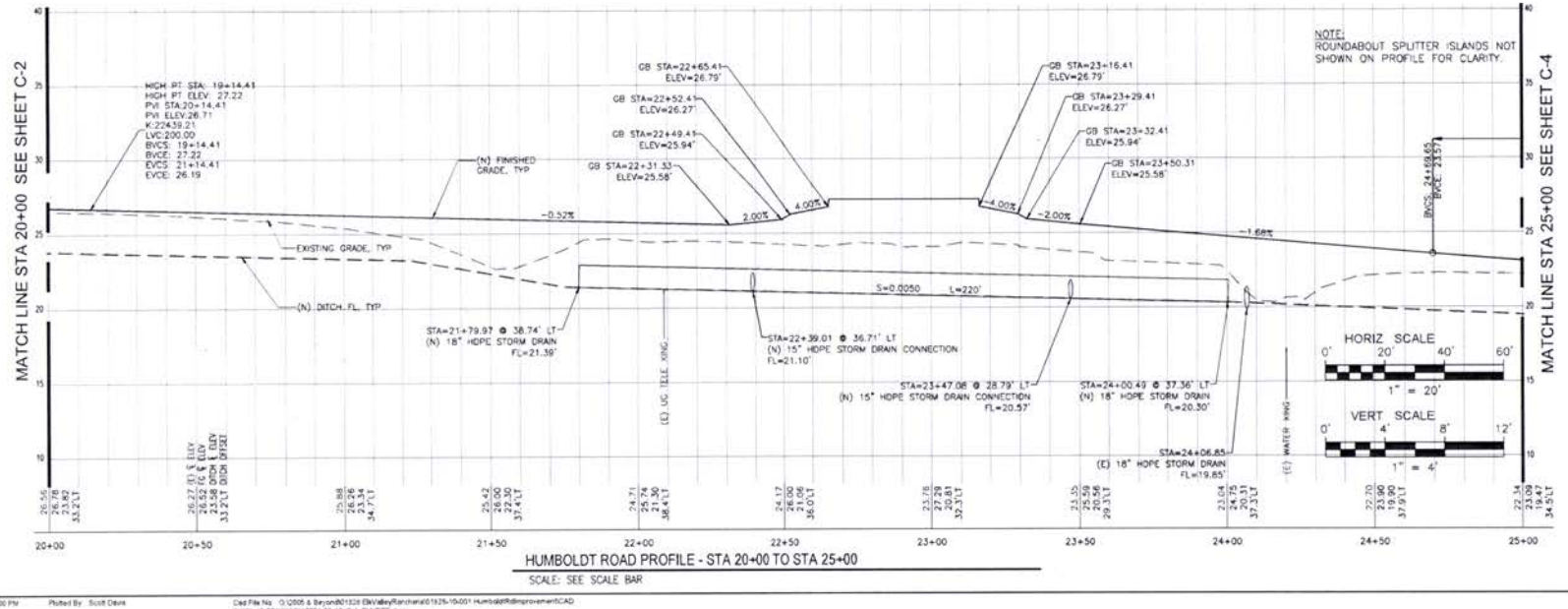


HUMBOLDT ROAD PLAN - STA 20+00 TO STA 25+00

SCALE: SEE SCALE BAR

CONSTRUCTION NOTES:

1. NEW STRIPING & MARKINGS SHALL BE THERMOPLASTIC PER SECTION 84 OF CALTRANS STANDARD SPECIFICATIONS AND FOLLOW NOTED STANDARD DETAILS AND PLANS, UNLESS NOTED OTHERWISE.
2. REFER TO SHEETS C-11 C-12 AND C-13 FOR INFORMATION ON ROUNDABOUT CONSTRUCTION.



HUMBOLDT ROAD PROFILE - STA 20+00 TO STA 25+00

SCALE: SEE SCALE BAR

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HUMBOLDT ROAD
IMPROVEMENT PROJECT

HUMBOLDT RD PLAN & PROFILE
STA 20+00 TO STA 25+00

PROJ NO 8410956
DRWN JS CHKD JW

C-3

SHEET 10 OF 34

Plot Date: 10 April 2014 - 2:00 PM Plotted By: Scott Davis
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ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD
IMPROVEMENT PROJECT
HUMBOLDT RD PLAN & PROFILE
STA 25+00 TO STA 30+00
C-4
SHEET 11 OF 34
CONSTRUCTION NOTES:
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2. REFER TO SHEETS C-11, C-12 AND C-13 FOR INFORMATION ON ROUNDABOUT CONSTRUCTION.
HUMBOLDT ROAD PLAN - STA 25+00 TO STA 30+00
SCALE: SEE SCALE BAR
HUMBOLDT ROAD PROFILE - STA 25+00 TO STA 30+00
SCALE: SEE SCALE BAR
MATCH LINE STA 25+00 SEE SHEET C-3
MATCH LINE STA 30+00 SEE SHEET C-5
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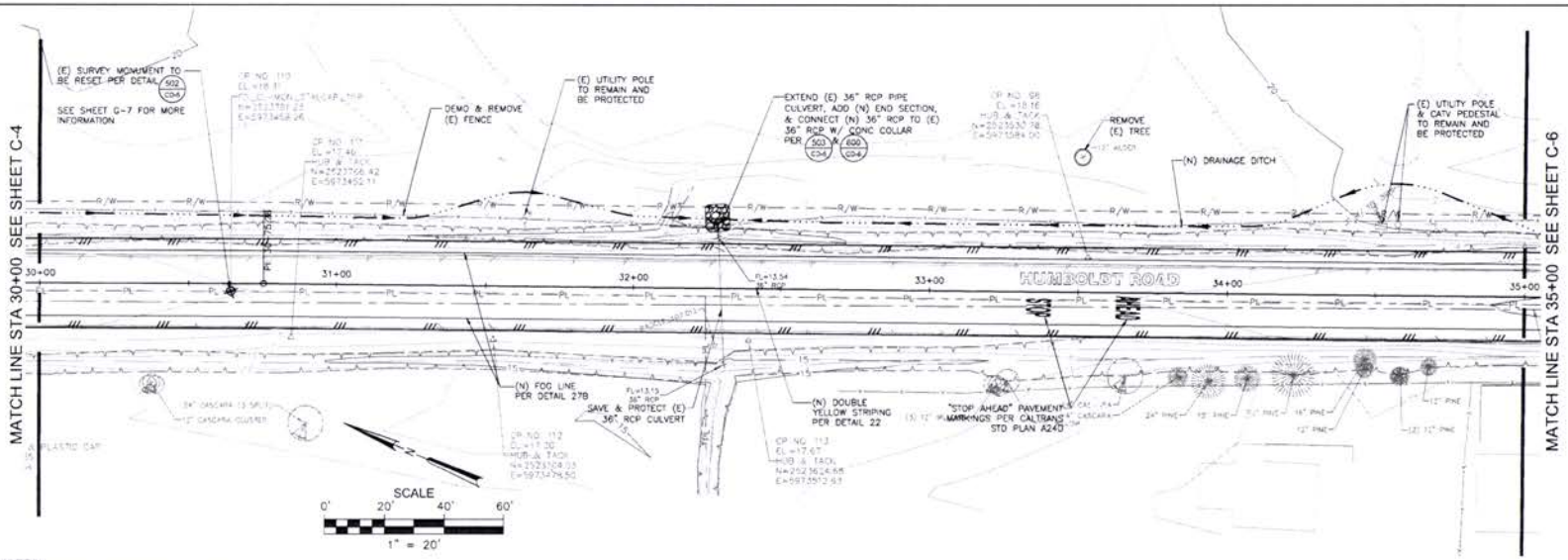

CONSTRUCTION NOTES:

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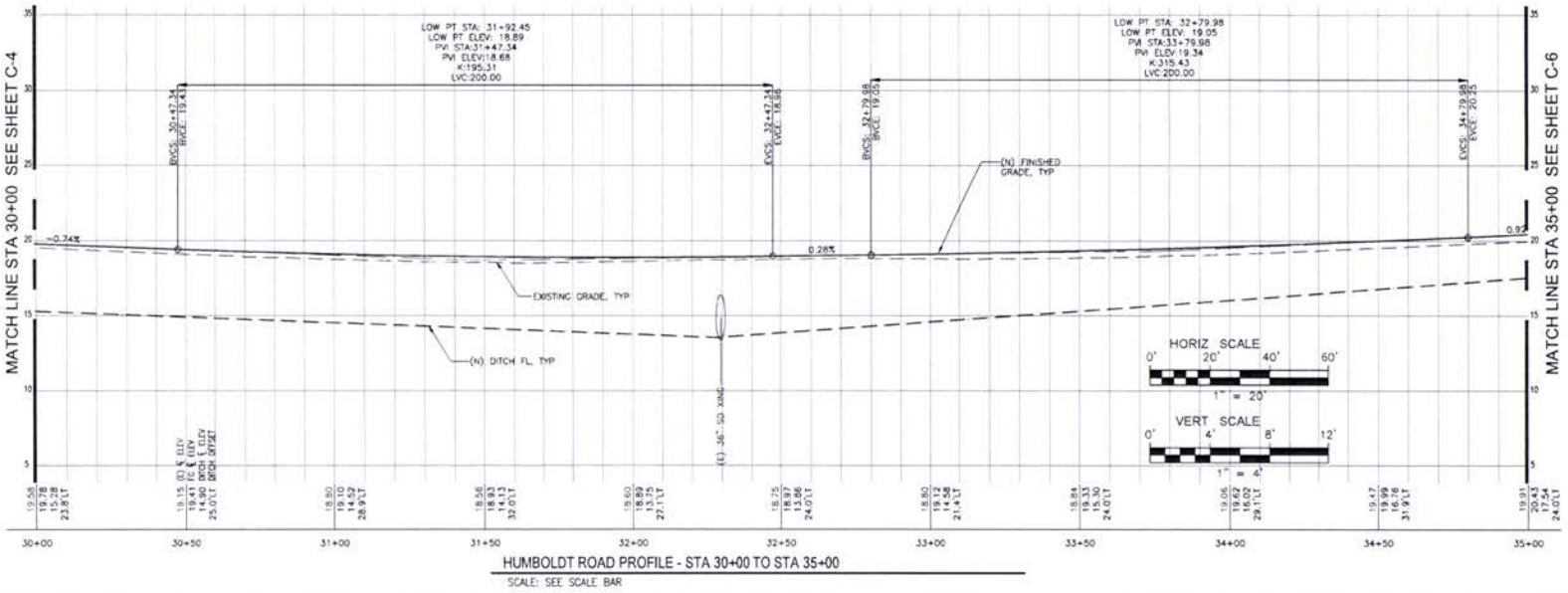
HUMBOLDT ROAD PLAN - STA 30+00 TO STA 35+00

SCALE: SEE SCALE BAR



HUMBOLDT ROAD PROFILE - STA 30+00 TO STA 35+00

SCALE: SEE SCALE BAR

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HUMBOLDT ROAD IMPROVEMENT PROJECT

HUMBOLDT RD PLAN & PROFILE STA 30+00 TO STA 35+00

PROJ NO. 8410956
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C-5

SHEET 12 OF 34

Plot Date: 10 April 2014 - 2:01 PM Plotted By: Scott Davis
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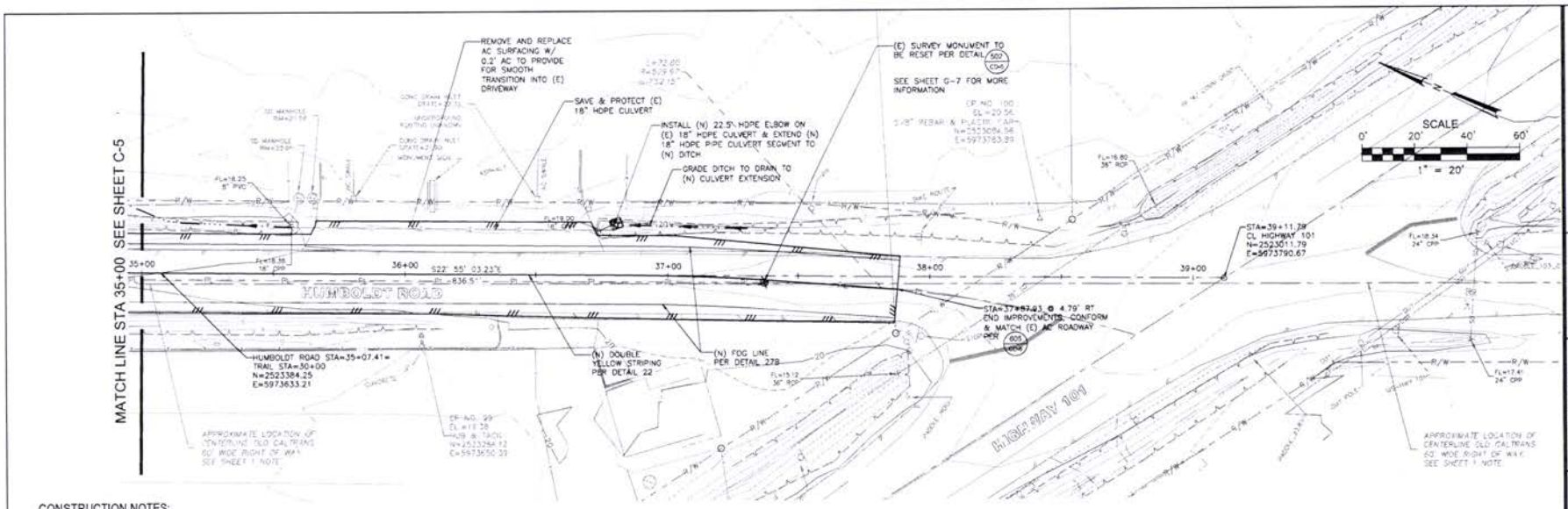

CONSTRUCTION NOTES:

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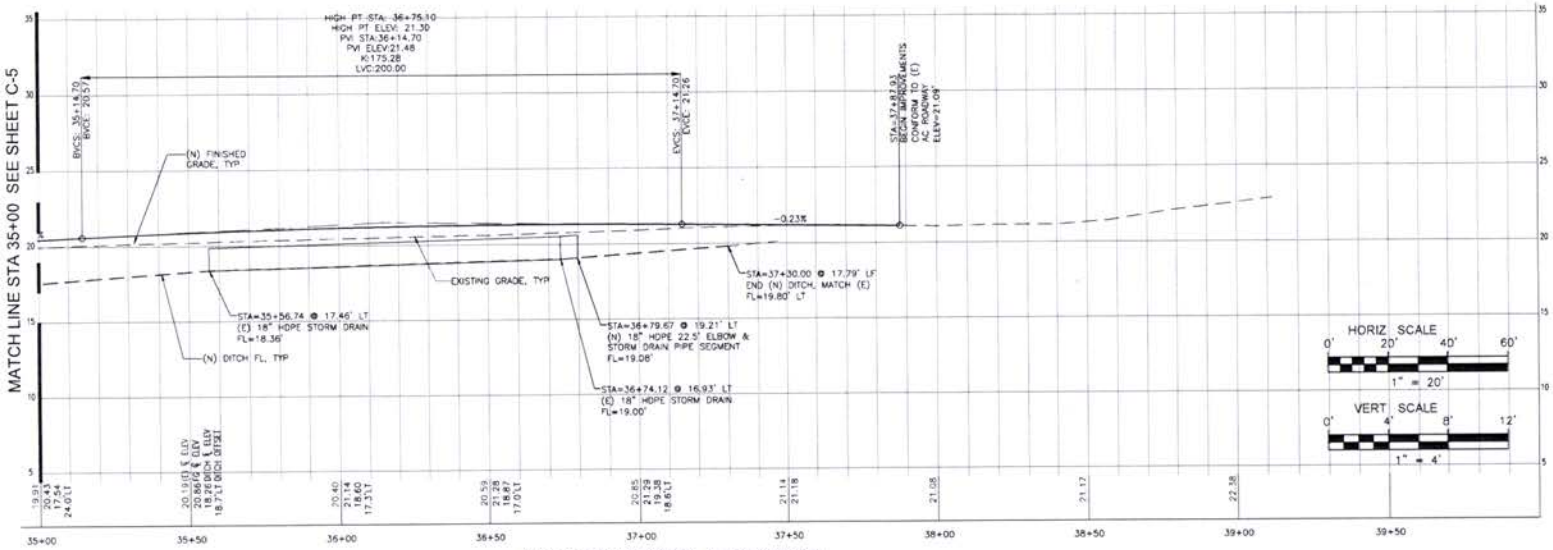
HUMBOLDT ROAD PLAN - STA 35+00 TO END

SCALE: SEE SCALE BAR



HUMBOLDT ROAD PROFILE - STA 35+00 TO END

SCALE: SEE SCALE BAR

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HUMBOLDT ROAD
IMPROVEMENT PROJECT

HUMBOLDT RD PLAN & PROFILE
STA 35+00 TO END

PROJ NO 8410956
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C-6

SHEET 13 OF 34

Plot Date: 10 April 2014 - 2:01 PM Plotted By: Scott Davis
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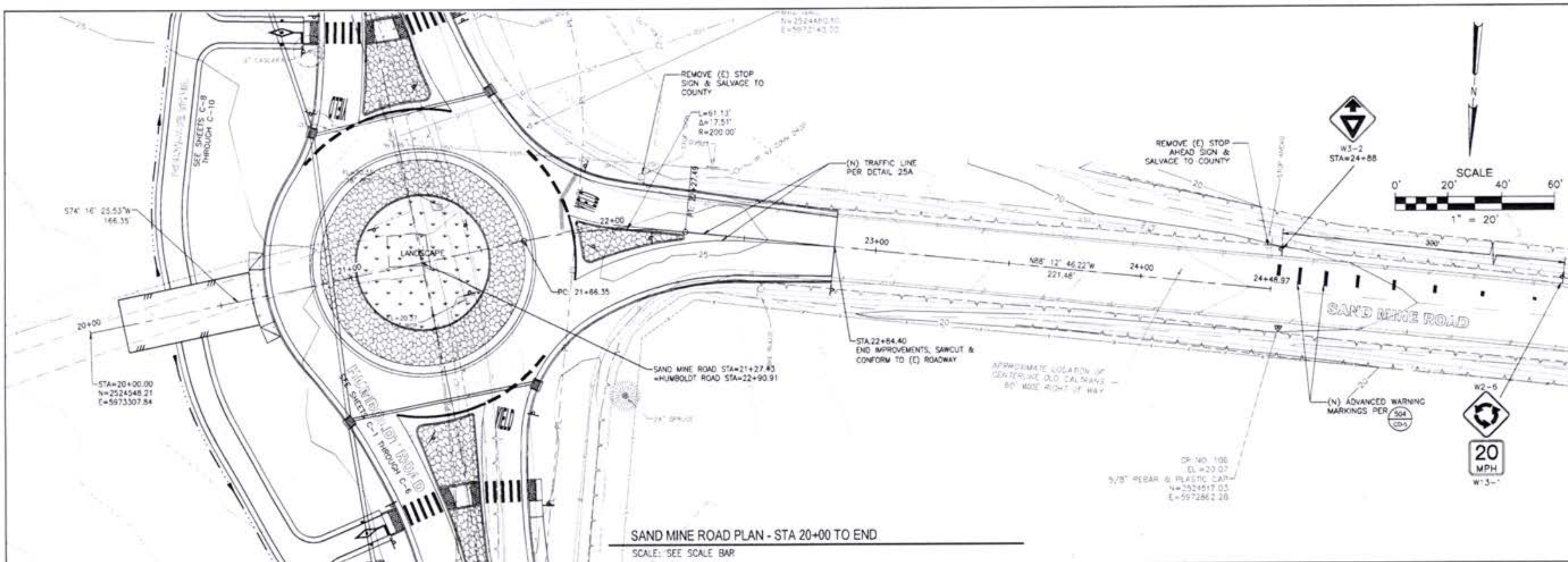
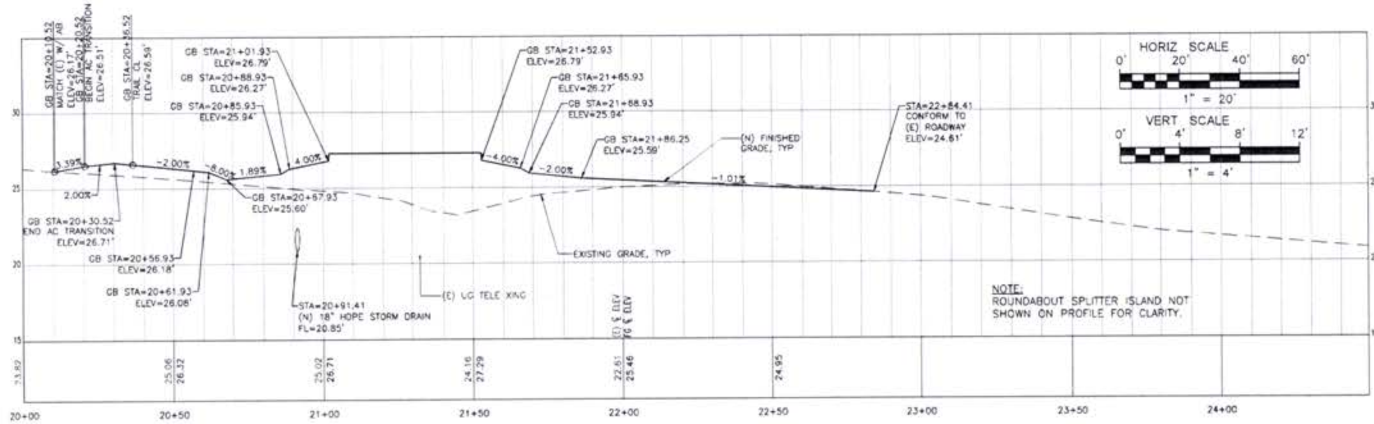


SAND MINE ROAD PLAN - STA 20+00 TO END

SCALE: SEE SCALE BAR



SAND MINE ROAD PROFILE - STA 20+00 TO END

SCALE: SEE SCALE BAR

CONSTRUCTION NOTES:

1. NEW STRIPING & MARKINGS SHALL BE THERMOPLASTIC PER SECTION 84 OF CALTRANS STANDARD SPECIFICATIONS AND FOLLOW NOTED STANDARD DETAILS AND PLANS, UNLESS NOTED OTHERWISE.
2. REFER TO SHEETS C-11, C-12 AND C-13 FOR INFORMATION ON ROUNDABOUT CONSTRUCTION.

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HUMBOLDT ROAD
IMPROVEMENT PROJECT

SAND MINE RD PLAN & PROFILE
STA 20+00 TO END

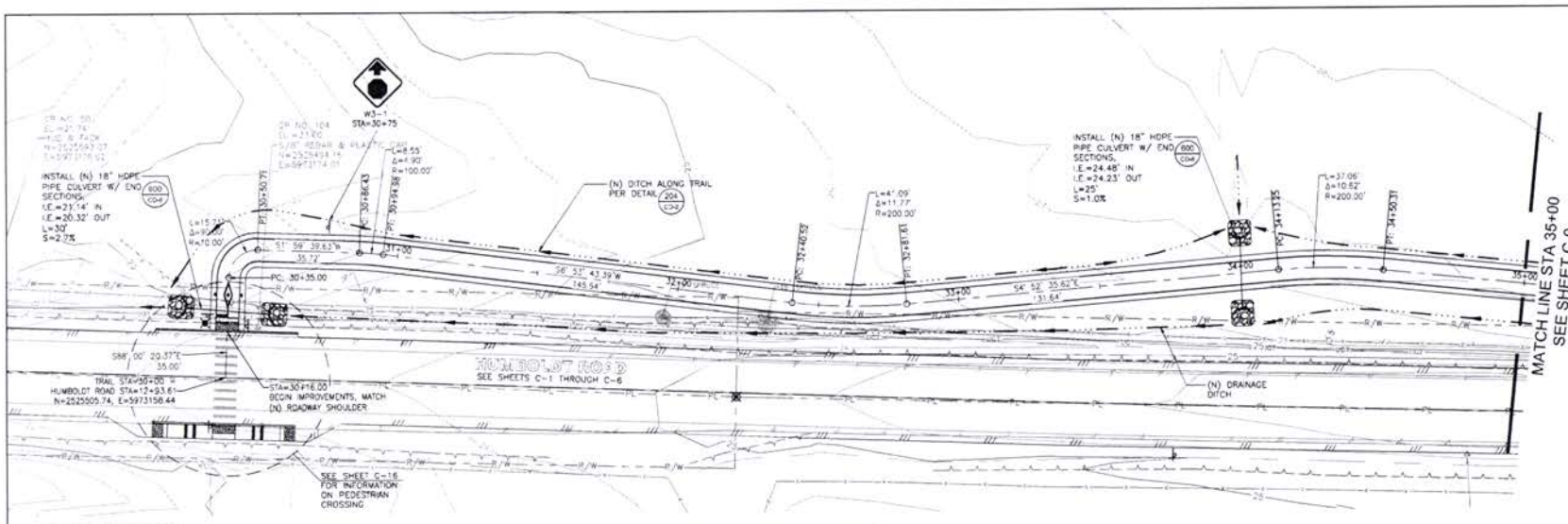
PROJ NO 8410956
DRWN JB CHKD JW

C-7

SHEET 14 OF 34

Plot Date: 10 April 2014 - 2:01 PM Plotted By: Scott Davis

Cad File No: G:\2005 & Beyond\01826 ElkValleyRancheria\01826-10-001 HumboldtRdImprovement\CAD\01826-10-001\01826100001-14_C-7_SandPlnPrf.dwg



CONSTRUCTION NOTES:

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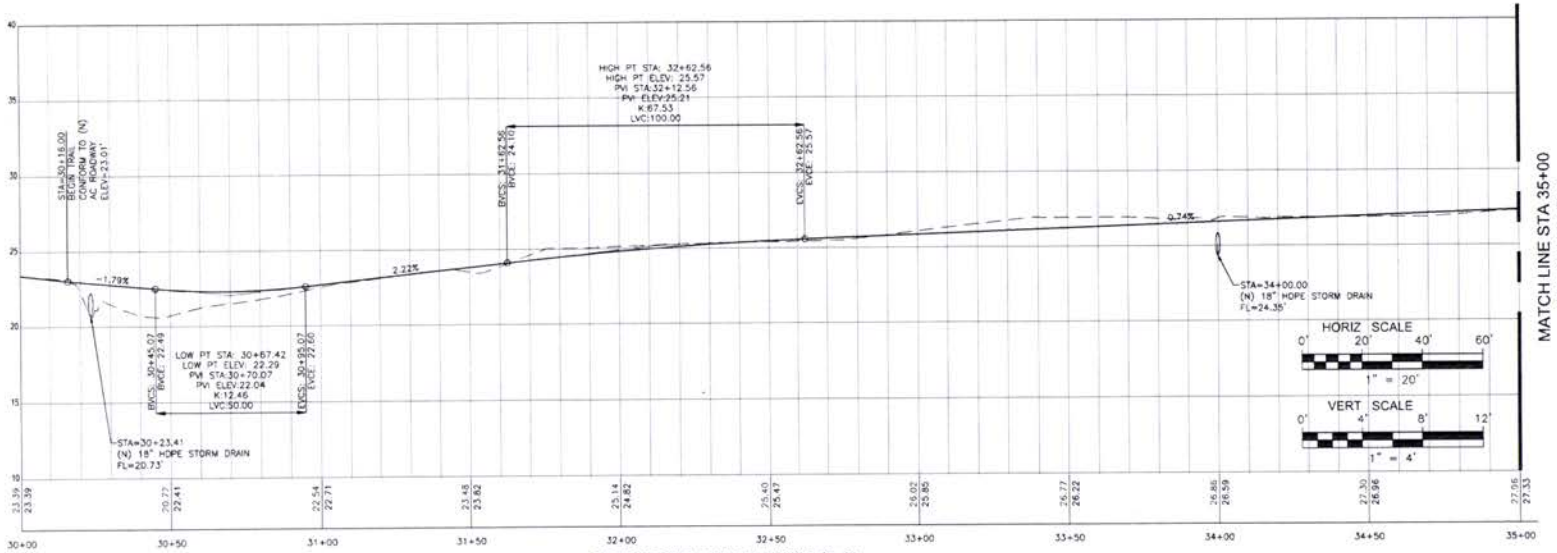
TRAIL PLAN - STA 30+00 TO STA 35+00

SCALE: SEE SCALE BAR



TRAIL PROFILE - STA 30+00 TO STA 35+00

SCALE: SEE SCALE BAR

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HUMBOLDT ROAD
IMPROVEMENT PROJECT

TRAIL PLAN & PROFILE
STA 30+00 TO STA 35+00

PROJ NO 8410956

DRWN JS CHKD JW

C-8

SHEET 15 OF 34

Plot Date: 10 April 2014 - 2:02 PM Plotted By: Scott Davis
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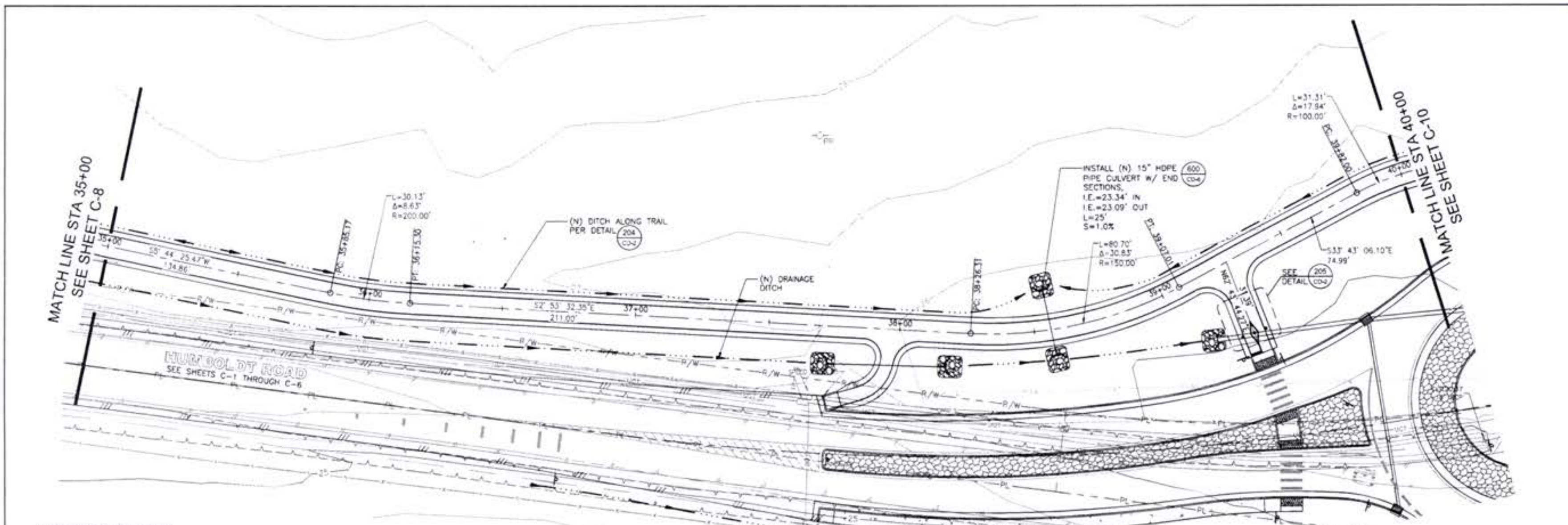
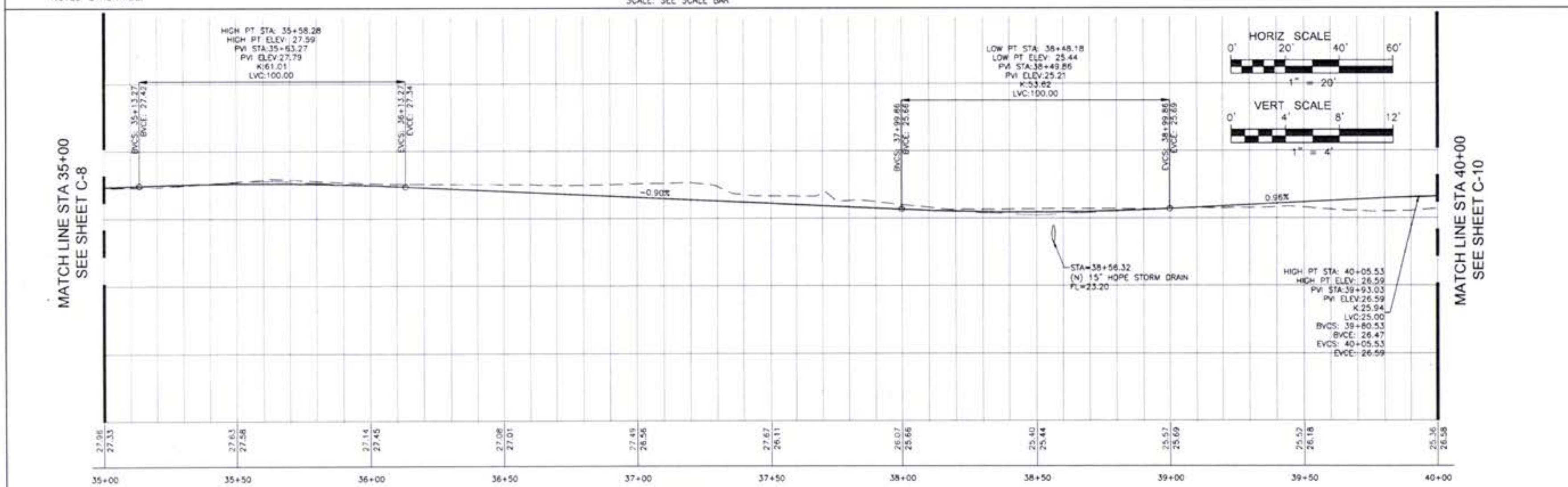


CONSTRUCTION NOTES:

1. NEW STRIPING & MARKINGS SHALL BE THERMOPLASTIC PER SECTION 84 OF CALTRANS STANDARD SPECIFICATIONS AND FOLLOW NOTED STANDARD DETAILS AND PLANS, UNLESS NOTED OTHERWISE.

TRAIL PLAN - STA 35+00 TO STA 40+00

SCALE: SEE SCALE BAR



TRAIL PROFILE - STA 35+00 TO STA 40+00

SCALE: SEE SCALE BAR

Plot Date: 10 April 2014 - 2:02 PM Plotted By: Scott Davis

ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD
IMPROVEMENT PROJECT

TRAIL PLAN & PROFILE
STA 35+00 TO STA 40+00

PROJ NO 8410956 | DRWN JS | CHKD JW

C-9

SHEET 16 OF 34

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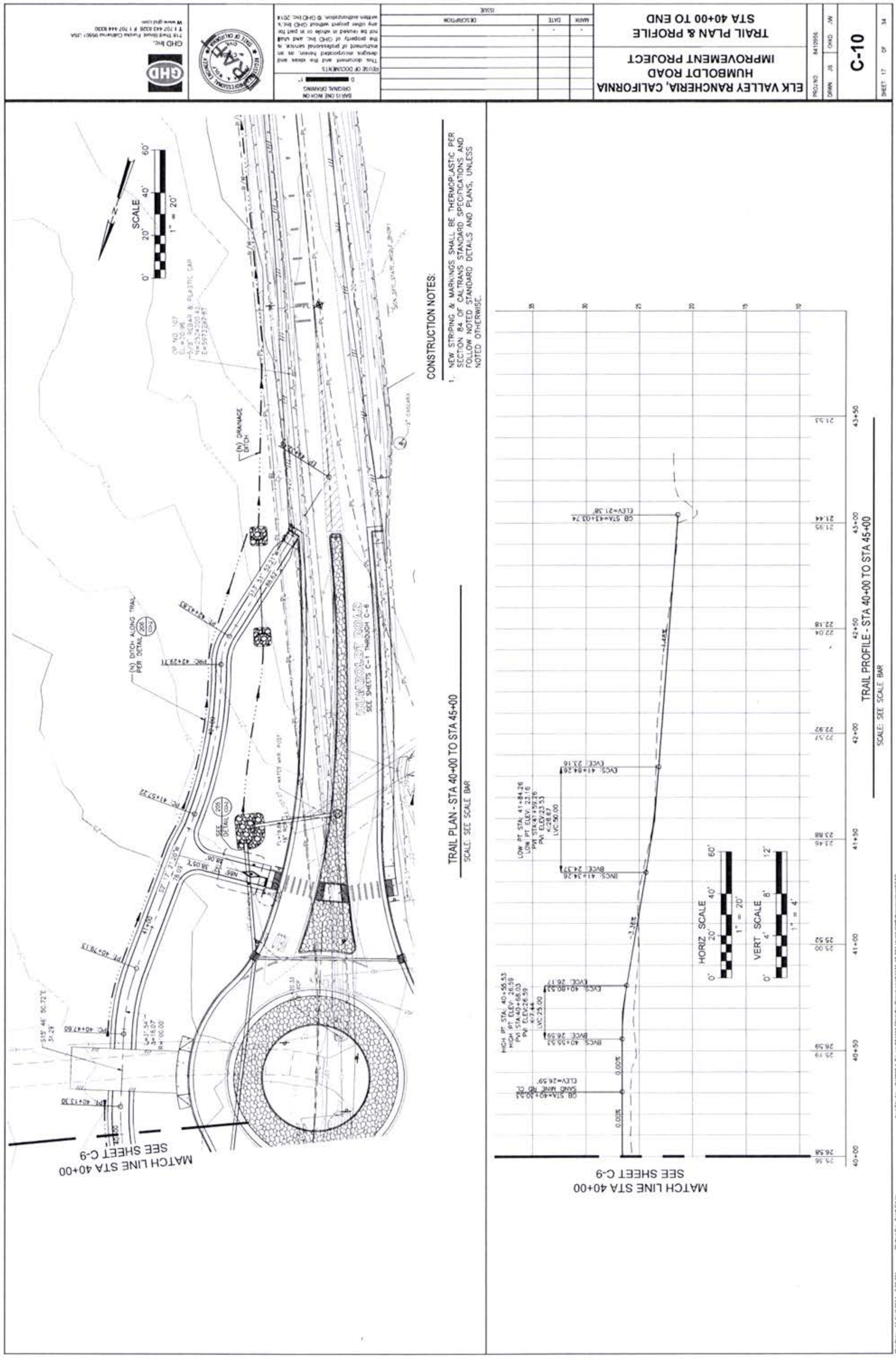
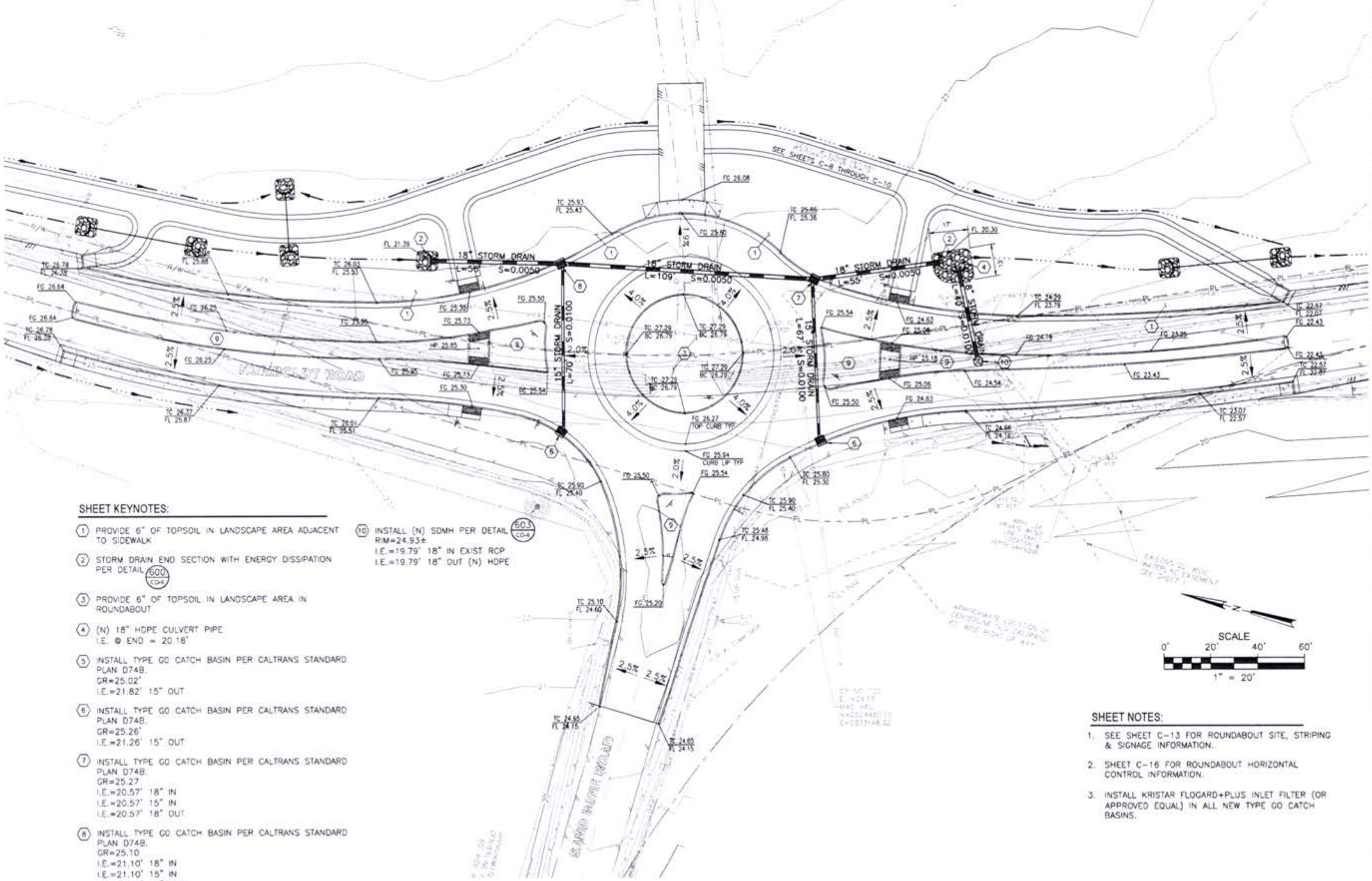

ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD
IMPROVEMENT PROJECT
TRAIL PLAN & PROFILE
STA 40+00 TO END
C-10
GHD
CONSTRUCTION NOTES:
1. NEW STRIPING & MARKINGS SHALL BE THERMOPLASTIC PER SECTION 84 OF CALTRANS STANDARD SPECIFICATIONS AND FOLLOW NOTED STANDARD DETAILS AND PLANS, UNLESS NOTED OTHERWISE.
TRAIL PLAN - STA 40+00 TO STA 45+00
SCALE: SEE SCALE BAR
TRAIL PROFILE - STA 40+00 TO STA 45+00
SCALE: SEE SCALE BAR
HUMBOLDT ROAD
SEE SHEETS C-1 THROUGH C-8
(N) DRAINAGE DITCH
(N) DITCH ALONG TRAIL PER DETAIL
SCALE
1" = 20'
HORIZ. SCALE
1" = 20'
VERT. SCALE
1" = 4'
MATCH LINE STA 40+00
SEE SHEET C-9



SHEET KEYNOTES:

1. PROVIDE 6" OF TOPSOIL IN LANDSCAPE AREA ADJACENT TO SIDEWALK
2. STORM DRAIN END SECTION WITH ENERGY DISSIPATION PER DETAIL 600/CD-6
3. PROVIDE 6" OF TOPSOIL IN LANDSCAPE AREA IN ROUNDABOUT
4. (N) 18" HDPE CULVERT PIPE
I.E. @ END = 20.18'
5. INSTALL TYPE GO CATCH BASIN PER CALTRANS STANDARD PLAN D74B.
GR=25.02'
I.E.=21.82' 15" OUT
6. INSTALL TYPE GO CATCH BASIN PER CALTRANS STANDARD PLAN D74B.
GR=25.26'
I.E.=21.26' 15" OUT
7. INSTALL TYPE GO CATCH BASIN PER CALTRANS STANDARD PLAN D74B.
GR=25.27
I.E.=20.57' 18" IN
I.E.=20.57' 15" IN
I.E.=20.57' 18" OUT
8. INSTALL TYPE GO CATCH BASIN PER CALTRANS STANDARD PLAN D74B.
GR=25.10
I.E.=21.10' 18" IN
I.E.=21.10' 15" IN
I.E.=21.10' 18" OUT
9. SPLITTER ISLANDS 0.5' ABOVE ROADWAY FG
10. INSTALL (N) SDMH PER DETAIL 603/CD-6
RIM=24.93±
I.E.=19.79' 18" IN EXIST RCP
I.E.=19.79' 18" OUT (N) HDPE

SHEET NOTES:

1. SEE SHEET C-13 FOR ROUNDABOUT SITE, STRIPING & SIGNAGE INFORMATION.
2. SHEET C-16 FOR ROUNDABOUT HORIZONTAL CONTROL INFORMATION.
3. INSTALL KRISTAR FLOGARD+PLUS INLET FILTER (OR APPROVED EQUAL) IN ALL NEW TYPE GO CATCH BASINS.

HUMBOLDT ROAD AT SAND MINE ROAD - ROUNDABOUT GRADING & DRAINAGE PLAN

SCALE: SEE SCALE BAR

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ISSUE

ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD
IMPROVEMENT PROJECT

ROUNDABOUT
GRADING & DRAINAGE PLAN

PROJ NO 8410956
DRWN JS CHKD JW

C-12

SHEET 19 OF 34

Plot Date: 10 April 2014 - 2:02 PM Plotted By: Scott Davis

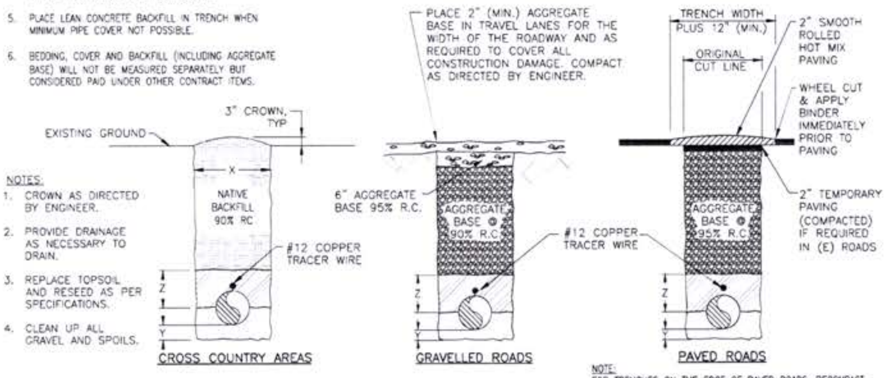
Cad File No: G:\2005 & Beyond\01826 ElkValleyRancheria\01826-10-001 HumboldtRdImprovement\CAD\01826-10-001\01826100001-19_C-12_Round-Grad.dwg

NOTES:
1. WIDER TRENCHES MAY REQUIRE HIGHER STRENGTH PIPE AND/OR SPECIAL BEDDING.
2. DIFFERING TRENCH WIDTHS REQUIRE PRIOR APPROVAL OF ENGINEER.
3. IN UNSTABLE SOILS INCREASE THE TRENCH WIDTH TO 5 PIPE DIAMETERS FOR PVC PIPE.
4. IN MAKING EXCAVATIONS FOR THIS PROJECT, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROVIDING & INSTALLING ADEQUATE SHEETING, SHORING & BRACING AS MAY BE NECESSARY AS A PRECAUTION AGAINST SLIDES OR CAVE-INS, AND TO PROTECT ALL (E) IMPROVEMENTS OF ANY KIND, EITHER ON PUBLIC OR PRIVATE PROPERTY, FULLY FROM DAMAGE.
5. PLACE LEAN CONCRETE BACKFILL IN TRENCH WHEN MINIMUM PIPE COVER NOT POSSIBLE.
6. BEDDING, COVER AND BACKFILL (INCLUDING AGGREGATE BASE) WILL NOT BE MEASURED SEPARATELY BUT CONSIDERED PAID UNDER OTHER CONTRACT ITEMS.

TRENCH DIMENSION CHART

	(X)		(Y)	(Z)		(X)		(Y)	(Z)
PIPE SIZE	TRENCH WIDTH MIN.	TRENCH WIDTH MAX.	BEDDING (MIN)	COVER (MIN)	PIPE SIZE	TRENCH WIDTH MIN.	TRENCH WIDTH MAX.	BEDDING (MIN)	COVER (MIN)
4"	16"	23"	4"	16"	15"	27"	33"	6"	16"
6"	18"	24"	6"	16"	18"	30"	36"	6"	16"
8"	20"	26"	6"	16"	24"	36"	42"	6"	16"
10"	22"	28"	6"	16"	30"	42"	48"	6"	16"
12"	24"	30"	6"	16"	36"	48"	54"	6"	16"

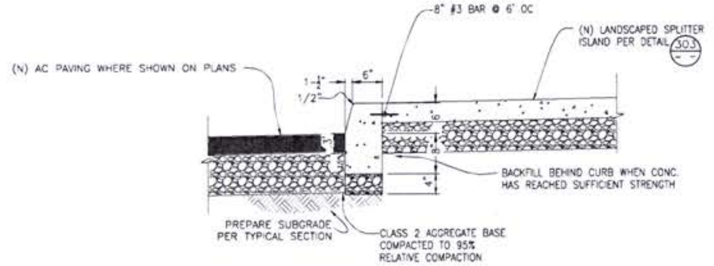
FOR MULTIPLE PIPE TRENCHES SEPARATE PIPES BY 12".



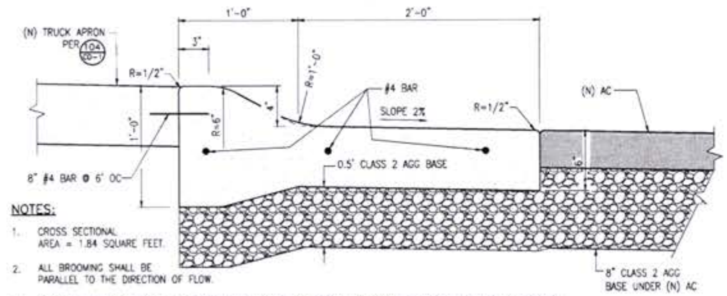
NOTES:
1. CROWN AS DIRECTED BY ENGINEER.
2. PROVIDE DRAINAGE AS NECESSARY TO DRAIN.
3. REPLACE TOPSOIL AND RESEED AS PER SPECIFICATIONS.
4. CLEAN UP ALL GRAVEL AND SPOILS.

NOTE:
FOR TRENCHES ON THE EDGE OF PAVED ROADS, RECOMPACT AND SMOOTH ROLL EDGE OF ROAD AT LEAST 12" OUTSIDE OF FINISHED EDGE BEFORE PLACING HOT MIX PAVING.

300 / CD-3 TYPICAL PIPE/CULVERT TRENCH DETAILS
SCALE: NTS

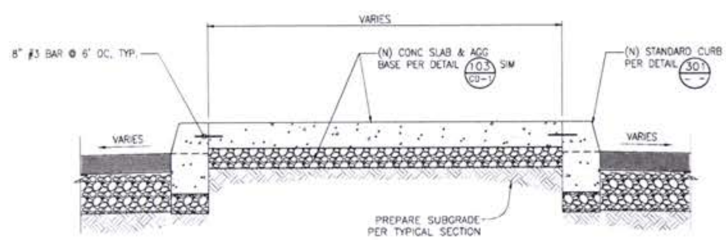


301 / CD-3 STANDARD CONCRETE CURB DETAIL
SCALE: NTS

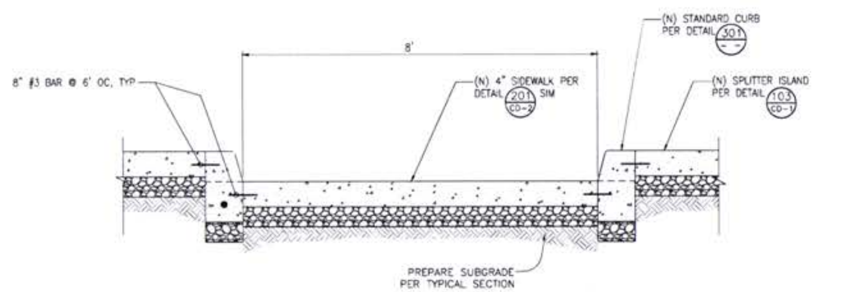


NOTES:
1. CROSS SECTIONAL AREA = 1.84 SQUARE FEET.
2. ALL BROOMING SHALL BE PARALLEL TO THE DIRECTION OF FLOW.
3. 1/2 INCH, PRE-MOLDED JOINT FILLER SHALL BE LEFT INSTALLED IN EXPANSION JOINTS AT THE 'BC' & 'EC' OF ALL CURB RETURNS & AT THE ENDS OF DRIVEWAYS & SHALL BE HELD FIRMLY IN PLACE PRIOR TO PLACING CONCRETE.
4. CONTROL JOINTS SHALL BE 2 INCHES DEEP & AT INTERVALS NOT TO EXCEED 16 FEET ON CENTER. TOP 3/4" OF THE CONTROL JOINT SHALL BE FILLED WITH POLYURETHANE SEALANT (SIKAFLEX-1A OR EQUAL).

302 / CD-2 TYPICAL MOUNTABLE CURB & GUTTER
SCALE: NTS



303 / CD-3 TYPICAL SPLITTER ISLAND DETAIL
SCALE: NTS



304 / CD-3 TYPICAL SPLITTER ISLAND PEDESTRIAN REFUGE DETAIL
SCALE: NTS

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ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD
IMPROVEMENT PROJECT

TYPICAL DETAILS - SHEET 3

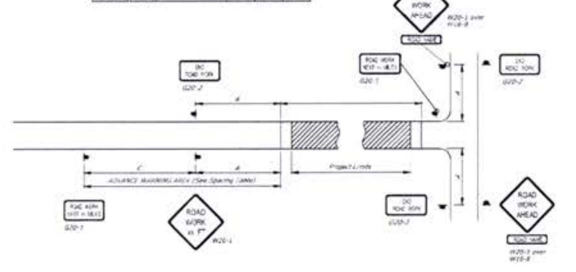
PROJ NO: 8410956
DRWN: JS CHKD: JW

CD-3

SHEET 24 OF 34

Plot Date: 10 April 2014 - 2:03 PM Plotted By: Scott Davis
Cad File No: G:\2005 & Beyond\01826 ElkValleyRancheria\01826-10-001 HumboldtRdImprovement\CAD\01826-10-001\01826\10001-22-27_CD-1_Details.dwg

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	[illegible]	[illegible]	[illegible]
Urban 45 MPH and greater	[illegible]	[illegible]	[illegible]
Rural	[illegible]	[illegible]	[illegible]
Expressway/Freeway	[illegible]	[illegible]	[illegible]



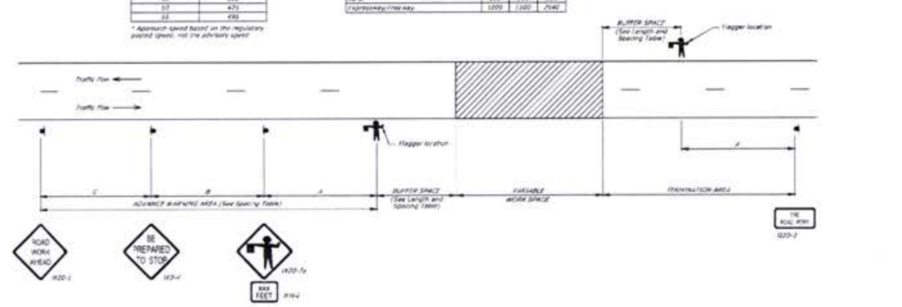
ADVANCED SIGNING

NTS

LENGTH AND SPACING TABLE	
APPROACH SPEED*	LENGTH OF BUFFER SPACE
MPH	FEET
25	155
30	200
35	250
40	305
45	360
50	425
55	495

* Approach speed based on the regulatory posted speed, not the advisory speed

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	100	100	100
Urban 45 MPH and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640



ROAD CLOSURE LAYOUT (WITH FLAGGERS)

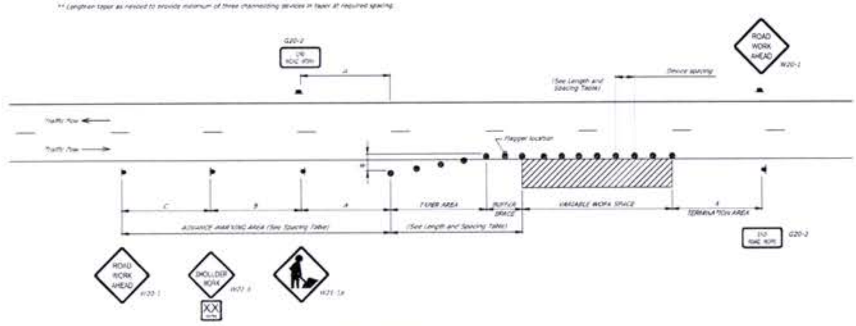
NTS

LENGTH AND SPACING TABLE					
APPROACH SPEED*	MINIMUM TAPER LENGTH**	LENGTH OF BUFFER SPACE	CHANNELIZING DEVICE		
			TAPER AREA	BUFFER SPACE	WORK SPACE
MPH	FEET	FEET	SPACING IN FEET		
25	Shoulder taper formula:	155	25	50	50
30	$L = \frac{WS^2}{180}$ for S ≤ 40 MPH	200	30	60	60
35	$L = \frac{WS}{3}$ for S ≥ 45 MPH	250	35	70	70
40	Where:	305	40	80	80
45	L = Minimum length of taper; W = Width of offset in feet; S = Numerical value of posted speed limit or 85 percentile speed prior to work in miles per hour	360	45	90	90
50		425	50	100	100
55		495	55	110	110

* Approach speed based on the regulatory posted speed, not the advisory speed.

** Lengthen taper as needed to provide minimum of three channelizing devices in taper at required spacing.

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	100	100	100
Urban 45 MPH and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640



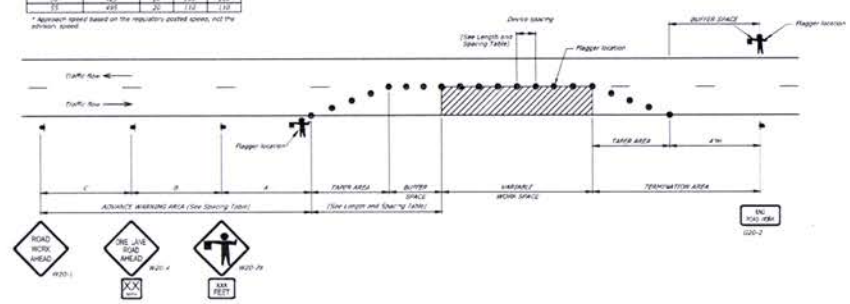
SHOULDER CLOSURE LAYOUT

NTS

LENGTH AND SPACING TABLE				
APPROACH SPEED*	LENGTH OF BUFFER SPACE	CHANNELIZING DEVICE		
		TAPER AREA	BUFFER SPACE	WORK SPACE
MPH	FEET	SPACING IN FEET		
25	155	20	50	50
30	200	20	60	60
35	250	20	70	70
40	305	20	80	80
45	360	20	90	90
50	425	20	100	100
55	495	20	110	110

* Approach speed based on the regulatory posted speed, not the advisory speed

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	100	100	100
Urban 45 MPH and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640



SINGLE LANE CLOSURE LAYOUT (WITH FLAGGERS)

NTS

TRAFFIC CONTROL NOTES:

1. ALL ELEMENTS OF TEMPORARY TRAFFIC CONTROL SHALL COMPLY WITH THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES – CURRENT EDITION.
2. THE TRAFFIC CONTROL DETAILS PROVIDED ARE THE MINIMUM REQUIREMENTS FOR TYPICAL SITUATIONS THE CONTRACTOR IS LIKELY TO ENCOUNTER ON THIS PROJECT. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE ENGINEER FOR APPROVAL BEFORE WORK BEGINS.
3. ALL THE COST OF THE MATERIALS, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE PRICE BID FOR TEMPORARY TRAFFIC CONTROL.
4. THE CONTRACTOR SHALL PROVIDE PEDESTRIAN ACCESS TO ALL BUILDINGS AT ALL TIMES, UNLESS OTHERWISE APPROVED BY THE ELK VALLEY RANCHERIA.
5. MAINTAIN ACCESS TO PRIVATE AND PUBLIC PROPERTY AT ALL TIMES.
6. COORDINATE TRAFFIC CONTROL WITHIN THE PUBLIC RIGHT-OF-WAY WITH THE COUNTY OF DEL NORTE.

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MARK	DATE	DESCRIPTION
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ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD
IMPROVEMENT PROJECT

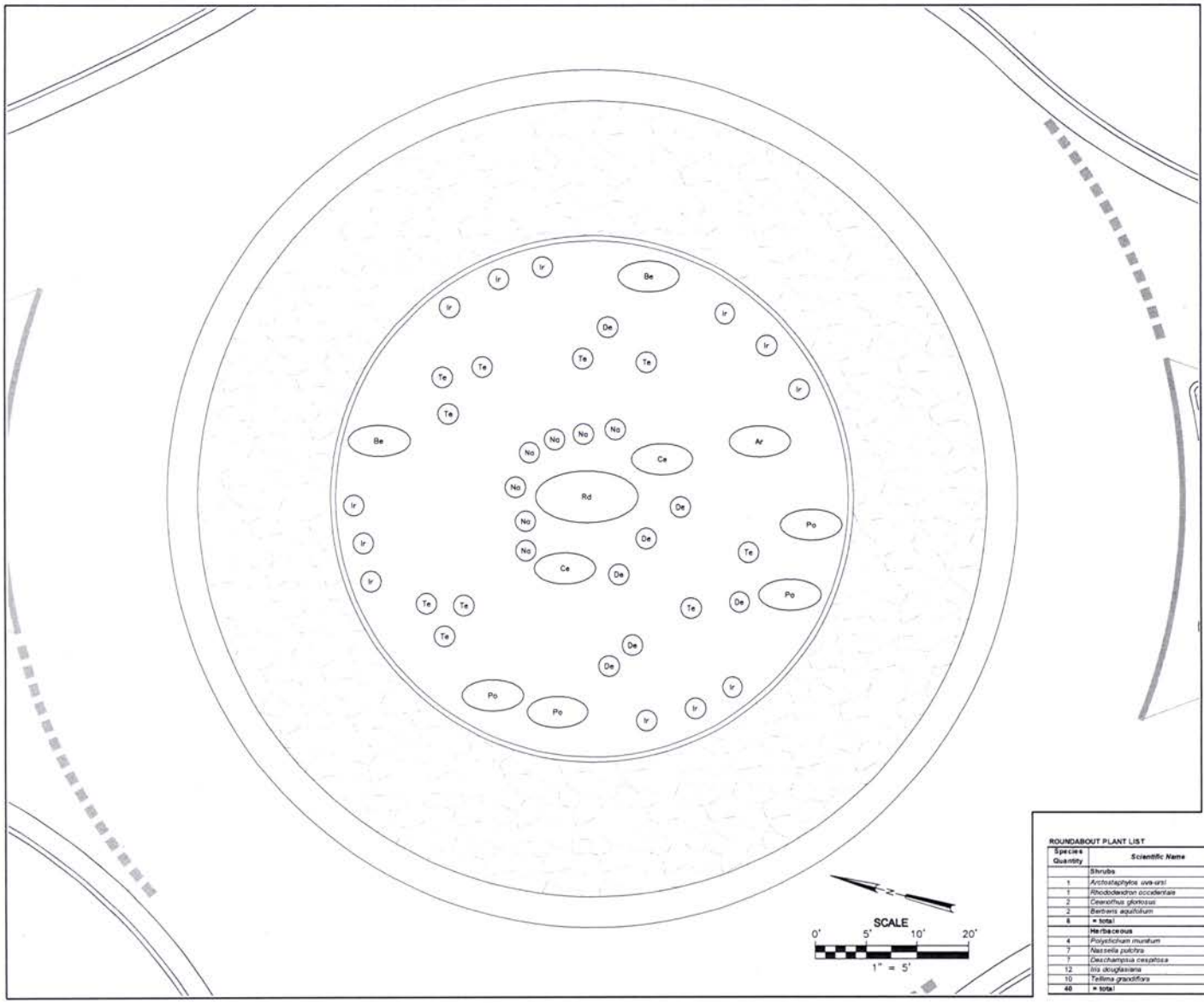
TEMPORARY
TRAFFIC CONTROL DETAILS

PROJ NO. 8410956
DRWN SJD CHKD JW

T-2

SHEET 33 OF 34

Plot Date: 10 April 2014 - 2:05 PM Plotted By: Scott Davis Cad File No: G:\2005 & Beyond\01826 ElkValleyRancheria\01826-10-001 HumboldtRdImprovement\CAD\01826-10-001\01826100001-33_T-2_TrfcCtrl.dwg



HUMBOLDT ROAD AT SAND MINE ROAD - ROUNDABOUT PLANTING PLAN

SCALE: SEE SCALE BAR

SHEET NOTES:

1. PLANTED AREAS ARE TO BE MULCHED WITH 4" REDWOOD BARK.
2. PLANT INSTALLATION TO BE AS SHOWN ON THE PLAN.
3. ALL PLANTS SHALL BE OBTAINED FROM LOCAL GENETIC STOCK. CONTRACTOR SHALL PROVIDE SUBMITTAL, PRIOR TO INCORPORATING PLANTS INTO THE PROJECT, THAT SHALL INCLUDE THE NAME AND LOCATION OF EACH NURSERY THAT WILL BE SUPPLYING PLANTS FOR THE PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE A SIGNED CERTIFICATION STATING THAT ALL PLANTS INCORPORATED INTO THE PROJECT WILL COME FROM A LOCAL GENETIC STOCK.
4. THE USE OF RODENTICIDES IS PROHIBITED.

ROUNDABOUT PLANT LIST

Species Quantity	Scientific Name	Common Name	Map Code	Unit	Spacing Type
	Shrubs				
1	*Arctostaphylos uva-ursi*	kinnikinnick	Ar	1 gallon	random
1	*Rhododendron occidentale*	western azalea	Rd	1 gallon	random
2	*Ceanothus gloriosus*	'Pt. Reyes' Ceanothus	Ce	1 gallon	random
2	*Berberis aquifolium*	Oregon grape	Be	1 gallon	random
8	**= total**				
	Herbaceous				
4	*Polystichum munitum*	sword fern	Po	4" plug	cluster
7	*Nassella pulchra*	purple needlegrass	Na	4" plug	cluster
7	*Deschampsia cespitosa*	tufted hairgrass	De	4" plug	cluster
12	*Iris douglasiana*	Douglas iris	Ir	4" plug	cluster
10	*Tellima grandiflora*	fringecups	Te	4" plug	cluster
48	**= total**				

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ELK VALLEY RANCHERIA, CALIFORNIA
HUMBOLDT ROAD IMPROVEMENT PROJECT

ROUNDABOUT PLANTING PLAN

PROJ NO: 01828-10-001

DRWN: JS CHKD: JWV

L-1

SHEET 37 OF 36

Plot Date: 10 February 2014 - 2:48 PM Plotted By: Jacob Schillinger

Cad File No: G:\2005 & Beyond\01828 ElkValleyRancheria\01828-10-001 Humboldt\Improvement\CAD\01828-10-001\01828100001-37_L-1_LO\SCPE.dwg

ELK VALLEY RANCHERIA, CALIFORNIA
DEL NORTE COUNTY, CALIFORNIA

HUMBOLDT ROAD IMPROVEMENT PROJECT

EROSION AND SEDIMENT CONTROL PLANS

FEBRUARY 2014

AREA MAP

LOCATION MAP

SHEET INDEX

No. Revision Note: * Indicates signatures on original issue of drawing or last revision of drawing | Drawn | Job Manager | Project Director | Date

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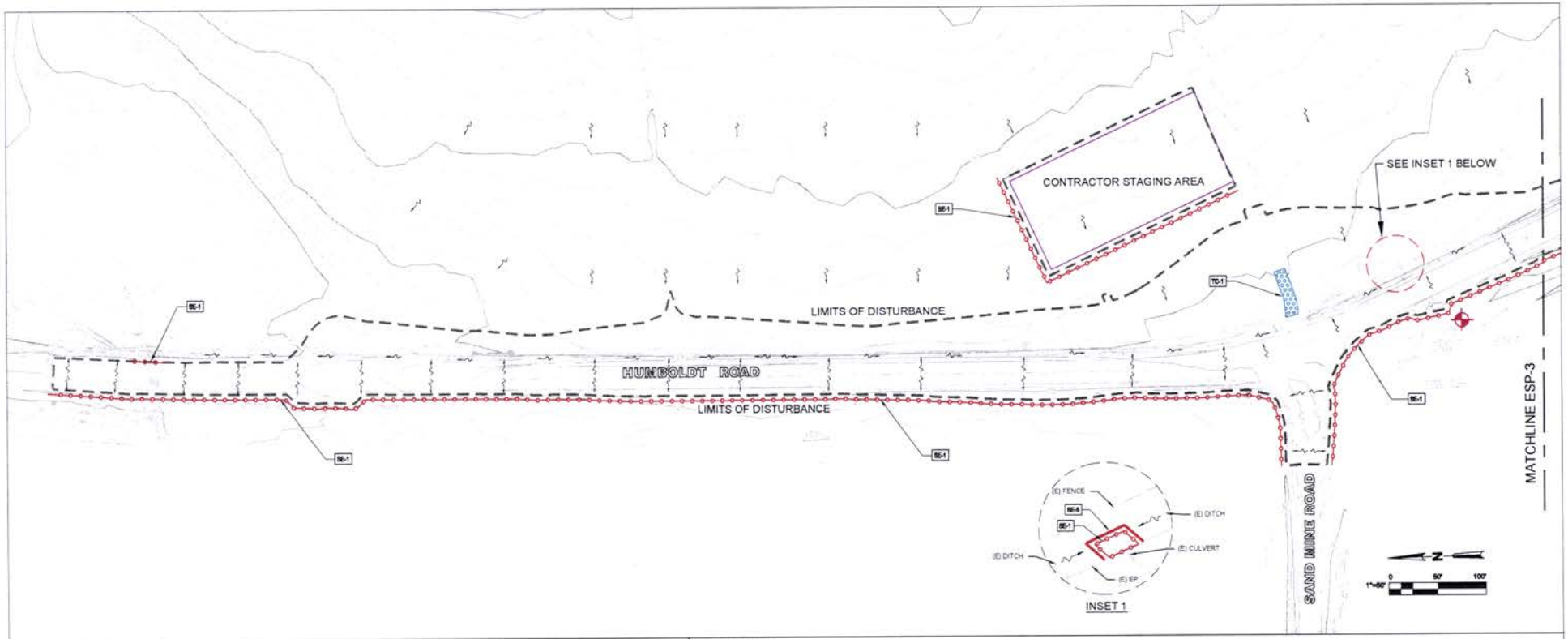
Drawn	JS	Designer	JS
Drafting Check	JAW	Design Check	JAW
Approved (Project Director)	MAP		
Date	2/14/2014		
Scale	AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client: ELK VALLEY RANCHERIA
Project: HUMBOLDT ROAD IMPROVEMENT PROJECT
Title: **EROSION AND SEDIMENT CONTROL PLANS COVER SHEET**
Contract No. 8410956
Original Size: **Arial D** Drawing No: **ECP-1** Sht 1 of 7 Rev:

Plot Date: 11 February 2014 - 3:21 PM Plotted by: Jakob Schlinger Cad File No. G:\101620.ElkValleyRancheria\8410956 Humboldt Road\06-CAD\Sheets\8410956-ECP1-COVR.dwg



GENERAL NOTES

1. THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES ARE A MINIMUM BEST MANAGEMENT PRACTICE. THE CONTRACTOR MAY BE REQUIRED TO TAKE ADDITIONAL EROSION CONTROL MEASURES TO ENSURE THAT NO SEDIMENT LADEN WATER EXITS THE SITE OR ENTERS THE EXISTING STORMWATER SYSTEMS. BMPS ARE TO BE EMPLOYED AS APPROPRIATE TO MINIMIZE EROSION AND PREVENT SEDIMENT DISCHARGE FROM THE SITE IN THE EVENT OF SUMMER RAINSTORMS. WHEN RAINFALL IS FORECAST, OR AT THE LATEST BY OCTOBER 15TH AND UNTIL APRIL 15TH.
2. SUFFICIENT EROSION CONTROL SUPPLIES SHALL BE AVAILABLE ON-SITE AT ALL TIMES TO DEAL WITH AREAS SUSCEPTIBLE TO EROSION DURING RAIN EVENTS.
3. UPDATE MAP THROUGHOUT CONSTRUCTION TO SHOW LOCATIONS OF STORAGE ARES FOR WASTE, VEHICLES, SERVICE, LOADING/UNLOADING OF MATERIALS, STAGING, STOCKPILES, CONCRETE WASHOUT, SANITARY FACILITIES, ACCESS (ENTRANCE/EXIT) POINTS TO CONSTRUCTION SITE, FUELING, WATER STORAGE, WATER TRANSFER FOR DUST CONTROL AND COMPACTION, AND ANY ADDITIONAL BMPs REQUIRED TO COMPLY WITH THE GENERAL PERMIT.
4. SEE BMP FACT SHEETS IN SWPPP APPENDIX I.

LEGEND

- LIMIT OF DISTURBANCE
- DIRECTION OF SURFACE RUNOFF
- SE-1 — SILT FENCE (SE-1)
- SE-5 — STRAW WADDLE SEDIMENT BARRIER (SE-5)
- STORM WATER SAMPLING LOCATION
- TC-1 — STABILIZED CONSTRUCTION ENTRANCE / EXIT (TC-1)

BMP KEY

EROSION CONTROL BMPs
EC-1 SCHEDULING
EC-2 PRESERVATION OF EXISTING VEGETATION
EC-3 HYDRAULIC MULCH
EC-4 HYDROSEEDING
EC-5 SOIL BINDERS
EC-6 STRAW MULCH
EC-7 GEOTEXTILES & MATS
EC-8 WOOD MULCHING
EC-9 EARTH DIKES AND DRAINAGE SWALES
EC-10 VELOCITY DISSIPATION DEVICES
EC-11 SLOPE DRAINS
EC-12 STREAMBANK STABILIZATION
EC-14 COMPOST BLANKETS
EC-15 SOIL PREPARATION / ROUGHENING
EC-16 NON-VEGETATIVE STABILIZATION

WIND EROSION CONTROL BMPs
WE-1 WIND EROSION CONTROL

TEMPORARY SEDIMENT CONTROL BMPs
SE-1 SILT FENCE
SE-2 SEDIMENT BASIN
SE-3 SEDIMENT TRAP
SE-4 CHECK DAM
SE-5 FIBER ROLLS
SE-6 GRAVEL BAG BERM
SE-7 STREET SWEEPING AND VACUUMING
SE-8 SANDBAG BARRIER
SE-9 STRAW BALE BARRIER
SE-10 STORM DRAIN INLET PROTECTION
SE-11 ACTIVE TREATMENT SYSTEMS
SE-12 TEMPORARY SILT DIKE
SE-13 COMPOST SOCKS AND BERMS
SE-14 BIOFILTER BAGS

NON-STORM WATER MANAGEMENT BMPs
NS-1 WATER CONSERVATION PRACTICES
NS-2 DEWATERING OPERATIONS
NS-3 PAVING AND GRINDING OPERATIONS
NS-4 TEMPORARY STREAM CROSSING
NS-5 CLEAR WATER DIVERSION
NS-6 ILLICIT CONNECTION/DISCHARGE
NS-7 POTABLE WATER/IRRIGATION
NS-8 VEHICLE AND EQUIPMENT CLEANING
NS-9 VEHICLE AND EQUIPMENT FUELING
NS-10 VEHICLE AND EQUIPMENT MAINTENANCE
NS-11 PILE DRIVING OPERATIONS
NS-12 CONCRETE CURING
NS-13 CONCRETE FINISHING
NS-14 MATERIAL AND EQUIPMENT USE
NS-15 DEMOLITION ADJACENT TO WATER
NS-16 TEMPORARY BATCH PLANTS

WASTE MANAGEMENT & MATERIALS POLLUTION CONTROL BMPs
WM-1 MATERIAL DELIVERY AND STORAGE
WM-2 MATERIAL USE
WM-3 STOCKPILE MANAGEMENT
WM-4 SPILL PREVENTION AND CONTROL
WM-5 SOLID WASTE MANAGEMENT
WM-6 HAZARDOUS WASTE MANAGEMENT
WM-7 CONTAMINATED SOIL MANAGEMENT
WM-8 CONCRETE WASTE MANAGEMENT
WM-9 SANITARY/ SEPTIC WASTE MANAGEMENT
WM-10 LIQUID WASTE MANAGEMENT

TEMPORARY TRACKING CONTROL BMPs
TC-1 STABILIZED CONSTRUCTION ENTRANCE/EXIT
TC-2 STABILIZED CONSTRUCTION ROADWAY
TC-3 ENTRANCE/OUTLET TIRE WASH

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Drafting Check	JAW	Design Check	JAW
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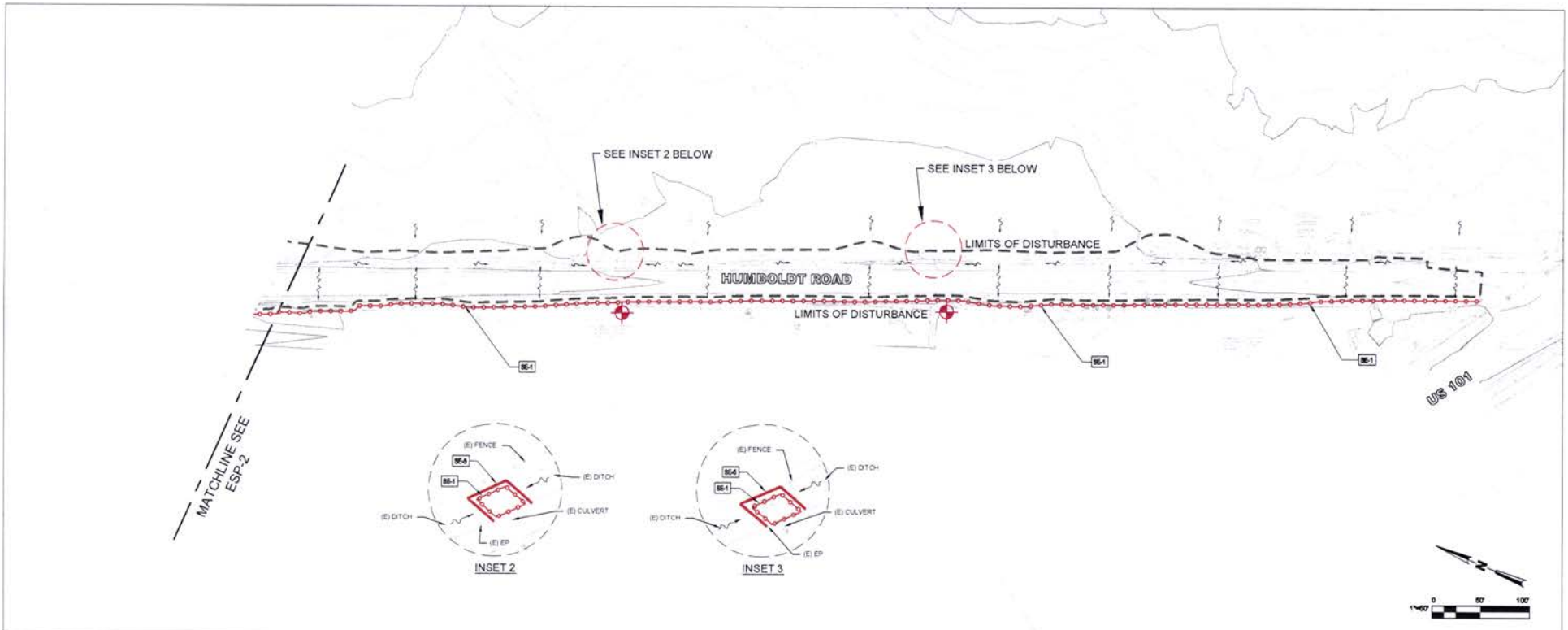
Client: ELK VALLEY RANCHERIA
Project: HUMBOLDT ROAD IMPROVEMENT PROJECT
Title: **EROSION AND SEDIMENT CONTROL PLANS DEMOLITION PHASE**
Contract No: 8410956
Original Size: **Arch D** Drawing No: **ECP-2** Sht 2 of 7 Rev:

Plot Date: 11 February 2014 - 3:16 PM Plotted by: Jakob Schollinger
Cad File No: G:\01\025 Elk Valley Rancheria\22\410956 Humboldt Road\DA CAD\Sheet\84109560-ECP2-7.dwg



GENERAL NOTES

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2. SUFFICIENT EROSION CONTROL SUPPLIES SHALL BE AVAILABLE ON-SITE AT ALL TIMES TO DEAL WITH AREAS SUSCEPTIBLE TO EROSION DURING RAIN EVENTS
3. UPDATE MAP THROUGHOUT CONSTRUCTION TO SHOW LOCATIONS OF STORAGE AREA FOR WASTE, VEHICLES, SERVICE, LOADING/UNLOADING OF MATERIALS, STAGING, STOCKPILES, CONCRETE WASHOUT, SANITARY FACILITIES, ACCESS (ENTRANCE/EXIT) POINTS TO CONSTRUCTION SITE, FUELING, WATER STORAGE, WATER TRANSFER FOR DUST CONTROL AND COMPACTION AND ANY ADDITIONAL BMPs REQUIRED TO COMPLY WITH THE GENERAL PERMIT
4. SEE BMP FACT SHEETS IN SWPPP APPENDIX I

LEGEND

- LIMIT OF DISTURBANCE
- DIRECTION OF SURFACE RUNOFF
- SE-1 SILT FENCE (SE-1)
- SE-4 STRAW WADDLE SEDIMENT BARRIER (SE-5)
- STORM WATER SAMPLING LOCATION
- TC-1 STABILIZED CONSTRUCTION ENTRANCE / EXIT (TC-1)

BMP KEY

EROSION CONTROL BMPs
EC-1 SCHEDULING
EC-2 PRESERVATION OF EXISTING VEGETATION
EC-3 HYDRAULIC MULCH
EC-4 HYDROSEEDING
EC-5 SOIL BINDERS
EC-6 STRAW MULCH
EC-7 GEOTEXTILES & MATS
EC-8 WOOD MULCHING
EC-9 EARTH DIKES AND DRAINAGE SWALES
EC-10 VELOCITY DISSIPATION DEVICES
EC-11 SLOPE DRAINS
EC-12 STREAMBANK STABILIZATION
EC-14 COMPOST BLANKETS
EC-15 SOIL PREPARATION / ROUGHENING
EC-16 NON-VEGETATIVE STABILIZATION

WIND EROSION CONTROL BMPs
WE-1 WIND EROSION CONTROL

TEMPORARY SEDIMENT CONTROL BMPs
SE-1 SILT FENCE
SE-2 SEDIMENT BASIN
SE-3 SEDIMENT TRAP
SE-4 CHECK DAM
SE-5 FIBER ROLLS
SE-6 GRAVEL BAG BERM
SE-7 STREET SWEEPING AND VACUUMING
SE-8 SANDBAG BARRIER
SE-9 STRAW BALE BARRIER
SE-10 STORM DRAIN INLET PROTECTION
SE-11 ACTIVE TREATMENT SYSTEMS
SE-12 TEMPORARY SILT DIKE
SE-13 COMPOST SOCKS AND BERMS
SE-14 BIOFILTER BAGS

NON-STORM WATER MANAGEMENT BMPs
NS-1 WATER CONSERVATION PRACTICES
NS-2 DEWATERING OPERATIONS
NS-3 PAVING AND GRINDING OPERATIONS
NS-4 TEMPORARY STREAM CROSSING
NS-5 CLEAR WATER DIVERSION
NS-6 ILLICIT CONNECTION/DISCHARGE
NS-7 POTABLE WATER/IRRIGATION
NS-8 VEHICLE AND EQUIPMENT CLEANING
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NS-11 PILE DRIVING OPERATIONS
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TEMPORARY TRACKING CONTROL BMPs
TC-1 STABILIZED CONSTRUCTION ENTRANCE/EXIT
TC-2 STABILIZED CONSTRUCTION ROADWAY
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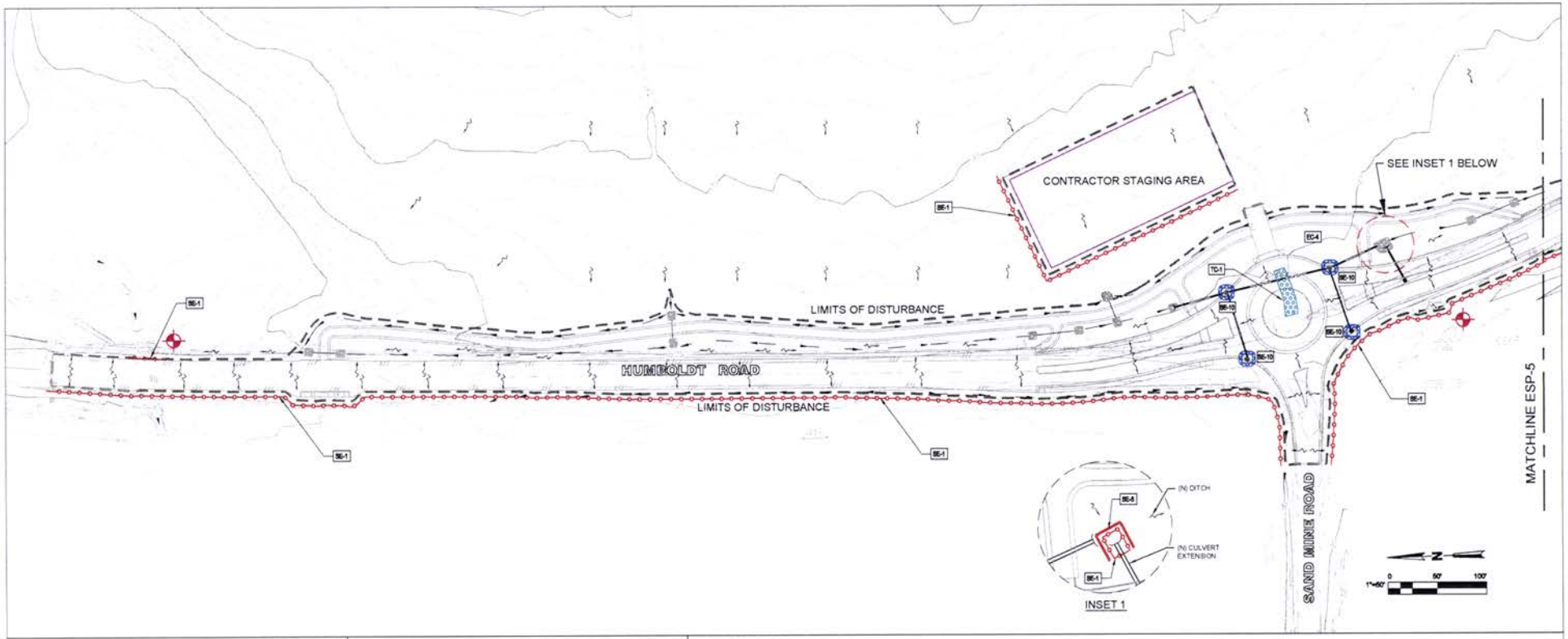
Client: ELK VALLEY RANCHERIA
Project: HUMBOLDT ROAD IMPROVEMENT PROJECT
Title: **EROSION AND SEDIMENT CONTROL PLANS DEMOLITION PHASE**
Contract No. 8410956
Original Size: **Arch D** Drawing No: **ECP-3** Sht 3 of 7 Rev:

Plot Date: 11 February 2014 - 3:19 PM Plotted by: Jakob Schillinger Cad File No: G:\01626.ElkValleyRancheria\8410956 Humboldt Road\09-CAD\Sheets\8410956-ECP3-7.dwg



GENERAL NOTES

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LEGEND

- LIMIT OF DISTURBANCE
- DIRECTION OF SURFACE RUNOFF
- SE-10 STORM DRAIN INLET PROTECTION (SE-10)
- SE-1 SILT FENCE (SE-1)
- SE-6 STRAW WADDLE SEDIMENT BARRIER (SE-6)
- TC-1 STABILIZED CONSTRUCTION ENTRANCE / EXIT (TC-1)
- STORM WATER SAMPLING LOCATION

BMP KEY

EROSION CONTROL BMPs
EC-1 SCHEDULING
EC-2 PRESERVATION OF EXISTING VEGETATION
EC-3 HYDRAULIC MULCH
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EC-5 SOIL BINDERS
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WIND EROSION CONTROL BMPs
WE-1 WIND EROSION CONTROL

TEMPORARY SEDIMENT CONTROL BMPs
SE-1 SILT FENCE
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NS-12 CONCRETE CURING
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WM-9 SANITARY/ SEPTIC WASTE MANAGEMENT
WM-10 LIQUID WASTE MANAGEMENT

TEMPORARY TRACKING CONTROL BMPs
TC-1 STABILIZED CONSTRUCTION ENTRANCE/EXIT
TC-2 STABILIZED CONSTRUCTION ROADWAY
TC-3 ENTRANCE/OUTLET TIRE WASH

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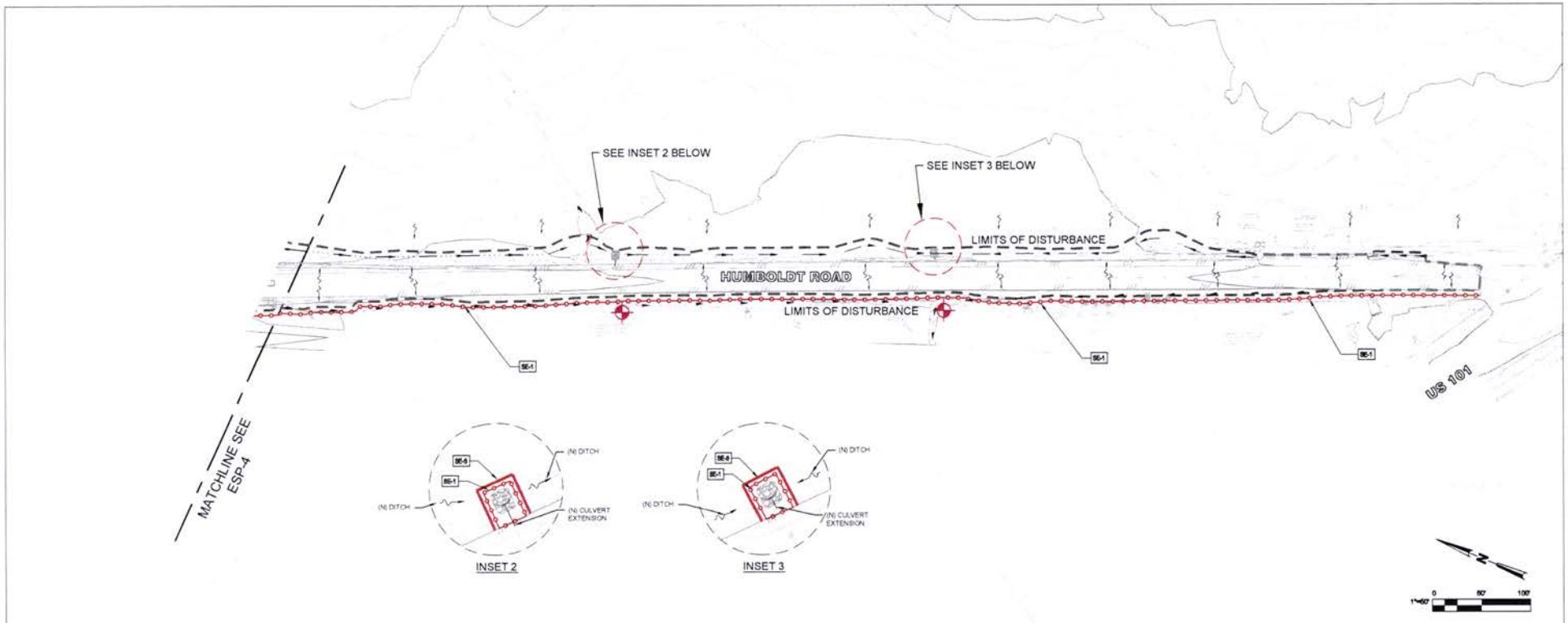
Client: ELK VALLEY RANCHERIA
Project: HUMBOLDT ROAD IMPROVEMENT PROJECT
Title: **EROSION AND SEDIMENT CONTROL PLANS GRADING AND UTILITIES PHASE**
Contract No. 8410956
Original Size: **Ansi D** Drawing No: **ECP-4** Sht 4 of 7 Rev:

Plot Date: 11 February 2014 - 3:16 PM Plotted by: Jakob Schillinger Cad File No: G:\21526 Elk Valley Rancheria\8410956 Humboldt Road\08-CAD\Sheets\8410956-ECP3-7.dwg



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- LIMIT OF DISTURBANCE
- DIRECTION OF SURFACE RUNOFF
- SE-10 STORM DRAIN INLET PROTECTION (SE-10)
- SE-1 SILT FENCE (SE-1)
- SE-5 STRAW WADDLE SEDIMENT BARRIER (SE-5)
- TC-1 STABILIZED CONSTRUCTION ENTRANCE / EXIT (TC-1)
- STORM WATER SAMPLING LOCATION

BMP KEY

EROSION CONTROL BMPs
EC-1 SCHEDULING
EC-2 PRESERVATION OF EXISTING VEGETATION
EC-3 HYDRAULIC MULCH
EC-4 HYDROSEEDING
EC-5 SOIL BINDERS
EC-6 STRAW MULCH
EC-7 GEOTEXTILES & MATS
EC-8 WOOD MULCHING
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EC-11 SLOPE DRAINS
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WIND EROSION CONTROL BMPs
WE-1 WIND EROSION CONTROL

TEMPORARY SEDIMENT CONTROL BMPs
SE-1 SILT FENCE
SE-2 SEDIMENT BASIN
SE-3 SEDIMENT TRAP
SE-4 CHECK DAM
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NON-STORM WATER MANAGEMENT BMPs
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WASTE MANAGEMENT & MATERIALS POLLUTION CONTROL BMPs
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TEMPORARY TRACKING CONTROL BMPs
TC-1 STABILIZED CONSTRUCTION ENTRANCE/EXIT
TC-2 STABILIZED CONSTRUCTION ROADWAY
TC-3 ENTRANCE/OUTLET TIRE WASH

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
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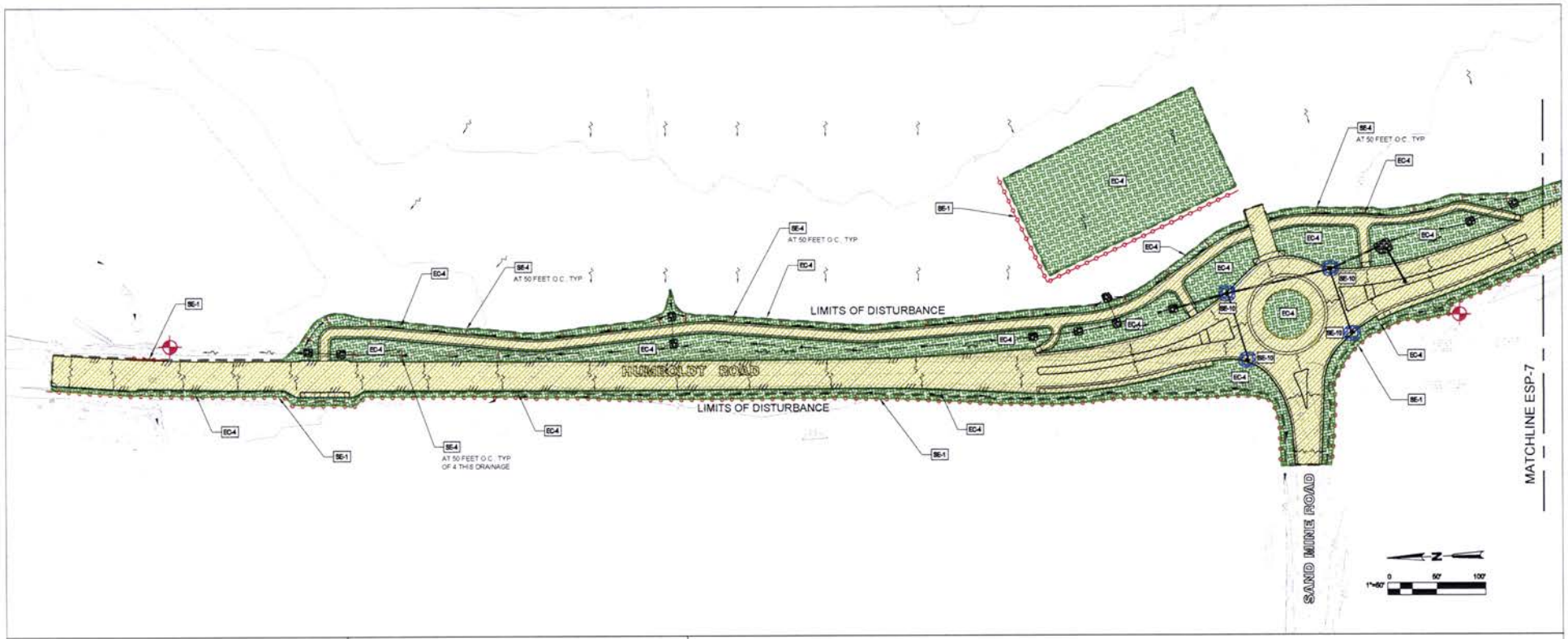
Client: ELK VALLEY RANCHERIA
Project: HUMBOLDT ROAD IMPROVEMENT PROJECT
Title: **EROSION AND SEDIMENT CONTROL PLANS GRADING AND UTILITIES PHASE**
Contract No: 8410956
Original Size: **Ansi D** Drawing No: **ECP-5** Sht 5 of 7 Rev:

Plot Date: 11 February 2014 - 3:16 PM Plotted by: Jakob Schillinger Cad File No: G:\01\826 Elk Valley Rancheria\41\8410956 Humboldt Road\08-CAD\Sheets\8410956-ECP3-7.dwg



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- DIRECTION OF SURFACE RUNOFF
- SE-10 STORM DRAIN INLET PROTECTION (SE-10)
- SE-1 SILT FENCE (SE-1)
- SE-5 STRAW WADDLE SEDIMENT BARRIER (SE-5)
- SE-4 CHECK DAM (SE-4)
- EC-4 LANDSCAPE AND OPEN AREAS: HYDROSEED (EC-4)
- PAVED AREA: IF NOT PAVED, PROVIDE BMPs AS REQUIRED TO COMPLY WITH GENERAL PERMIT
- STORM WATER SAMPLING LOCATION

BMP KEY

EROSION CONTROL BMPs
EC-1 SCHEDULING
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No	Revision	Drawn	Job Manager	Project Director	Date
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Approved (Project Director)	MAP		
Date	3/14/2014		
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Client: ELK VALLEY RANCHERIA
Project: HUMBOLDT ROAD IMPROVEMENT PROJECT
Title: **EROSION AND SEDIMENT CONTROL PLANS PAVING AND FINAL STABILIZATION PHASE**
Contract No: 8410956
Original Size: **Ansi D** Drawing No: **ECP-6** Sht 6 of 7 Rev:

Plot Date: 11 February 2014 - 3:16 PM Plotted by: Jakob Schillinger
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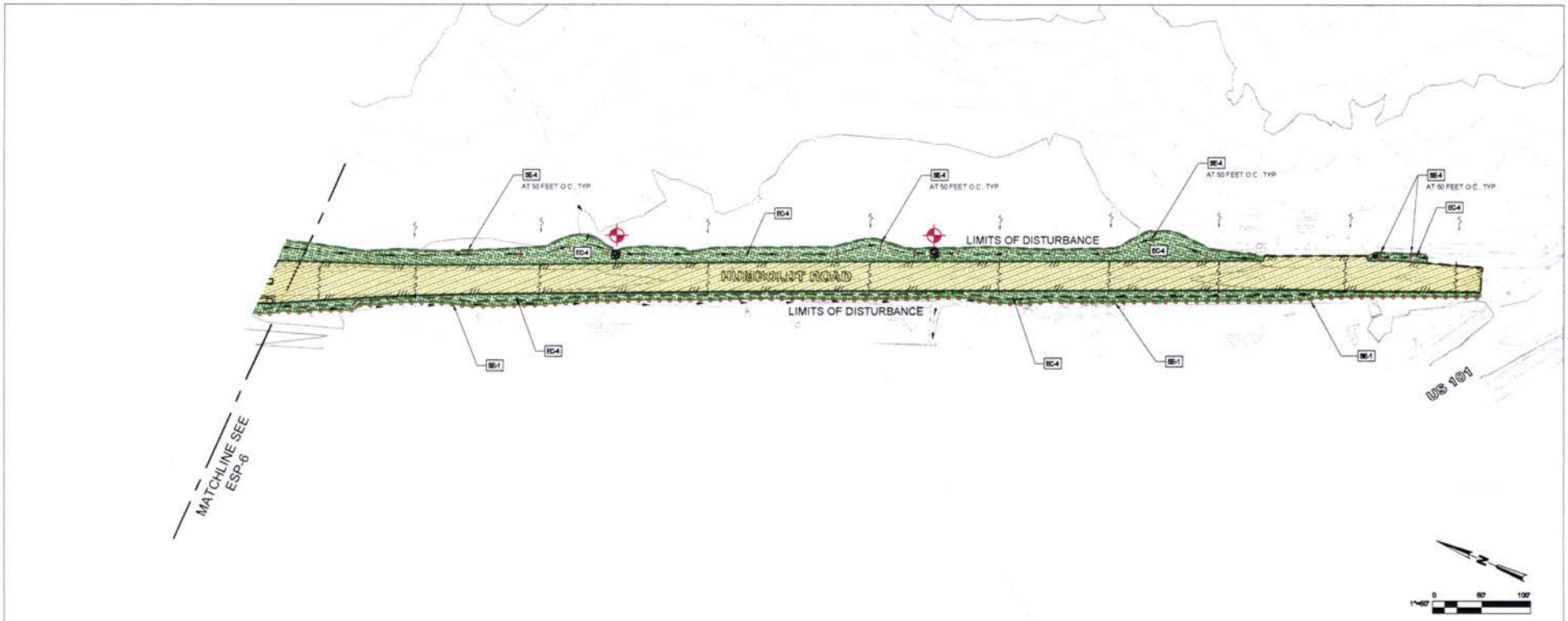

GENERAL NOTES

1. THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES ARE A MINIMUM BEST MANAGEMENT PRACTICE. THE CONTRACTOR MAY BE REQUIRED TO TAKE ADDITIONAL EROSION CONTROL MEASURES TO ENSURE THAT NO SEDIMENT LADEN WATER EXITS THE SITE OR ENTERS THE EXISTING STORMWATER SYSTEMS. BMPS ARE TO BE EMPLOYED AS APPROPRIATE TO MINIMIZE EROSION AND PREVENT SEDIMENT DISCHARGE FROM THE SITE IN THE EVENT OF SUMMER RAINSTORMS. WHEN RAINFALL IS FORECAST, OR AT THE LATEST BY OCTOBER 15TH AND UNTIL APRIL 15TH
2. SUFFICIENT EROSION CONTROL SUPPLIES SHALL BE AVAILABLE ON-SITE AT ALL TIMES TO DEAL WITH AREAS SUSCEPTIBLE TO EROSION DURING RAIN EVENTS
3. UPDATE MAP THROUGHOUT CONSTRUCTION TO SHOW LOCATIONS OF STORAGE AREA FOR WASTE, VEHICLES, SERVICE, LOADING/UNLOADING OF MATERIALS, STAGING, STOCKPILES, CONCRETE WASHOUT, SANITARY FACILITIES, ACCESS (ENTRANCE/EXIT) POINTS TO CONSTRUCTION SITE, FUELING, WATER STORAGE, WATER TRANSFER FOR DUST CONTROL AND COMPACTION, AND ANY ADDITIONAL BMPs REQUIRED TO COMPLY WITH THE GENERAL PERMIT
4. SEE BMP FACT SHEETS IN SWPPP APPENDIX I

LEGEND

- LIMIT OF DISTURBANCE
- DIRECTION OF SURFACE RUNOFF
- SE-10 STORM DRAIN INLET PROTECTION (SE-10)
- SE-1 SILT FENCE (SE-1)
- SE-5 STRAW WADDLE SEDIMENT BARRIER (SE-5)
- SE-4 CHECK DAM (SE-4)
- EC-4 LANDSCAPE AND OPEN AREAS: HYDROSEED (EC-4)
- PAVED AREA IF NOT PAVED, PROVIDE BMPs AS REQUIRED TO COMPLY WITH GENERAL PERMIT
- STORM WATER SAMPLING LOCATION

BMP KEY

EROSION CONTROL BMPs
EC-1 SCHEDULING
EC-2 PRESERVATION OF EXISTING VEGETATION
EC-3 HYDRAULIC MULCH
EC-4 HYDROSEEDING
EC-5 SOIL BINDERS
EC-6 STRAW MULCH
EC-7 GEOTEXTILES & MATS
EC-8 WOOD MULCHING
EC-9 EARTH DIKES AND DRAINAGE SWALES
EC-10 VELOCITY DISSIPATION DEVICES
EC-11 SLOPE DRAINS
EC-12 STREAMBANK STABILIZATION
EC-14 COMPOST BLANKETS
EC-15 SOIL PREPARATION / ROUGHENING
EC-16 NON-VEGETATIVE STABILIZATION

WIND EROSION CONTROL BMPs
WE-1 WIND EROSION CONTROL

TEMPORARY SEDIMENT CONTROL BMPs
SE-1 SILT FENCE
SE-2 SEDIMENT BASIN
SE-3 SEDIMENT TRAP
SE-4 CHECK DAM
SE-5 FIBER ROLLS
SE-6 GRAVEL BAG BERM
SE-7 STREET SWEEPING AND VACUUMING
SE-8 SANDBAG BARRIER
SE-9 STRAW BALE BARRIER
SE-10 STORM DRAIN INLET PROTECTION
SE-11 ACTIVE TREATMENT SYSTEMS
SE-12 TEMPORARY SILT DIKE
SE-13 COMPOST SOCKS AND BERMS
SE-14 BIOFILTER BAGS

NON-STORM WATER MANAGEMENT BMPs
NS-1 WATER CONSERVATION PRACTICES
NS-2 DEWATERING OPERATIONS
NS-3 PAVING AND GRINDING OPERATIONS
NS-4 TEMPORARY STREAM CROSSING
NS-5 CLEAR WATER DIVERSION
NS-6 ILLICIT CONNECTION/DISCHARGE
NS-7 POTABLE WATER/IRRIGATION
NS-8 VEHICLE AND EQUIPMENT CLEANING
NS-9 VEHICLE AND EQUIPMENT FUELING
NS-10 VEHICLE AND EQUIPMENT MAINTENANCE
NS-11 PILE DRIVING OPERATIONS
NS-12 CONCRETE CURING
NS-13 CONCRETE FINISHING
NS-14 MATERIAL AND EQUIPMENT USE
NS-15 DEMOLITION ADJACENT TO WATER
NS-16 TEMPORARY BATCH PLANTS

WASTE MANAGEMENT & MATERIALS POLLUTION CONTROL BMPs
WM-1 MATERIAL DELIVERY AND STORAGE
WM-2 MATERIAL USE
WM-3 STOCKPILE MANAGEMENT
WM-4 SPILL PREVENTION AND CONTROL
WM-5 SOLID WASTE MANAGEMENT
WM-6 HAZARDOUS WASTE MANAGEMENT
WM-7 CONTAMINATED SOIL MANAGEMENT
WM-8 CONCRETE WASTE MANAGEMENT
WM-9 SANITARY/ SEPTIC WASTE MANAGEMENT
WM-10 LIQUID WASTE MANAGEMENT

TEMPORARY TRACKING CONTROL BMPs
TC-1 STABILIZED CONSTRUCTION ENTRANCE/EXIT
TC-2 STABILIZED CONSTRUCTION ROADWAY
TC-3 ENTRANCE/OUTLET TIRE WASH

No.	Revision. Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
-	-	-	-	-	-

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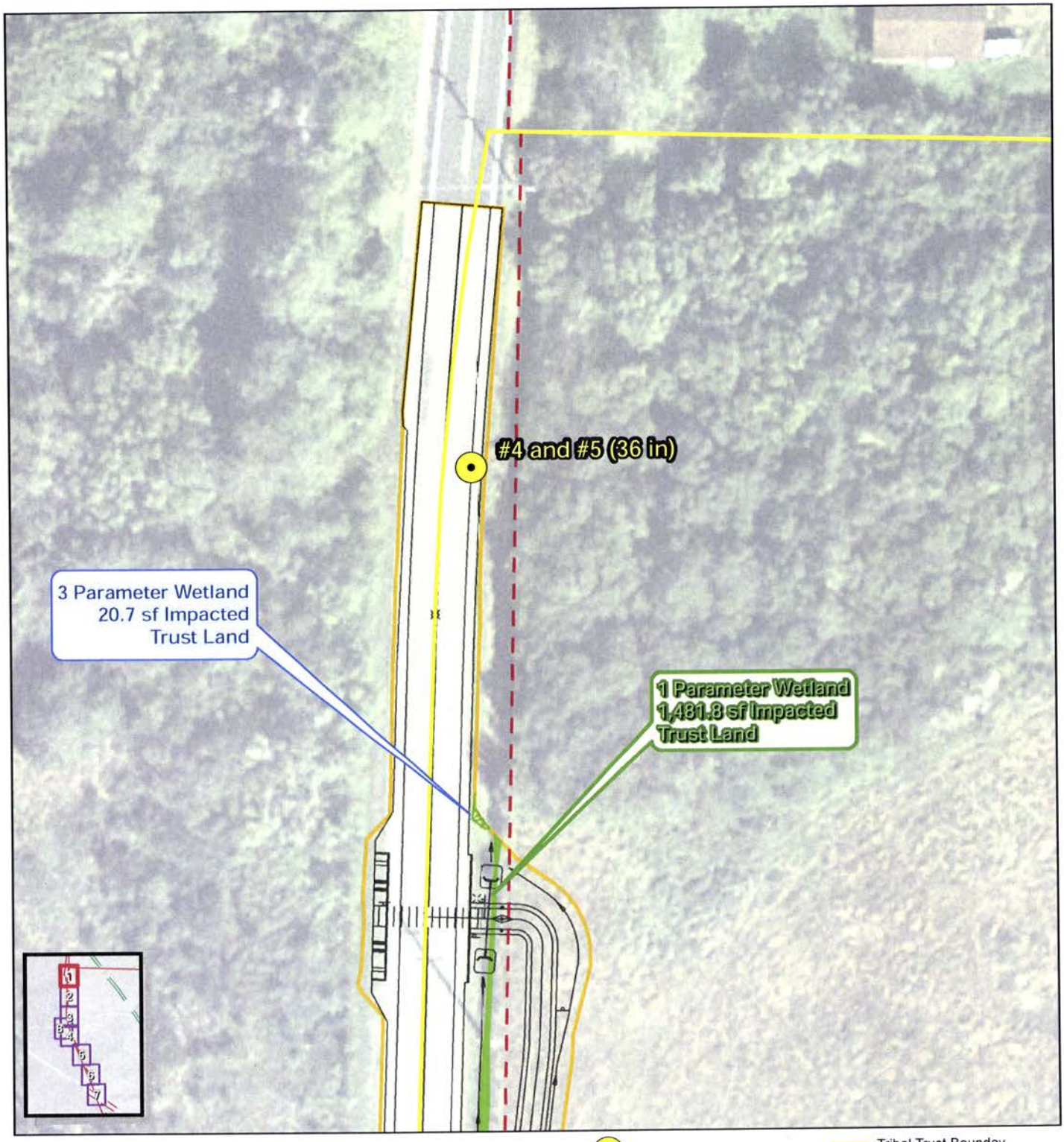
Drawn	JS	Designer	JS
Drafting Check	JAW	Design Check	JAW
Approved (Project Director)	MAP		
Date	2/14/2014		
Scale	AS SHOWN	This Drawing shall not be used for Construction unless Signed and Dated For Construction	

Client: ELK VALLEY RANCHERIA
Project: HUMBOLDT ROAD IMPROVEMENT PROJECT
Title: **EROSION AND SEDIMENT CONTROL PLANS PAVING AND FINAL STABILIZATION PHASE**
Contract No. 8410956
Original Size: **Ansi D** Drawing No: **ECP-7** Sht 7 of 7 Rev:

Plot Date: 11 February 2014 - 3:18 PM Plotted by: Jakob Schillinger Cad File No. G:\01526 ElkValley\Rancheria\410956 Humboldt Road\09-CAD\Sheets\410956-ECP2-7.dwg



3-Parameter Wetlands

Riparian/Forested Wetland Impacts (0.12 ac; 5,019 sf)

Palustrine Emerget Wetland Impacts (0.27 ac; 11,691 sf)

1-Parameter Wetlands

Man-made Ditch Impacts (0.15 ac; 6,387 sf)

Existing Culverts

Proposed Improvements Footprint

Limits Of Disturbance

Tribal Trust Bounday

Edge of Right-of-Way

Coastal Zone Boundary

NOTE:
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Elk Valley Rancheria, Cali
Humboldt Road Improvem

Project Footprint & Wetland Impacts

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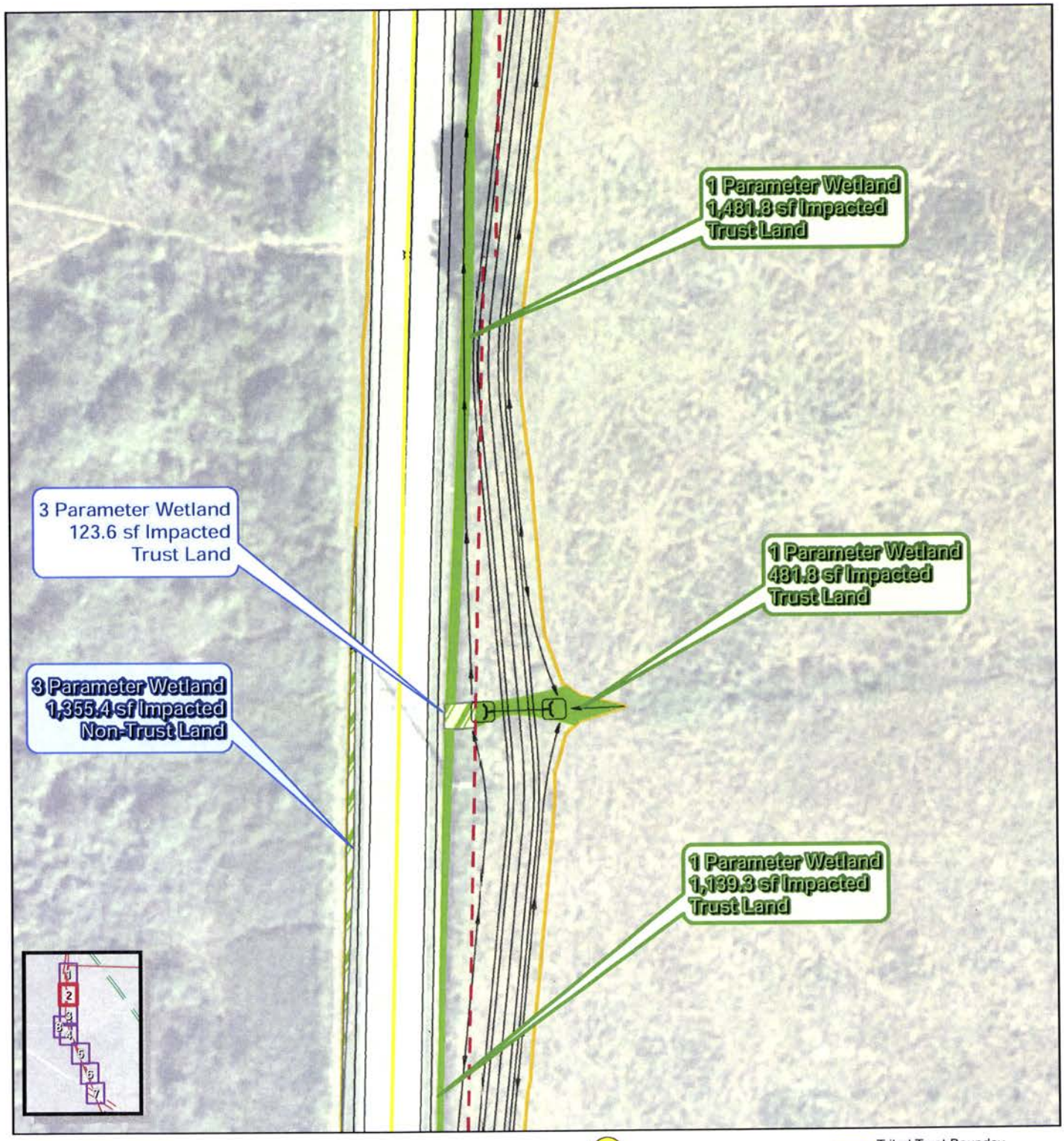
Data source: Aerial: NOAA Coastal data, 1 ft resolution; wetland mapping: AES, 2004; W&K, 2010-2011; desing GHD. Created by: porogers

EXHIBIT NO. 6

APPLICATION NO.

A-1-DNC-12-021 and
CC-0001-14 (Elk Valley Rancheria)
WETLAND IMPACT MAPS (1 of 8)



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Elk Valley Rancheria, California
Humboldt Road Improvements

Job Number 0182810001
Revision A
Date 19 Feb 2014

Project Footprint
& Wetland Impacts

Figure 2-2

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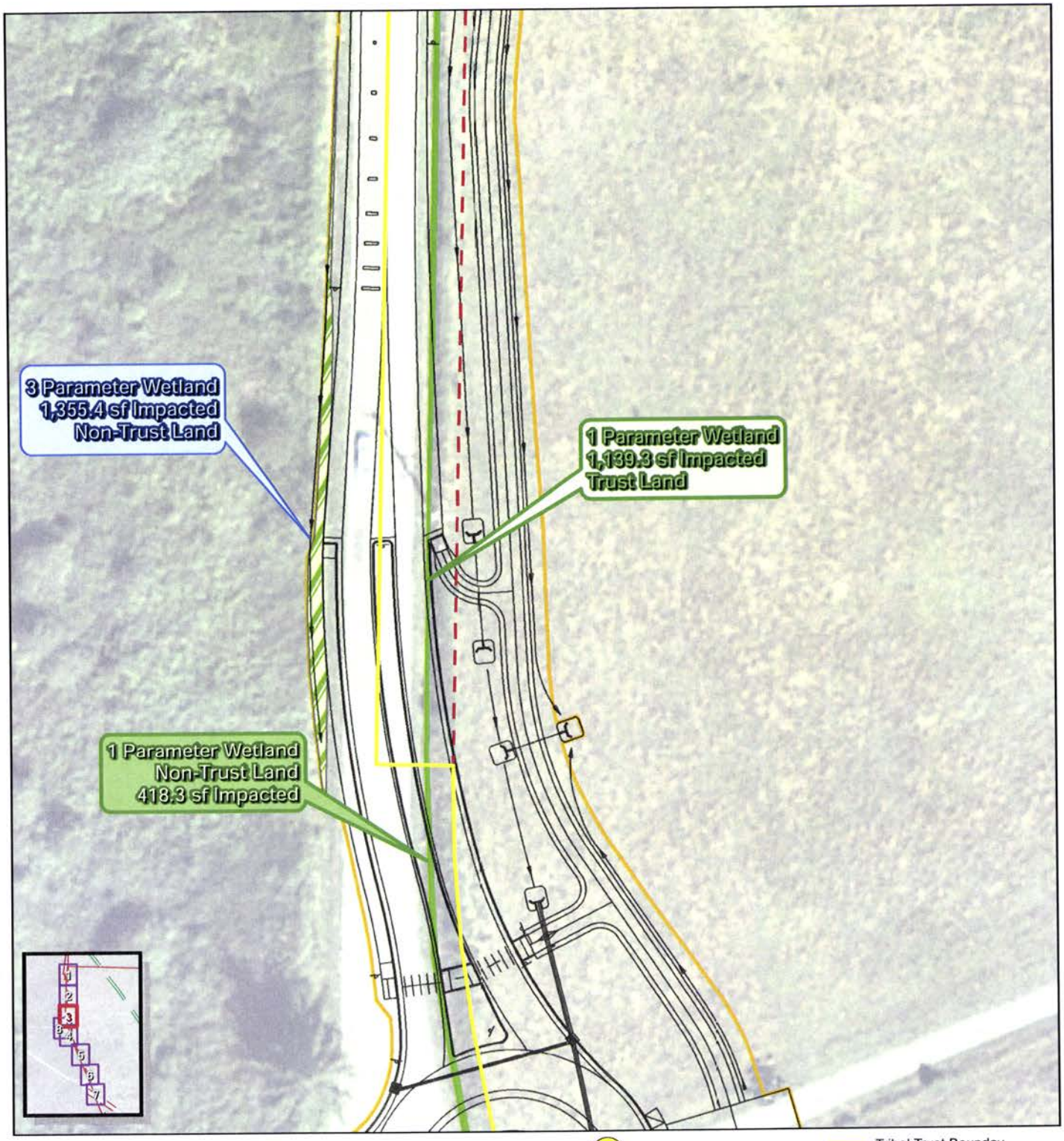

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Elk Valley Rancheria, California
Humboldt Road Improvements

Job Number 0182810001
Revision A
Date 19 Feb 2014

Project Footprint
& Wetland Impacts

Figure 2-3

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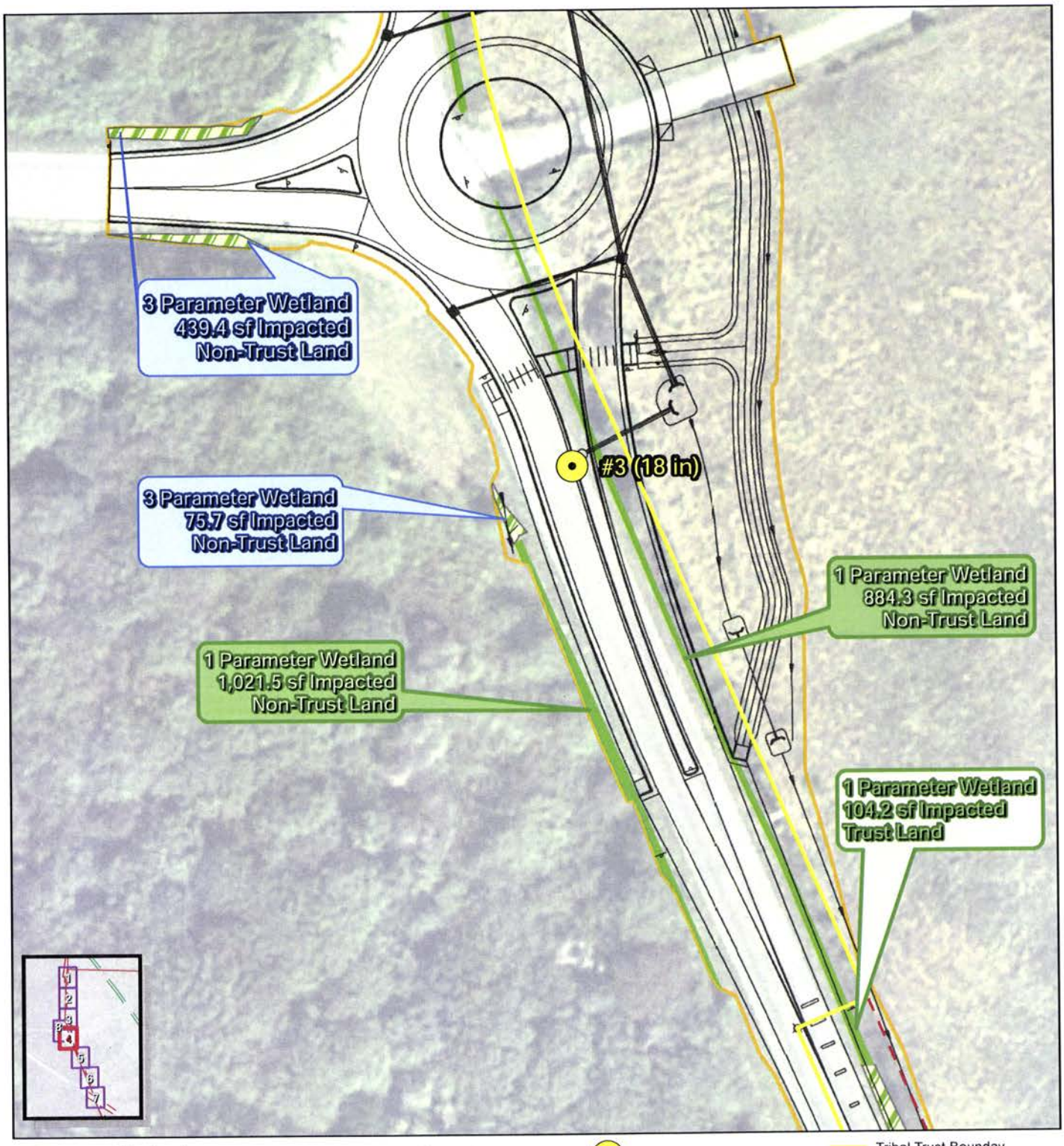

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Elk Valley Rancheria, California
Humboldt Road Improvements

Job Number 0182810001
Revision A
Date 19 Feb 2014

Project Footprint
& Wetland Impacts

Figure 2-4

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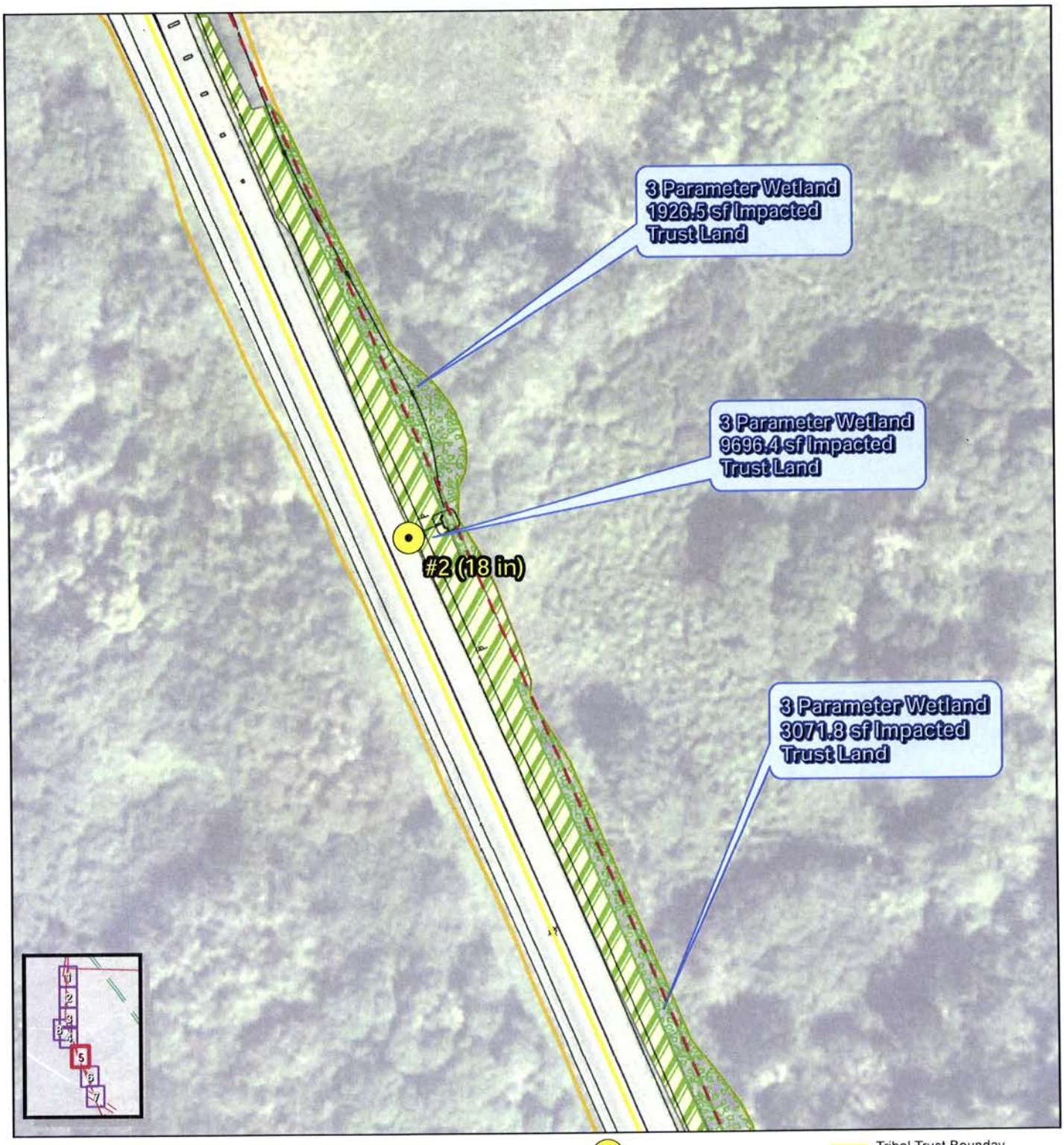

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Elk Valley Rancheria, California
Humboldt Road Improvements

Job Number 0182810001
Revision A
Date 19 Feb 2014

Project Footprint
& Wetland Impacts

Figure 2-5

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Data source: Aerial: NOAA Coastal data, 1 ft resolution; wetland mapping: AES, 2004; W&K, 2010-2011; desing GHD. Created by porogers

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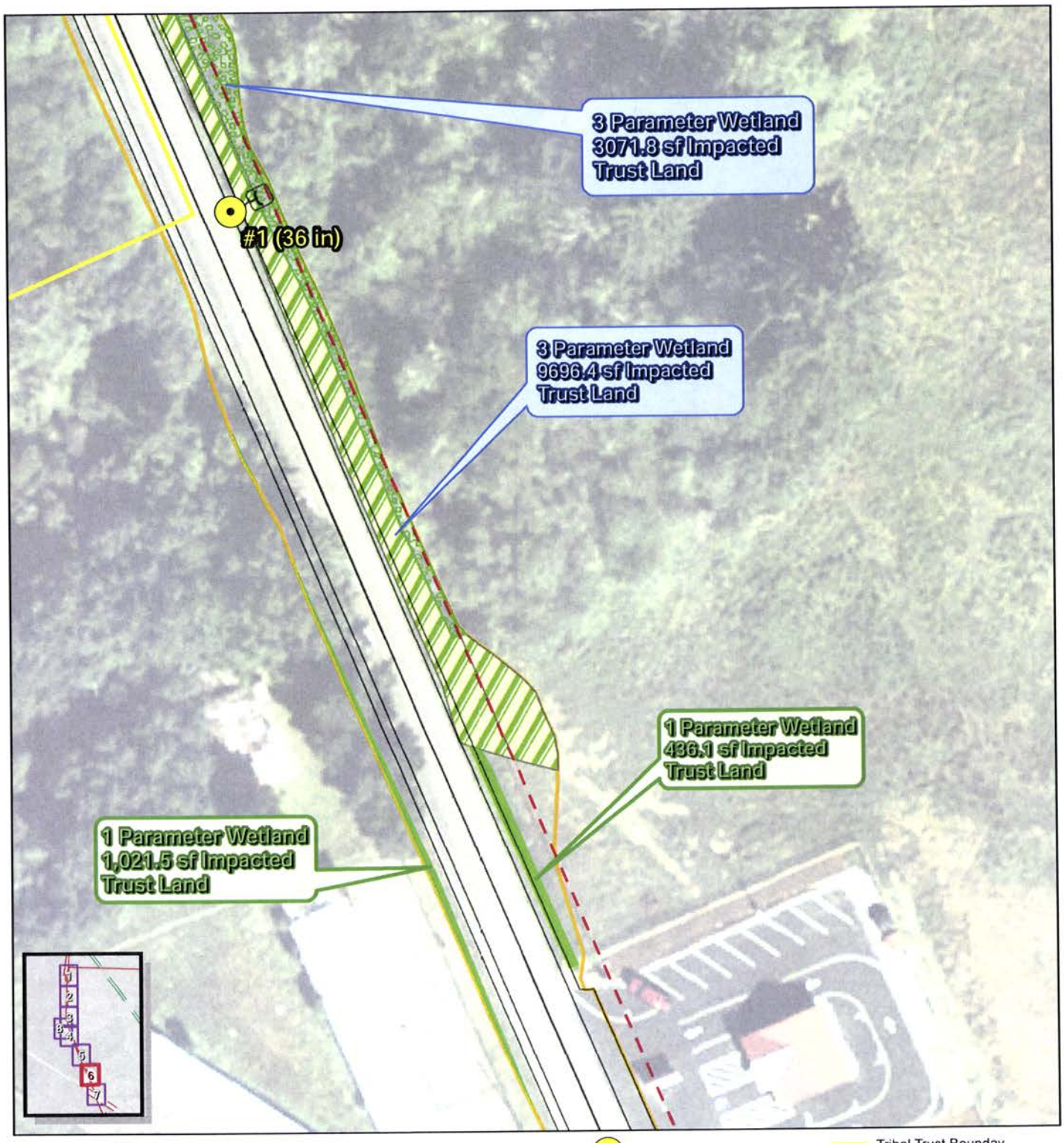

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Elk Valley Rancheria, California
Humboldt Road Improvements

Job Number 0182810001
Revision A
Date 19 Feb 2014

Project Footprint
& Wetland Impacts

Figure 2-6

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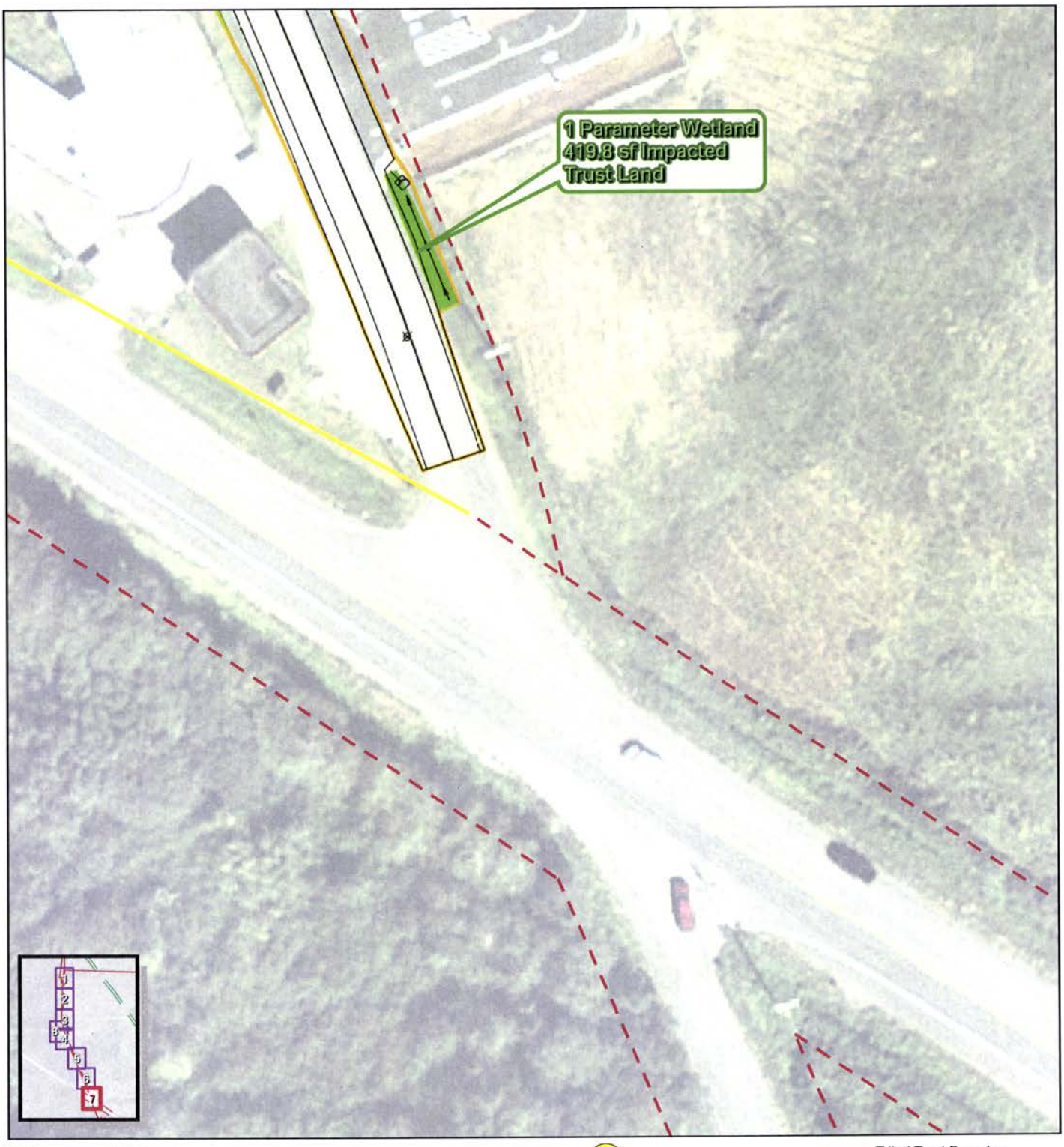
Data source: Aerial: NOAA Coastal data, 1 ft resolution; wetland mapping: AES, 2004; W&K, 2010-2011; desing GHD. Created by porogers

6 of 8



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Elk Valley Rancheria, California
Humboldt Road Improvements

Job Number 0182810001
Revision A
Date 19 Feb 2014

Project Footprint & Wetland Impacts

Figure 2-7

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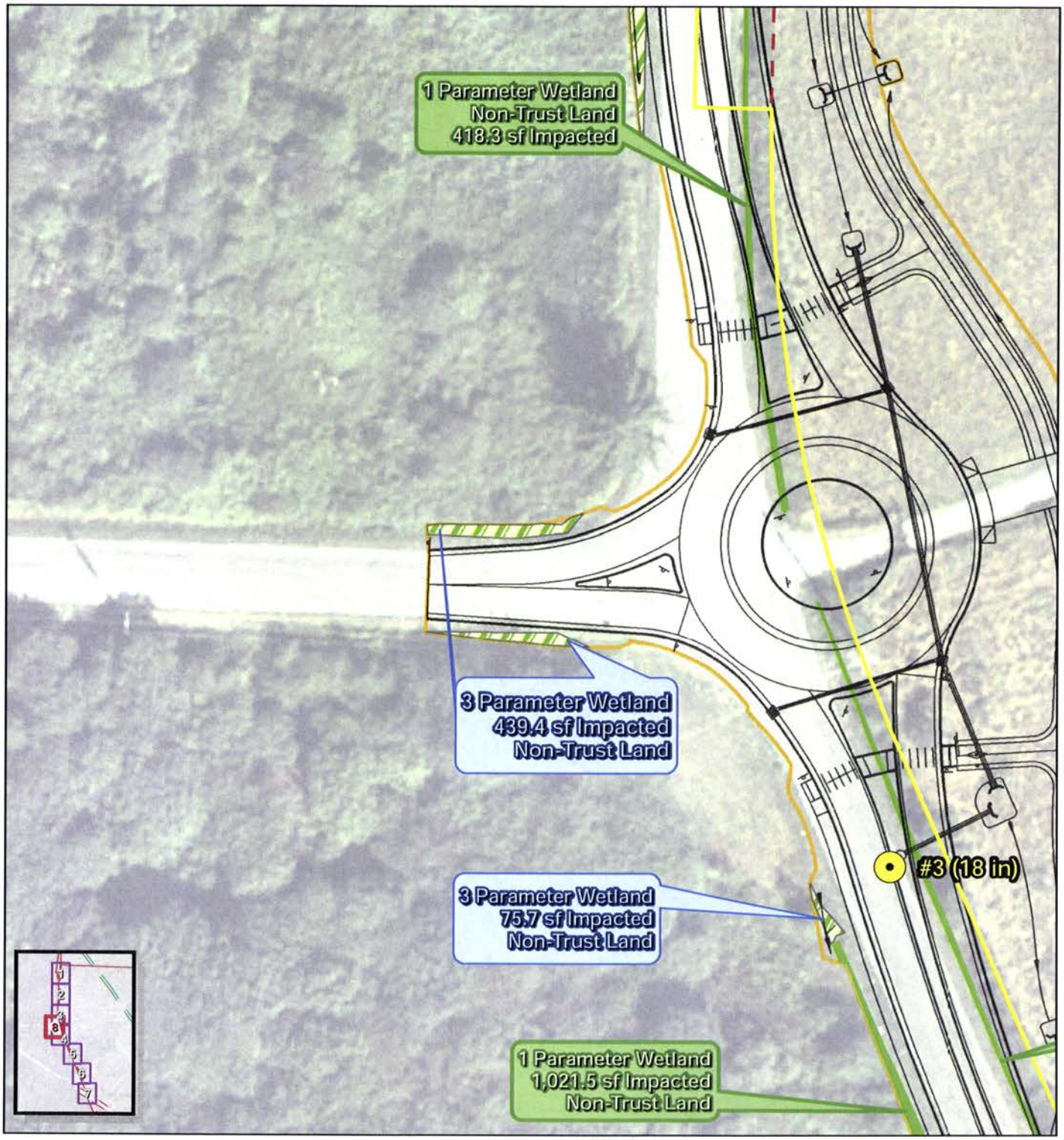
Data source: Aerial: NOAA Coastal data; 1 ft resolution; wetland mapping: AES, 2004; W&K, 2010-2011; desing GHD. Created by: porogers



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Project Footprint
& Wetland Impacts

Figure 2-8

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8 of 8

EXHIBIT NO. 7
APPLICATION NO.
A-1-DNC-12-021 and
CC-0001-14 (Elk Valley Rancheria)
ANALYSIS OF ALLOWABLE USE FOR WETLAND FILL AND ALTERNATIVES (EXCERPT) (1 of 12)

August 2, 2013

Melissa Kraemer
California Coastal Commission
1385 8th Street, Suite 130
Arcata, CA 95521

RE: Commission Appeal No. A-1-DNC-12-021 – Elk Valley Rancheria's Humboldt Road Safety Improvement Project.

Dear Ms. Kraemer,

INTRODUCTION

The Elk Valley Rancheria, California, is seeking regulatory approval for the proposed Humboldt Road Safety Improvement Project, located in Del Norte County, California. Section 30233 of the Coastal Act regulates development activities within or affecting wetlands within the Coastal Zone in the following manner: a) identifies seven allowable uses; b) requires that the proposed project be the least environmentally damaging feasible alternative; and, c) where applicable, requires feasible and appropriate mitigation.

The Humboldt Road Safety Improvement Project is located along an approximately 3,000-ft-long stretch of Humboldt Road between Highway 101 and Roy Ave. The County of Del Norte issued a coastal development grading permit with conditions (GP2011-32C) to the Elk Valley Rancheria for the project. The decision was appealed by (1) Friends of Del Norte and (2) Commissioners Mark Stone and Esther Sanchez (A-1-DNC-12-021). The Coastal Commission subsequently opened the public hearing on the appeal on September 13, 2012 and adopted the staff recommendation finding that a "substantial issue" exists with respect to the grounds on which the appeal had been filed. As a result, the County's approval was deemed no longer effective.

A letter from Melissa Kraemer dated September 14, 2012 outlined information requested by the Commission staff needed to determine if the project can be found consistent with the policies and standards of the certified local coastal program. Commission Staff (Bob, Melissa), GHD staff (Josh and Misha) and Brad Downes of EVR met to review the September 14, 2012 letter and commission concerns. At the meeting it was agreed that the applicant/Tribe could address some of the more critical items identified in the letter initially, and then provide follow up information on the less critical items at a later date.

The information contained in this memorandum aims to address items number 2 (Clarification on the extent of wetland impacts), 3 (Alternatives Analysis) and 4 (Additional information on allowable use). Additional information on the other items will be provided following the commissions review of the information provided herein.

PERMISSIBLE USE FOR FILL

The first test for a proposed project involving fill is whether the fill is for one of the seven allowable uses under Section 30233(a). Based on the information provided below, the proposed project is determined to be an allowable use per uses 4 and 7:

> *(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.*
>
> *(7) Nature study, aquaculture, or similar resource dependent activities.*

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Regarding item 4, in order to qualify as an "incidental public service purpose," a proposed fill project must satisfy two requirements: (1) the project must have a "public service purpose," and (2) the purpose must be "incidental" within the meaning of that term as used in Section 30233(a)(4).

The proposed Humboldt Road Safety Improvement project does have a public service purpose. This project will bring Humboldt Road, an existing public facility that provides essential transportation services to the public, up to current Del Norte County road design and safety standards. The stated purpose of the development is twofold: (1) to improve safety along the corridor for motor vehicles, pedestrians, and bicyclists; and (2) to upgrade the road to current County standards. Humboldt Road is designated as a collector road on the California Road Systems (CRS) maps. The Del Norte County Code (section 12.04.070) requires collector roads have a minimum 24 foot wide paved surface with four foot graded or paved shoulders, for a total minimum width of 32 feet. The section of roadway that is proposed for widening has travel lanes of approximately 11 feet with nonexistent shoulders, a sharp drop off at the edge of pavement, no bike or pedestrian facilities (even though the road is a designated bike route), no clear recovery area, poor intersection sight distance, non-standard intersection alignment, no intersection lighting, and fog lines that are too close to pavement edges. The substandard road conditions increase the potential for accidents when drivers are confronted with an emergency and have no room to recover.

Traffic collision data for the last five years of available data was obtained from the CHP, through the State-wide Integrated Traffic Record System (SWITRS). Between the years of 2006 and 2011, there were eight (8) collisions in the vicinity of the Humboldt Road/Sandmine Road intersection. Of those collisions, unsafe speed and the ability to negotiate the intersection were noted as associated collision factors.

A collision rate analysis was conducted for the intersection of Humboldt Road/Sandmine Road (see Attachment 5). The average crash rate was calculated to be 2.04 per Million Entering Vehicles (MEV). Based on the 2002 and 2007 Collision Data on California State Highway, published by Caltrans, the statewide average rate for similar intersections was 0.22 MEV. Based on the analysis, the collision rate for the Humboldt Road/Sand Mine Road intersection is nearly ten times the state average for an intersection of this type, which is considered "high."

The proposed project alternative includes 11 foot travel lanes and four foot paved shoulders with one foot of shoulder backing for a total width of 32 feet, which meets the minimum width required by Del Norte County Code for a collector road. According to the American Association of State Highway and Transportation Officials (AASHTO), road shoulders (besides being required by Del Norte County Code) provide the following safety benefits for motorized and non-motorized users:

- Provide room for vehicles to make evasive maneuvers (clear recover zone)
- Accommodate bicycles and pedestrians who choose not to utilize the multi-use path
- Reduce passing conflicts between motorized and non-motorized users
- Provide parking for disabled and emergency vehicles

In addition, shoulders provide for structural support to pavement, increasing the life expectancy of the road surface, and provide space for roadway maintenance operations to occur.

Fill associated with this project adjacent to the roadway to improve the road for public safety purposes is incidental to the existing road's primary transportation purpose.

In regard to the second item (test), in 1981 the Coastal Commission adopted the "*Statewide Interpretive Guidelines for Wetlands and Other Environmentally Sensitive Habitat Areas*." These guidelines analyze the allowable uses in wetlands under Section 30233 including the provision regarding "incidental public service purposes." The guidelines state that fill is allowed for "incidental public service purposes which temporarily impact the resources of the area." A footnote (3) to the above-quoted further states:

> "When no other alternative exists, and when consistent with the other provisions of this section [i.e., Coastal Act Section 30233], limited expansion of roadbeds and bridges necessary to maintain existing traffic capacity may be permitted."

The Court of Appeal has previously recognized the Coastal Commission's interpretation in the Guidelines of the term "incidental public service purposes: as a permissible one. In 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... roadway expansions are permitted when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.

In past cases the Coastal Commission has considered the circumstances under which fill associated with the expansion of an existing "roadbed or bridge" might be allowed under Section 30233(a)(4). In such cases the Commission determined that, consistent with the analysis in the Guidelines, the expansion of an existing road or bridge may constitute an "incidental public service purpose" when no other alternative exists and the expansion is necessary to maintain existing traffic capacity. The Coastal Commission has previously granted to the cities of Seal Beach and Long Beach a coastal development permit (5-00-321) for the construction of bridge abutments and concrete piles for the Marina Drive Bridge located on the San Gabriel River. The Coastal Commission found that the project involved the fill of open coastal water for an incidental public service purpose because the fill was being undertaken by a public agency in pursuit of its public service mission, and because it maintained existing road capacity.

The Humboldt Road Safety Improvement Project is a public transportation project that will improve roadbed and intersection safety and function. The question thus becomes whether the proposed improvements are necessary to maintain the existing operation of the road.

The project is intended to serve existing users and not intended to increase operational capacity of the road or intersection. The roadway travel lanes will maintain existing width, and the shoulder widening is required to meet Del Norte County Code but will also increase safety for both motorized and non-motorized users.

According to the traffic study prepared by W-Trans (dated March 6, 2006) for the Elk Valley Rancheria, the intersection of Sand Mine Road/Humboldt Road currently operates acceptably at LOS A, and is expected to continue to operate acceptably into the future at LOS B without any improvements. The study indicates that a roundabout could be installed at the Sandmine Road/Humboldt Road intersection to serve as an entry feature to the area, but that it is not necessary from a capacity standpoint, which demonstrates that the capacity of the roadway is not a concern. Therefore, the function of the proposed roundabout would be to improve safety, not to increase capacity.

The proposed project will provide improved safety to an existing publicly managed/used facility that provides essential transportation services to the public; therefore, fill associated with this project is for a public service purpose and thus the project satisfies this requirement under Section 30233(a)(4). Thus the second item is satisfied as the proposed project is incidental to the operation of the road.

Regarding item 7, several segments of the Class I multi-use coastal-access trail proposed in the selected alternative pass through wetlands and facilitate nature study access, but also unavoidably entail filling of wetlands. The proposed wetlands fill/vegetation removal associated with the overall project is needed in part for the construction of the trail through wetland areas that could not be otherwise be avoided to

provide a 12-foot cross-sectional width to meet minimum Class I bikeway standards as required by the funding agencies for multi-modal trails.

The remainder of this section is based on findings from staff report F8b (November 4, 2011) for the Elk River Access Area / Hiksari Trail Project. The analysis provided in staff report F8b seems to be directly relevant to the Humboldt Road Safety Improvement Project.

The Commission has considered the development of new recreational trail segments through wetlands and other environmentally sensitive resource areas, where design efforts have been made to minimize such intrusions to the smallest feasible area or least impacting routes, and where the trail segment functions as a nature trail, to be a form of "nature study… or similar resource dependent activities" (see findings for County of Santa Barbara LCP Amendment No. STB-MAJ-3-02 (Toro Canyon Planning Area) County of Humboldt LCP Amendment No. HUM-MAJ-1-03 (Riparian Corridor Trails), and Coastal Development Permit 3-11-074, City of Santa Cruz, Applicant (Arana Gulch Master Plan)). Trails are utilized for a variety of utilitarian and aesthetic reasons. Although the use of trails does not in every case entail nature study, the proposed facilities certainly support such a pursuit. The trail plans and project narrative include provisions for installation of interpretive panels along the route.

Thus, the trail would function as a nature trail and the project would include interpretive panels about the adjoining habitat, existing coastal resources, and the Tribe's ecocultural history, directly facilitating the public's ability to experience the adjoining habitat. By providing venues for incidental exploration of the physical and biological world, trails in natural settings are generally recognized as one of the best ways to ensure continued public support for protecting environmentally significant natural areas and to encourage an appropriate level of visitation. This perspective is at the core of the many public outreach and grant-funding efforts undertaken by natural resource conservation-oriented public agencies and other non-government organizations, from the Coastal Conservancy to many of the numerous land trusts involved in public access acquisition and development. Regardless of their age, people in general are more likely to develop a stewardship ethic toward the natural environment if they are educated about the importance to the overall ecosystem, especially if they are provided the opportunity to experience the physical, mental and spiritual benefits of these areas first-hand. Providing for the development of trails into coastal wetland areas can be an ideal setting for such activities, as they offer a safe, convenient and unique perspective of the rich and diverse biological resources. Thus, trails through wetland areas such as the project site may similarly be considered a form of "nature study… or similar resource-dependent activities," as they are: (1) a development type integral to the appreciation and comprehension of biophysical elements that comprise riparian areas; and (2) dependent upon the presence of the natural area resource through which they pass to provide a nature study experience.

Finally, the trail will provide connections for bicyclists and pedestrians between the Elk Valley Rancheria and the Bertsch-Oceanview neighborhood to Jedediah Smith Redwood State Park, Enderts Beach Road, and several beach trails. The trail, which would be parallel to Humboldt Road, would be the most direct bike/ped route from Highway 101 and the coast to the Rancheria and the surrounding neighborhoods. Accordingly, the proposed Class I multi-use trail would serve as a vital bicycle/pedestrian coastal access facility.

Therefore, it is concluded that the proposed project is consistent with Section 30233 of the Coastal Act per Allowable Uses Numbers 4 and 7. An Alternatives Analysis is therefore required in accordance with Section 30233 of the California Coastal Act which allows for the filling, placement of structures within, dredging, or diking of wetlands, provided the project is an allowable coastal use and that there are no less environmentally damaging feasible alternatives. The alternatives analysis is presented in the following section.

SUMMARY AND OVERVIEW OF ALTERNATIVE ANALYSIS

The second test of Section 30233(a) is whether there are feasible less environmentally damaging alternatives to the proposed project. As demonstrated below, a number of alternatives were considered, most of which were rejected because they were infeasible and/or did not satisfy the project goals. The remaining alternatives were analyzed.

The preferred alternative includes the installation of shoulders along both edges of Humboldt Road, shifting a draining ditch containing wetlands by approximately five feet, installation of a Class I multi-use trail along the east side of the roadway, interpretive signs along the multi-use trail, and a roundabout at the intersection of Humboldt Road and Sandmine Road as shown in Figures 1 and 2 (Attachment 1). Analysis throughout the following pages demonstrates that this preferred alternative has the smallest environmental impact of all the alternatives that are feasible and that meets the project goals.

The preferred alternative would require filling of wetlands in the coastal zone. Per Coastal Act Section 30233(a)(4) (Incidental Public Service Purposes), the filling of wetlands is permissible because the preferred alternative provides critical safety improvements to a public facility. In addition, per Coastal Act Section 30233(a)(7) (Nature Study), the filling of wetlands is permissible because the preferred alternative includes a mutli-use trail that provides coastal access and that includes interpretive signs that will educate the general public about the site's existing coastal resources and ecocultural history.

CCC GUIDANCE FOR ALTERNATIVES ANALYSES

Per the Commission's policies, the project must have no feasible less-environmentally-damaging alternative. Coastal Act Section 30108 defines "feasible" as follows:

> *"Feasible" means capable of being accomplished in a successful manner within a reasonable time, taking into account economic, environmental, social, and technological factors.*

The Commission Procedural Guidance, Appendix C, provides that an Alternatives Analysis should include the following (CCC, 1981):

a) A review of all feasible alternatives including:
    1. Consideration of alternative sites, including sites which are completely outside the wetland.
    2. Reconfiguration of the project including a reduction in project size, density, or coverage.
b) Identifies the wetland impacts of each alternative, including a determination of the amount of habitat lost and an analysis of the impacts to the functional capacity of the system.
c) Selects the least damaging feasible alternative.

The alternatives analysis examines the proposed project and compares it to other possible alternatives to determine which feasible alternative is the least environmentally damaging. The feasible alternative with the lowest overall coastal resource impacts is deemed the least environmentally damaging feasible alternative.

PROJECT GOALS

Prior to providing an analysis of the alternatives, it is important to emphasize the project's goals. A version of the project goals are stated in the NEPA Environmental Assessment (EA) that was completed for the project in November of 2010 (with FONSI filed later that year). The purpose and needs of the project have since been amended to include a nature study element per agency recommendations. In general, the purpose of the project is to provide a transportation facility for vehicles, pedestrians, and bicycles that is safer, more efficient, and more reliable than the road as it currently exists. The specific goals of the project are as follows:

1. Improve overall safety for vehicular traffic;
2. Make roadway safer for pedestrians, bicycles, and equestrian use by providing a pedestrian-oriented transportation facility separated from the vehicular travel lanes;
3. Redesign roadway to meet or exceed American Association of State Highway and Transportation Officials (AASHTO) standards, eliminating current design deficiencies and improving overall user safety;
4. Improve operations and safety (for all users) at the intersection of Humboldt Road and Sandmine Road by implementing improvements such as a roundabout as suggested in the 2006 Traffic Study by W-Trans;
5. Provide opportunities for nature study by including a Class I multi-use trail and interpretive signs/panels that provide educational information about adjoining coastal wetland habitat, and the Tribe's ecocultural history;
6. Design the project in such a way that above safety improvements are met while minimizing the total impacts to wetlands, environmentally-sensitive habitats (ESHAs), and other natural areas/habitats;
7. Minimize project costs while maintaining the tenets of the above purposes.

OVERVIEW OF PROJECT ALTERNATIVES

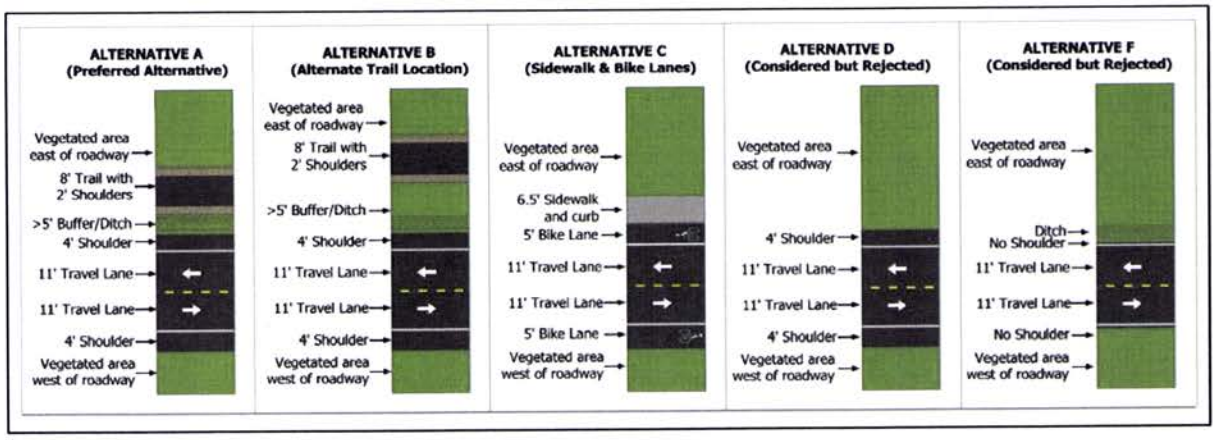
There are two geographically distinct sets of alternatives for this project: the intersection and the lane configurations as shown in Figure 2 (Attachment 1). Alternatives associated with the intersection of Humboldt Road and Sandmine Road are numbered 1 through 6. Alternatives associated with the lane configurations of Humboldt Road (outside the above mentioned intersection) are lettered A through F. As shown in Table 1 (Attachment 3), the overall project could consist of any combination of the numbered and lettered alternatives (e.g. 1A, 3E, 5C, etc). However, as is shown in Table 2 (Attachment 3) and in the analyses below, many of these combinations of alternatives were rejected as they failed to meet the above project goals and/or were rejected per the recommendations of the project's Traffic Engineer (found in Attachment 2). The alternatives that were considered are listed below and described in the next section of this memo.

<u>INTERSECTION ALTERNATIVES (Intersection of Humboldt Road and Sandmine Road)</u>

1. Roundabout
2. Considered but Rejected - Realignment of Intersection (infeasible because not recommended by Traffic Engineer)
3. Considered but Rejected - Reconfigure intersection to be a 3-way stop (infeasible because not recommended by Traffic Engineer)
4. Considered but Rejected - Reconfigure and signalize intersection (infeasible because not recommended by Traffic Engineer)
5. Considered but Rejected - Re-locate roadway (infeasible)
6. Considered but Rejected - No Action Alternative (does not meet project goals)

<u>ROAD CONFIGURATION ALTERNATIVES (along Humboldt Road excluding the intersection analyzed above)</u>

A. 11-foot lanes, 4-foot shoulders, & separated Class 1 Trail (8' wide with two 2' shoulders)
B. 11-foot lanes, 4-foot shoulders, and 12' Class I Trail (alternate location)
C. 11-foot lanes, 5-foot shoulders (Class II Bike Lane), and a raised sidewalk
D. Considered but Rejected - 11-foot lanes, 4-foot shoulders, and no designated pedestrian facilities (does not meet project goals)
E. Considered but Rejected - Re-locate roadway (infeasible)
F. Considered but Rejected - No Action Alternative (does not meet project goals)



ANALYSIS OF ALTERNATIVES: INTERSECTION OF HUMBOLDT ROAD AND SANDMINE ROAD

Intersection Alternative 1

Alternative 1 consists of a single lane roundabout with an inscribed circle diameter of 115 feet, which would replace the existing two-way stop control. The geometric design would include raised splitter islands, truck apron, a non-traversable central island, appropriate entry path deflection, and provision for bicycle and pedestrian traffic crossings. This alternative satisfies the project goals.

This alternative is considered to be the best of the intersection alternatives for providing safety. According to analysis provided the project's Traffic Engineer (see Attachment 2), roundabouts have been demonstrated to be safer than other forms of intersections. The safety is a product of the design, as opposed to reliance on driver's compliance with signage and markings. For instance;

- Vehicles travel in the same direction, eliminating right angle collisions
- Speeds are controlled by geometric features, at all times of the day
- Speeds are reduced, reducing sight distance requirements
- Increased likelihood for drivers to yield to crossing pedestrians or cyclists
- More time is provided for entering drivers to judge, adjust speed for, and enter a gap in circulating traffic, allowing for safer merges
- More time for all users to detect and correct for their mistakes, or mistakes of others
- Make crashes less frequent and less severe, including crashes involving pedestrians and cyclists

According to the Federal Highway Administration (FHWA) single-lane roundabouts designed for low-speed operation are one of the safest treatments available for at-grade intersections. Drivers have no lane use decisions to make. Pedestrians cross one lane of traffic at a time. Roadway speeds and widths are low enough to allow comfortable mixed bicycle and motor vehicle flow.

Additionally, roundabouts can provide environmental benefits, reducing vehicle delay, the number and duration of stops. Thereby reducing noise, air quality impacts, and fuel consumption by reducing the number amount of acceleration and deceleration and the time spent idling.

The intersection would be expected to operate at LOS A under both Existing and Future Conditions with the construction of a roundabout. Vehicle emissions and associated measures of effectiveness are expected to be reduced beyond that of the existing two-way stop control.

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Figure 3 in Attachment 1 shows a footprint of this Alternative in relation to the mapped wetlands. Figure 4 shows wetlands impacts associated with the Alternative.

Intersection Alternative 2: Realignment of Intersection (REJECTED)
Alternative 2 proposes to realign the intersection to accommodate the predominant traffic movements at the intersection, which are from the north leg of Humboldt Road to the west leg of Sandmine Road. The intersection would be realigned so that the stop sign would be assigned to the northbound traffic on Humboldt Road while the stop sign would be removed from the east end of Sandmine Road, allowing traffic traveling from Sandmine Road to Humboldt Road to flow through uncontrolled. In order to accommodate this uncontrolled or "free" movement of these turns at prevailing speeds, a large radius curve would be required at the northwest side of the current intersection. This alternative, while likely to have the least amount of vehicle delay and emissions, was rejected by the Traffic Engineer due to right-of-way requirements and anticipated impacts to the adjacent sensitive habitats in the northwest quadrant of the intersection.

Intersection Alternative 3: Reconfigure Intersection to be a 3-way Stop (REJECTED)
Alternative 3 consists of installation of all-way stop controls. In this scenario, two new stop signs would be installed. All traffic entering the intersection would be required to stop. According to the project's Traffic Engineer (see Attachment 2), the intersection does not satisfy the required all-way stop control warrants. Therefore, this alternative is not feasible and was rejected.

Intersection Alternative 4: Reconfigure and Signalize Intersection (REJECTED)
Alternative 4 consists of installation of all-way signalized stop controls. In this scenario, new traffic signals would be installed. According to the project's Traffic Engineer (see Attachment 2), the required traffic signal volume and operational warrants would not be satisfied. Therefore, this alternative is not feasible and was rejected.

Intersection Alternative 5: Relocate Intersection (REJECTED)
Alternative 5, consist of relocating he intersection to a different location. In order to relocate the intersection, Humboldt Road and Sandmine Road would need to be realigned to shift the intersection away from its current location. Humboldt Road currently serves as the exclusive collector street for at least 16 local residential roads. It is not possible to relocate Humboldt Road and simultaneously continue to serve these 16 local roads. Additionally, any minor realignment of the roadway to the east or west of the existing road alignment would impact significantly more wetlands than any of the other lane configuration alternatives. Therefore, this alternative was rejected.

Intersection Alternative 6: No Action Alternative (REJECTED)
Under Alternative 6 (No Action), the intersection of Humboldt Road and Sandmine Road would remain in its current unsafe condition. According to the project's Traffic Engineer (see Attachment 2), the existing conditions are not conducive to operational or safety goals of the proposed project. Therefore, this alternative was rejected because it does not meet the project goals of improving safety, redesigning the roadway to meet AASHTO standards, making the roadway safer for pedestrians/bicycles, or implementing intersection operational and safety improvements.

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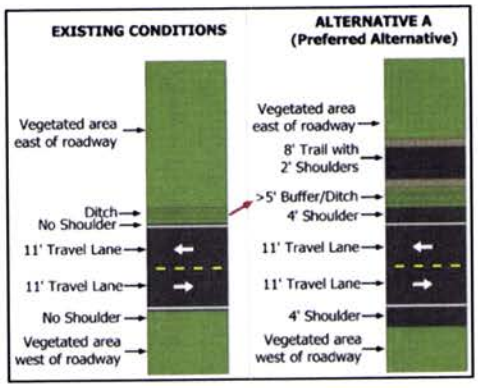
ANALYSIS OF ALTERNATIVES: LANE CONFIGURATIONS AND PEDESTRIAN FACILITIES ALONG HUMBOLDT ROAD

Lane Configuration Alternative A: 11-foot lanes, 4-foot
Alternative A proposes to maintain the existing 11-foot travel lanes, add two new 4-foot shoulders, relocate the existing drainage ditch slightly to the east, and install a new Class I bike trail east of the new ditch. Figure 3 in Attachment 1 shows a footprint of this Alternative in relation to the mapped wetlands. Figure 4 shows wetlands impacts associated with the Alternative.

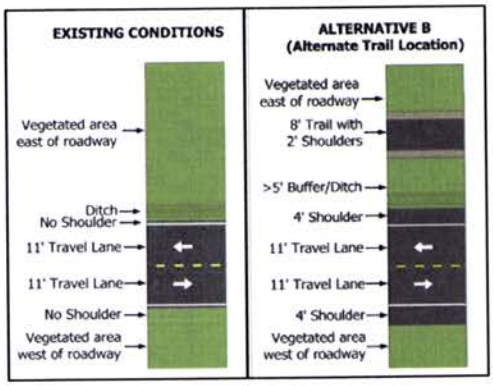


As the image to the right demonstrates, the existing ditch would need to be shifted approximately five feet to the east to accommodate the 4-foot shoulder on the east side of the road. Under this alternative, storm water would continue to sheet flow from the roadway to the east as it currently does, however the ditch would be located approximately five feet east of its currently location. The existing ditch was delineated as "palustrine emergent wetlands." It can be assumed that the relocated ditch would serve the same functions as the existing ditch as it would be located in the same soils as the existing ditch and would receive approximately the same amount and types of storm water as the existing ditch.

As stated in the 2010 NEPA EA, Humboldt Road provides connections between the Elk Valley Rancheria and the Bertsch-Oceanview neighborhood to Jedediah Smith Redwood State Park, Enderts Beach Road, and several beach trails. Humboldt Road is the most direct route from Highway 101 and the coast to the Rancheria and the surrounding neighborhoods. Accordingly, the proposed Class I multi-use trail presented in this alternative would serve as a vital bicycle/pedestrian coastal access facility. It would also provide opportunities for "nature study," which is one of the allowable uses of filling wetlands in the coastal zone. To enhance the opportunities for nature study, the Tribe is proposing as a part of this alternative to include interpretive signs along the trail that would display graphical and textual educational information the site's existing coastal resources as well as the Tribe's ecocultural ties to the coastal environment.

This alternative satisfies all the project goals to a greater degree than any of the other Lane Configurations and Pedestrian Facility Alternatives. This alternative provides the best solutions for: improving vehicular safety; meeting or exceeding AASHTO standards eliminating current design deficiencies; and making the roadway safer for pedestrians, bicycles, and equestrian use by providing a pedestrian-oriented transportation facility separated from the vehicular travel lanes. This alternative is expected to cost less than the other feasible alternatives that meet the project goals.

Lane Configuration Alternative B: 11-foot lanes, 4-foot shoulders, and 12' Class I Trail (alternate location)
Alternative B is generally identical to Alternative A, but would re-locate the Class I Trail further to the east, further from the roadway. Because of a series of wetlands to the east of the roadway, this alternative would have greater impacts to wetlands than Alternative A. Therefore, this alternative is not the environmentally superior alternative. Figure 5 in Attachment 1 shows a map of this Alternative.



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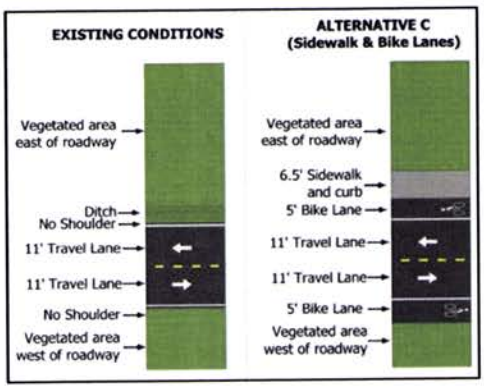
Lane Configuration Alternative C: 11-foot lanes, 5-foot shoulders (Class II Bike Lane), and a raised sidewalk (REJECTED)

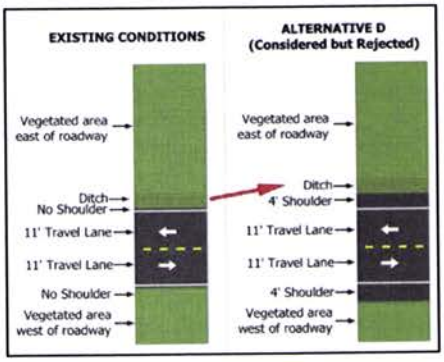


Alternative C proposes to maintain the existing 11-foot travel lanes, add two new bike lanes, add a curb, and add a raised sidewalk to the east side of the road.

Currently, storm water sheet flows from the roadway to the east into an existing 3-foot-wide ditch. As the image to the right demonstrates, the existing ditch would need to be filled to accommodate the eastern bike lane and the sidewalk. A curb would need to be installed because the sidewalk would be raised above the grade of the roadway. The curb would prevent storm water from sheet flowing off the road. Therefore, drop inlets would be installed along the edge of the curb and storm water would be conveyed underground. Accordingly, the existing wetland ditch would be filled and would need to be mitigated off site. Therefore, this alternative would fill more wetlands than Alternatives A and B. The underground piped storm water system would also result in a reduction in water quality when compared to the above-ground ditch/drainage swale described in Alternatives A and B. Thus, this alternative is not the environmentally superior alternative.

Though this alternative would include both bicycle and pedestrian facilities, it does not fulfill the project goals of providing bike/pedestrian safety as well as Alternatives A and B. Since bicycle traffic would be directly adjacent to vehicular traffic, the bike lanes would be less safe than a separated bike path. This alternative would also be much more expensive than Alternatives A and B as a result of the higher cost of the concrete sidewalk compared to an asphalt concrete trail, the additional cost associated with the underground storm drainage system, and because this alternative would require the relocation of up to eight utility poles. Therefore, this alternative does not meet the project goals as well as Alternatives A or B and was rejected.

Intersection Alternative D: 11-foot lanes, 4-foot shoulders, and no designated pedestrian facilities (REJECTED)



Alternative D would maintain the existing 11-foot travel lanes and add 4-foot shoulders, but does not include the separated trail or any other designated pedestrian/bike facilities.

As the image to the right demonstrates, the existing ditch would need to be relocated to accommodate the eastern four-foot shoulder. There would be no net loss of wetlands, but the wetland ditch would need to be relocated slightly to the east. However, this alternative was rejected because it does not meet the project goals of making the roadway safer for pedestrians, bicycles, and equestrian users by providing a pedestrian-oriented transportation facility separated from the vehicular travel lanes. Therefore, this alternative was rejected.

Lane Configuration Alternative E: Relocate Roadway (REJECTED)

Alternative E, relocating the roadway, is not feasible. The roadway currently serves as the exclusive collector street for at least 16 local residential roads. It is not possible to relocate Humboldt Road and

simultaneously continue to serve these 16 local roads. Additionally, any minor realignment of the roadway to the east or west of the existing road alignment would impact significantly more wetlands than any of the other lane configuration alternatives. Therefore, this alternative was rejected.

Lane Configuration Alternative F: No Action Alternative (REJECTED)
Under Alternative F, Humboldt Road would continue to have two 11-foot paved travel lanes with no bicycle or pedestrian facilities. This alternative was rejected because it does not meet the project goals of making the roadway safer for pedestrians, bicycles, and equestrian users by providing a pedestrian-oriented transportation facility separated from the vehicular travel lanes, nor does this alternative meet the project goal of redesigning the roadway to meet AASHTO standards. Therefore, this alternative was rejected.

COMBINATIONS OF PROJECT ALTERNATIVES AND CONCLUSIONS OF ALTERNATIVES ANALYSIS
As shown in Table 2 (Attachment 3), most of the alternatives that were considered were rejected because they are either infeasible and/or they do not meet the project goals. There are only two possible combinations that were not rejected: 1A and 1B. Combination 1A consists of a roundabout at the intersection of Humboldt Road and Sandmine Road and a roadway with 4-foot shoulders and a Class I Trail. Combination 1B is the same as combination 1A, with an alternate location for the Class I Trail.

The combination of Alternative 1 and Alternative A constitutes the preferred alternative and has been determined the least environmentally damaging feasible alternative of all the alternatives that are feasible and that meet the project goals. This alternative satisfies all the project goals to a greater degree than any of the alternatives. This alternative is expected to cost less than the other feasible alternatives that meet the project goals. Finally, as shown in the Table 3 (Attachment 3), this alternative has the least amount of wetland impacts of the alternatives considered. Table 4 (Attachment 3) shows an analysis of the types of wetland impacts in related to where the wetland impacts occur relative to trust land.

The preferred alternative (which is also the least environmentally damaging feasible alternative) would require filling of wetlands in the coastal zone, which is permissible per Coastal Act Sections 30233(a)(4) and 30233(a)(7). A wetland mitigation feasibility analysis (Attachment 4: Memo Regarding Feasibility of Wetland Mitigation) was conducted to demonstrate that mitigation for the filling of wetlands is feasible.

FEASIBLE MITIGATION MEASURES
The third test set forth by Section 30233 is whether feasible mitigation measures have been provided to minimize significant adverse environmental impacts. See Attachment 4.

If you have any questions, please feel free to contact me at the number below.

Sincerely,
GHD Inc.

Josh Wolf, PE
Project Manager
707-443-8326

Cc: Brad Downes, Elk Valley Rancheria, California

ATTACHMENTS

- Attachment 1: Figures
- Attachment 2: Recommendations of Traffic Engineer regarding Intersection of Humboldt Road and Sandmine Road (dated 3/29/13)
- Attachment 3: Tables
- Attachment 4: Memo Regarding Feasibility of Wetland Mitigation (dated 11/30/11)
- Attachment 5: Intersection Crash Rate Analysis (6/13/13)

12912

Elk Valley Rancheria, California

Humboldt Road Safety Improvement Project

Wetland Mitigation and Monitoring Plan

February 2014

EXHIBIT NO. 8

APPLICATION NO.

A-1-DNC-12-021 and
CC-0001-14 (Elk Valley Rancheria)

DRAFT WETLAND MITIGATION OF
MONITORING PLAN (EXCERPT) (1 of 45)

1. Introduction

1.1 Summary

This wetland Mitigation and Monitoring Plan (MMP) provides guidance for the implementation of a wetland restoration to offset permanent and temporary impacts associated with the Elk Valley Rancheria, California Humboldt Road Safety Improvement Project for the purposes of improved pedestrian and vehicular safety. This MMP includes the following elements: an ecological assessment of the proposed mitigation site; goals; objectives and performance standards; mitigation components and concept drawings; maintenance and management plan; monitoring methods and performance evaluation; and a remedial action plan.

The Humboldt Road Safety Improvement Project is located along an approximately 3,000 feet stretch of Humboldt Road between Highway 101 and Roy Ave. A vicinity map is provided as Figure 1. The mitigation package include four to one mitigation ratio (four acres of mitigation for every one acre of impact) for permanent impacts, and a two to one (two acres of mitigation for every of impact) ratio for temporary impacts. Wetlands will be mitigation for using a here to one ratio (three acres of created wetland for everyone acre of wetland impact). Riparian habitat is included as a one to one acre ration to meet the mitigation package ration of four to one. The total wetland creation results total approximately 1.32 acres of wetland creation (emergent and forested), 0.39 acres of riparian habitat mitigation and 0.15 acres of ditch relocation. The total Mitigation package equals 1.86 acres. The project and mitigation site is located within the coastal zone where both the Del Norte County Local Coastal Program (LCP) and Coastal Commission Policies apply.

1.2 Project Background

The Elk Valley Rancheria, California (Tribe), through the Elk Valley Rancheria Long Range Transportation Plan, identified the 3,000 foot section of Humboldt Road between US 101 and Roy Avenue as its top safety priority project. The Tribe entered into a Memorandum of Understanding with the County to facilitate road improvements and construction. The Route is part of the Tribe's Bureau of Indian Affairs (BIA) Indian Reservation Road Inventory Program (IRRP). This MMP addresses mitigation for impacts specifically resulting from the implementation of the Humboldt Road Safety Project (Project) in Del Norte County, California.

1.3 Contacts

Questions regarding the Mitigation and Monitoring Plan should be directed to:

Stephanie Klein & Misha Schwarz
GHD
718 Third Street
Eureka, CA 95501
Tel: 707.443.8326 | F: 707.444.8330

2. Project Description

2.1 Location

Humboldt Road Safety Improvement Project is located in Section 35, Township 16N, Range 1W of the Sister Rocks quadrangle map (USGS 1966) in Del Norte County, California. The site is just south of the Crescent City quadrangle map (USGS 1975). Humboldt Road, also known as Bureau of Indian Affairs Route #0088, is the main south/north connector from U.S. Highway 101 to the Elk Valley Rancheria, California's reservation. Portions of the safety improvement project occur on the Martin Ranch Property, which is directly east of Humboldt Road. The Project site is located less than one mile east of the Pacific Ocean and approximately 2.5 miles southeast of Crescent City, California. The Humboldt Road site is accessed directly off of the U.S. 101 (Figure 1).

The Project corridor includes the Humboldt Road intersection with Highway 101 (near the north terminus of Enderts Beach Road) to the northern terminus at the intersection with Roy Avenue and Humboldt Road. From the Highway 101 intersection, the Project extends along the east side of Humboldt Road towards the north, past the intersection with Sandmine Road and the Martin Ranch access driveway, ending at the intersection with Roy Avenue.

The mitigation site is located on Tribal Trust Land east of Humboldt Road on the northern portion of property known as Martin Ranch (Figure 1). This Draft MMP identifies two areas for wetland mitigation. These areas are currently open upland pastures that are used for grazing purposes located on the north side of the property, adjacent to areas of existing forested and emergent wetlands.

2.2 Responsible Parties

The Project site is owned by the Tribe, California Department of Fish and Wildlife, and Del Norte County. The mitigation site is owned by the Tribe. The Tribe will be the responsible entity for financing and developing the Project including the implementation of the mitigation and monitoring plan which includes the subcomponents described below. The maintenance of Humboldt Road is under Del Norte County jurisdiction. The Tribe is pursuing project site funding from the BIA, United States Federal Highway Administration (FHWA), State Transportation Improvement Program (STIP), and STIP Transportation Enhancement (TE), among others.

2.3 Project History

In October of 2011, the Elk Valley Rancheria submitted to the County of Del Norte a CEQA Initial Study & Draft Mitigated Negative Declaration (ISMND) for the Humboldt Road Safety Improvement Project. As is explained in the ISMND, a portion of the project would require the filling of wetlands. Mitigation Measure BIO-3 (page 23 of the ISMND) was developed to mitigate for these impacts and reads as follows:

> BIO-3) The applicant shall develop an on-site compensatory wetland mitigation and monitoring plan approved by the Corps, DFG, Del Norte County, the California Coastal Commission and any other resource agency with jurisdiction. Approximately 0.31 acres of impacts would occur due to the Project. At a minimum, the plan shall: result in no net loss

of wetland area or function; include a planting plan that reflects the native plant species within the wetland types to be impacted; and include maintenance and monitoring of the mitigation site for a minimum of 5 years.

In addition to CEQA requirements, the County of Del Norte issued a Coastal Development Grading Permit (CDGP) with conditions (GP2011-32C) to the Elk Valley Rancheria for the project. The decision was appealed by (1) Friends of Del Norte and (2) California Coastal Commissioners Mark Stone and Esther Sanchez (A-1-DNC-12-021). The California Coastal Commission subsequently opened the public hearing on the appeal on September 13, 2012 and adopted the staff recommendation finding that a "substantial issue" exists with respect to the grounds on which the appeal had been filed. As a result, the County's approval was deemed no longer effective.

A letter from Coastal Commission Planner Melissa Kraemer, dated September 14, 2012, outlined needed information requested by the Commission staff to determine if the project can be found consistent with the policies and standards of the certified LCP. GHD was retained by the Elk Valley Rancheria to provide professional services to assist the Tribe with the appeals of the (CDGP) to the California Coastal Commission (CCC). This MMP is presented to satisfy one of the many requests made by the CCC.

2.3.1 Proposed Project Components

The project site is unsafe for pedestrians as they are forced to walk in the travel lanes, or when avoiding vehicular traffic, and are forced into the steep roadside ditch. There are no existing street lights along the length of the Project site. Existing utility poles and overhead phone and electrical power lines occur along the western and eastern edge of the Project site alignment. Although the entire length of Humboldt Road is designated as a Class II bikeway (City of Crescent City 2001), the project site is not safe for bicycle travel, as there are no bike lanes or paved shoulder. One of the most dangerous portions of the project site is the three-way intersection of Humboldt Road with Sandmine Road, which has no pedestrian safety features.

The proposed project would improve the safety along the improved section of road, minimize environmental impacts, and meet American Association of State Highway and Transportation Officials (AASHTO) standards. The proposed project includes several safety-related infrastructure improvements, including the following:

1. Resurfacing and/or reconstructing the road structural pavement section
2. Construction of roundabout and associated pedestrian crosswalks at the intersection of Humboldt Road with Sandmine Road
3. Construction of five foot wide paved shoulders on each side of Humboldt Road
4. Construction of separated bicycle/pedestrian trail along a discrete portion of the east side of Humboldt Road
5. Construction of street lighting
6. Reconfiguration of drainage ditch on east side of road
7. Construction of new road signage and striping
8. Extension of three drainage culverts that run underneath Humboldt Road

The California Department of Transportation (Caltrans) maintains a right-of-way (ROW) along US 101 that extends approximately 20 feet beyond the existing width of the highway. Humboldt Road would be resurfaced and widened beginning immediately north of the road's northeasterly divergence from the US 101 Caltrans ROW.

2.4 Proposed Mitigation Project

The proposed mitigation project includes habitat creation and enhancement, in-place and in-kind, on Martin Ranch. Martin Ranch contains wetlands along a drainage ditch, identified as the "northern stream" which conveys water from Rellim Ridge (AES 2005). This wetland mitigation plan will increase connectivity to the existing wetlands in an effort to maximize the chance for success of improving the overall function and value of wetland habitat. The existing forested and emergent wetlands will serve as a pool for biota and provides a source for locally occurring flora and fauna allowing passive re-colonization to the created and enhanced wetlands.

The impacts requiring mitigation result from the permanent filling of palustrine emergent wetland (0.10 acres), a palustrine emergent ditch (0.17 acres) and forested wetland (0.12 acres) and temporary impacts associated with filling and relocating of a roadside ditch (0.15 acres).

Current impacts associated with the emergent wetland totals 0.20 acres; using a 3:1 ratio for permanent impacts, approximately 0.60 acres of emergent wetland will be established (created). Current impacts associated with the forested wetlands are approximately 0.04 acres; using a 3:1 ratio for permanent impacts, approximately 0.12 acres of forested wetland will be established (created). The man-made roadside drainage ditch impacts total approximately 0.15 acres. This feature will be mitigated using a 2:1 ratio for this temporary impact, where the drainage ditch will be replaced in kind, as well as, adding 0.15 acres of wetland mitigation to the forested wetland habitat. As a result, this mitigation package totals 0.87 acres of wetland establishment (creation).

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers has regulatory jurisdiction over wetlands and waters of the United States. The project site is within the Coastal Zone jurisdiction regulated by the California Coastal Commission, and will also require a Water Quality Certification.

3. Goals and Objectives

3.1 Mitigation Goals

The purpose of the mitigation project is to compensate for impacts resulting from road safety improvements along Humboldt Road. These improvements will be implemented in a manner that is consistent with the American Association of State Highway and Transportation Officials (AASHTO) standards The overall goal of the proposed mitigation package is to establish and preserve self-sustaining natural palustrine emergent and forested wetlands; establish and preserve riparian habitat; and rehabilitate the adjacent disturbed creek channel that has been invaded by Himalayan blackberry (*Rubus armeniacus*), and other exotic species.

3.2 Mitigation Objectives

Specific mitigation objectives include:

1. Establish native forest and emergent species vegetation assemblage in created wetlands on Martin Ranch Property;
2. Remove and replace the man-made drainage ditch in-kind on Martin Ranch Property;
3. Enhance the northern creek salmonid and other fish bearing stream by removing and managing for invasive plant species along the banks of northern creek;
4. Reduce sedimentation and bank degradation on northern creek by eliminating cattle crossing through fencing the wetlands and creek area; and
5. Increase connectivity between the proposed wetland and the existing red alder deciduous wetlands and wetland prairie habitats.

3.3 Target Habitats

Plant community types that are to be re-established, established (creation) rehabilitated, or enhanced include: palustrine emergent and forested wetlands, palustrine emergent wetland ditch, palustrine forested wetland, and north coast riparian habitat, and enhance salmonid and other fish bearing stream habitat by removing invasive plants along an 650 foot riparian corridor.

- Create Palustrine Emergent Wetland (in mitigation area) 0.79 acres
- Create Palustrine Forested Wetland (in mitigation area) 0.36 acres.
- Re-create Man-made One (1)-Parameter Ditch (adjacent to the improved portions of Humboldt Road) 0.15 acres
- Establish Wetland Ditch (3-Parameter) (adjacent to the improved portions of Humboldt Road) 0.17 acres
- Establish Riparian Habitat (in mitigation area) 0.39 acres

Table one displays the proposed mitigation and associated acreage for each habitat type for the impacts associated with the Humboldt Road Project. Figure set 2 identifies the habitat and spatial area of impact.

Table 1 Wetland Impacts Associated with the Humboldt Road Project.

Wetland Impacted	Project Impact Area (ac)	Mitigation											
		Total Mitigation Package		New Manmade Ditch (1-Parameter)		Palustrine Emergent Wetland				Riparian/Forested Wetland		Riparian	
						Created Wetland Ditch (3-Parameter)		Created Palustrine Emergent Wetland (in mitigation area)					
		Ratio	Area (ac)	Ratio	Area (ac)	Ratio	Area (ac)	Ratio	Area (ac)	Ratio	Area (ac)	Ratio	Area (ac)
Palustrine Forested Wetland[1]	0.12	**4:1**	**0.48**	--	0.00	--	0.00	--	0.00	3:1	0.36	1:1	0.12
Palustrine Emergent Wetland (Non Ditch)[2]	0.10	**4:1**	**0.40**	--	0.00	--	0.00	3:1	0.30	--	0.00	1:1	0.10
Palustrine Emergent Wetland Ditch[3]	0.17	**4:1**	**0.68**	--	0.00	1:1	0.17	2:1	0.34	--	0.00	1:1	0.17
Man-made 1-Parameter Ditch[4]	0.15	**2:1**	**0.30**	1:1	0.15	--	0.00	1:1	0.15	--	0.00	--	0.00
Mitigation Package	**0.54**		**1.86**		**0.15**		**0.17**		**0.79**		**0.36**		**0.39**

1. [1] Forested/Riparian Wetland impacted by culvert extensions and relocated Palustrine Emergent Wetland ditch.
2. [2] Palustrine Emergent Wetland (non-ditch) impacted by road widening, roundabout, and culvert extensions.
3. [3] Palustrine Emergent Wetland Ditch to be relocated to accommodate road widening.
4. [4] Man-made 1-Parameter Ditch to be relocated to accommodate road widening, roundabout, pedestrian trail and drainage facilities.
5. ac = Acres

3.4 Mitigation Site Selection

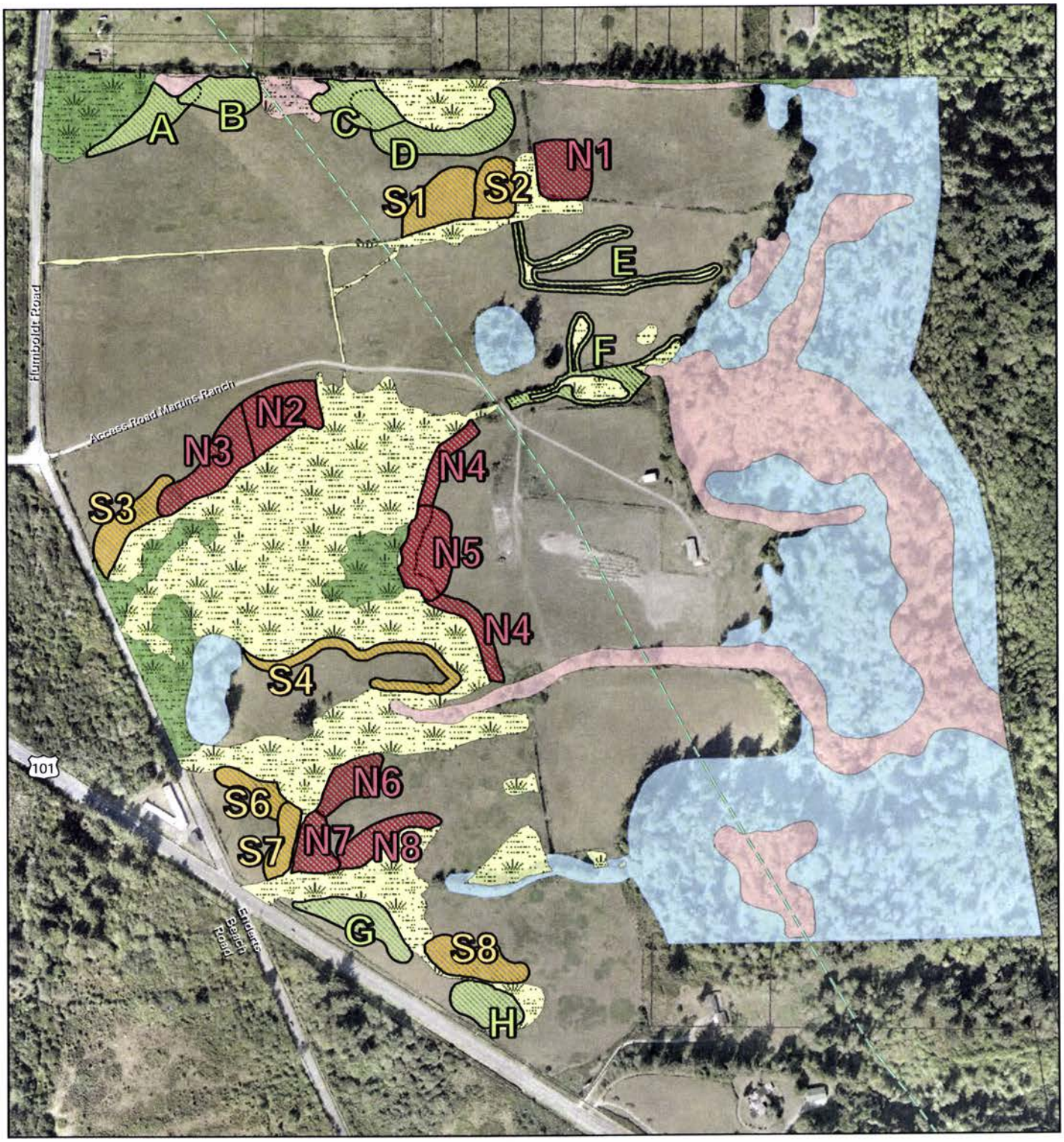
On February 28, 2011 Winzler & Kelly (Currently GHD) staff conducted initial field investigations and developed a memo to determine suitable areas for wetland mitigation of the Martin's Ranch Property. Three tiers of recommendations were made: 1) top recommended sites (A-H), 2) secondary recommendations (S1-S8), and 3) not recommended (N1-N8). Each of the potential mitigation sites are shown on Figure 3. The top recommended sites, as described in the 2011 memo, offer ecological and other advantages that make them the most suitable sites for wetland mitigation on Martin Ranch. The secondary recommendations would also increase ecological connectivity and hydrology; however, these areas would not serve the landscape ecology with the same advantages as the top recommended sites. While the not-recommended sites also have suitable hydrology and feasible ecological connectivity, they offer several disadvantages to the Tribe, by way of disjointing developable lands.

With this assessment in hand, the Tribe was asked to select one of these sites. As a result, the Tribe chose B and C as the top recommended sites because the mitigations site's close proximity to existing wetland resources on site, as well as, establishing a visual screen from the northern adjacent property via a vegetative barrier. These two sites (B and C) total 1.40 acres, of which only 0.87 acres (includes 0.15 acres of man-made drainage mitigation), is proposed to off-set wetland impacts from the Project. The final wetland design will consider the most up to date data when finalizing the size and shape of the wetlands for construction. The intention of our design is to maximize the amount of wetland size and function with the least amount of disturbance possible.

Dave Ammerman of the USACE visited the site in October of 2011 to conduct a Jurisdictional Determination (JD). While on site, Mr. Ammerman viewed the proposed mitigation sites and indicated that the two sites were adequate for wetland mitigation. An updated JD was issues on December 5, 2013 for Humboldt Road and on April 11, 2005 on Martin Ranch with a request to re-issue the JD in the letter JD request letter submitted to the USACE in September, 2011.

3.5 Site Protection Instrument

After completion of mitigation activities and at the end of the monitoring period or when performance criteria have been met, ownership of the selected mitigation areas would remain in Tribal ownership. A memorandum of understanding or other instrument would be prepared in advance of construction activity and to specify long-term and adaptive management guidelines. This would restrict future development and cattle grazing where mitigation has occurred and specify that the area is subject to wetland values and function. The replaced drainage, located in the County right-of-way, will continue to be maintained by the County and will require mitigation monitoring or any other speciation site protection.



LEGEND

Potential Mitigation Sites
- Not Recommended
- Secondary Recommended
- Top Recommended

- Sitka Spruce Forest
- Red Alder Mixed Deciduous Woodland
- Riparian Wetland
- Wetland Prairie

- Coastal Zone Boundary
- Wetlands
- Approximate Parcel Boundary

Paper Size ANSI A
0 100 200 300 400 500
Feet
Map Projection: Transverse Mercator
Horizontal Datum: North American 1983
Grid: NAD 1983 UTM Zone 10N

N

Elk Valley Rancheria
Humboldt Road Improvements

Job Number 0182810001
Revision A
Date 06 Jan 2014

Potential Mitigation Sites

Figure 3

718 Third Street Eureka, CA 95501 T 707 443 8326 F 707 444 8330 E eureka@ghd.com W www.ghd.com

Q:\Projects\G0182810001\Maps\Working\EVR_HumboldtRd_RecommendedMitgationSitesBasedOnFieldRecon.mxd

Data source: Richard B. Davis, Co. Inc. 2000; AES, 2004. Created by:emgutierrez

4. Environmental Baseline

This mitigation and monitoring plan covers baseline conditions found along the proposed Humboldt Road Project corridor and the proposed mitigation site, Martin Ranch. Baseline conditions at each of the mitigation areas are described below.

4.1 Humboldt Road Safety Improvement Project Corridor Environmental Conditions

The Project site elevation is approximately 20 feet above mean sea level (msl) and maintains a generally consistent elevation across the site. The low coastal Rellim Ridge is located approximately 0.4 miles east of the project site and reaches an elevation of approximately 900 feet above msl. The lands surrounding the project site are generally undeveloped, with pasturelands dominating the area to the east and a mix of native shrub/tree marsh habitats dominating the area to the west.

The project site consists of Humboldt Road and areas contiguous to the road's alignment. Much of the project site vegetation has been altered from long-term anthropocentric land uses and consists of many non-native and disturbance-oriented species. The project site consists of human-altered soils from cut and fill associated with the roadbed and man-made adjacent ditch network that provides drainage for the road. Project Footprint & Mapped Wetlands Figures 2-1 through 2-8 (above) depict Humboldt Road and the areas contiguous to the project site alignment. The general habitat types present within and adjacent to the project site are summarized below.

4.1.1 East of the Project Site

The area to the east of the project site is dominated by undeveloped pastureland and wetlands. The undeveloped property comprising the area east of the project site is known as Martin Ranch. Martin Ranch is comprised of land held in trust by the Elk Valley Rancheria. Martin Ranch generally consists of open pasture currently utilized as grazing land for cattle. Wetlands exist in portions of the pasturelands to the east of the project site. This area consists of adjacent wetland agricultural lands on the Martin Ranch property dominated by common rush (*Juncus effuses*), slough sedge (*Carex obnupta*), buttercup (*Ranunculus repens*), plantain (*Plantago lanceolata*), birds-foot trefoil (*Lotus corniculatus*) velvet grass (*Holcus lanatus*) and curly dock (*Rumex crispus*).

Several small unnamed stream channels enter the Martin Ranch property from the Rellim Ridge area and flow west towards Humboldt Road. These streams have a low gradient and generally shallow channels. The streams are channelized and predominantly devoid of riparian vegetation along their banks, or they flow to larger wetland complexes within the Martin Ranch property. These intermittent and ephemeral streams are generally dry, following the wet season, but likely provide seasonal habitat for amphibians and other wildlife. The stream channels and wetland areas to the east of Humboldt Road generally flow to the ditch on the east side of the project site, where water is conveyed to one of the five existing culverts that are established under Humboldt Road, eventually flowing to the Crescent City Marsh Wildlife Area.

In October of 2013, a fish assessment was conducted along this ditch and associated culverts for approximately a 3,000 mile reach. The field review started at the Humboldt Road/Highway 101

intersection and ended at the northwest corner of Martin Ranch property line (Stillwater 2013). This assessment identified marginal intermittent fish habitat (~ 150 feet) close to the first culvert crossing. Additionally, the northern most section of the assessment (~280 feet of the ditch) identified fish bearing habitat. In close proximity to culverts # 4 and #5 inlets and outlets were unidentified juvenile salmonids, sticklebacks, and coastal cut-throat trout (Stillwater 2013). The assessment further indicated that fish likely inhabit the northern creek (immediately north of the proposed mitigation area) on Martin Ranch and during high flows attributed from precipitation events which inundate the adjacent forested wetland.

An area of willow-dominated forested wetland exists on the north end of the Martin Ranch property near the intersection of Humboldt Road with Roy Avenue. The forested wetland in this area consists of an understory of Douglas spiraea (*Spiraea douglasii*) and skunk cabbage (*Lysichiton americanus*). The system is dominated by broad leaved deciduous woody vegetation at least 20 feet in height with scrub-shrub woody vegetation less than six meters in height with a seasonally flooded water regime. The riparian area is dominated by willow (*Salix sp.),* lady fern (*Athyrium filix-femina*), horsetail (*Equisetum sp.*), Himalayan blackberry and sword fern (*Polystichum munitum).*

The northern creek generally flows from the Martin Ranch property and connects to culverts under Humboldt Road and discharges to a drainage on the west side of the road. The drainage to the west of Humboldt Road has substantial associated riparian habitat. Typical vegetation within the palustrine emergent ditch areas along the east side of Humboldt Road include: velvet grass, birds-foot trefoil, horsetail, Himalayan berry, buttercup, self-heal (*Prunella vulgaris*), and annual bluegrass (*Poa annua*).

On the east side of Humboldt Road south of the Sandmine Road intersection, generally two wetland areas are mapped; the larger of which is a palustrine freshwater forested scrub-shrub system dominated by broadleaved deciduous woody plants with a seasonally flooded water regime. Both grass and rush dominated wetland prairie, and alder and willow dominated scrub-shrub wetland cover a substantial area within the Martin Ranch pasture to the east of the project site and are considered by the United States Army Corps of Engineers (USACE) as a jurisdictional wetland (USACE 2005). Both upland and wetland complexes for the area east of Humboldt Road were mapped and described by AES. AES describes the seasonal wetland areas as being associated with seeps and intermittent drainage systems that originate near and/or from Rellim Ridge to the east.

4.1.2 West of the Project Site

The Crescent City Marsh Wildlife Area, owned and operated by California Department of Fish and Wildlife (CDFW), occupies much of the area to the west of the project site. The CDFW Crescent City Marsh Wildlife Area consists of wetland habitat beyond the existing toe of fill slope associated with Humboldt Road. The area west of the project site near the intersection of Sandmine and Humboldt Roads contains a mix of dense upland and wetland scrub-shrubs with some herbaceous understory. The Del Norte County Local Coastal Program (LCP) identifies the "Sandmine Road Wetland" as a major coastal wetland. Although the LCP does not map this wetland, it is assumed herein to be comprised of all wetlands to the west of Humboldt Road in the area of the project site.

On the west side of Humboldt Road, extending from the intersection of Humboldt Road and US 101 north to Sandmine Road, a substantial offsite area is dominated by perennial palustrine emergent

and freshwater forested scrub-shrub habitat with a presumed temporarily flooded water regime. This riparian-type cover predominantly consists of cascara (*Rhamnus purshiana*) with some red alder (*Alnus rubra*), and an understory consisting of sword fern, Himalayan berry and California blackberry (*Rubus ursinus*). The project site section south of the intersection with Sandmine Road was noted to have dominant wetland scrub-shrub cover consisting almost exclusively of Douglas Spirea.

4.2 Martin Ranch Property Proposed Mitigation Site Existing Conditions

Portions of the safety improvement project occur on the Martin Ranch Property, which is directly east of Humboldt Road. The project applicant (Elk Valley Rancheria) owns the property and has identified a portion of the property for the wetland mitigation as described above. Figure 3 (above) shows the general location of the two sites identified for wetland mitigation. The two sites are located on the far north side of the property, adjacent to areas of existing forested wetlands and emergent wetlands. These two areas are currently open upland pastures that are used for grazing purposes. Both sites are lower in elevation in the north and slope gently uphill to the south. Much of the vegetation has been altered from long-term land uses, and consists of many non-native and disturbance-oriented species. The natural surface hydrology is assumed to have been altered from past agricultural disturbances such as channelization, vegetation clearing and grazing.

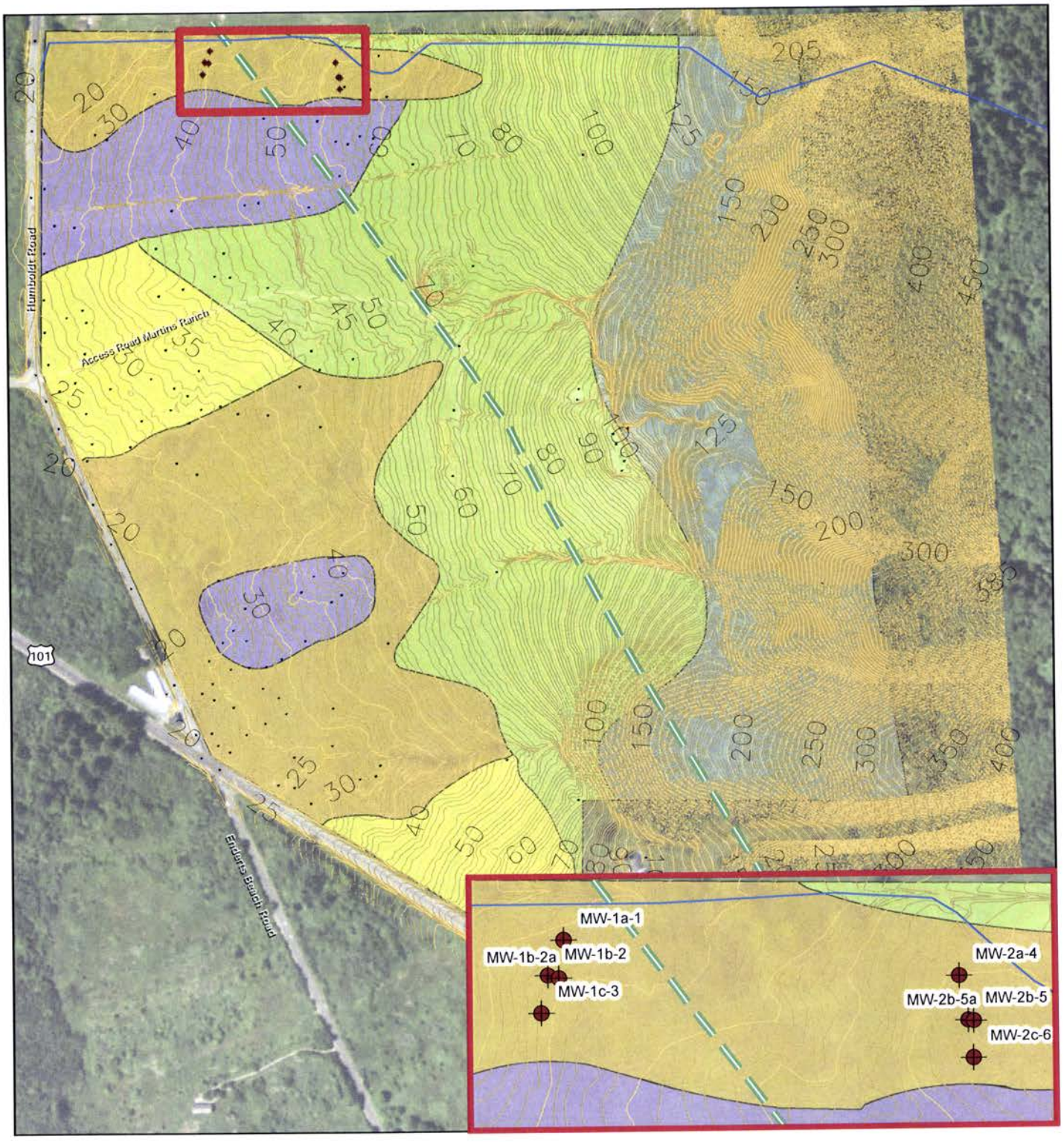
The site elevation is approximately 20 feet above mean sea level (msl), and contains undulating terrain intermixed with uplands and wetlands. The low coastal Rellim Ridge rises to the east of the site reaching up to approximately 900 feet above msl. The climate of the area is temperate and humid with abundant summer fog. The mean annual temperature is 53 degrees Fahrenheit, and average precipitation for Del Norte County is approximately 66 inches per year (NOAA 2010).

This existing conditions section focuses on the northern portion of Martin Ranch Property between the Access Road to Martin Ranch and the north creek and the alder woodland to the east. The site contains a mix of upland, riparian, and wetland habitats. Sitka spruce dominates the east side of the site, intermixed with red alder deciduous woodland habitat, which also borders much of northern creek. Northern creek is also bound by emergent and forested wetland habitat. At high flows, the creek spreads onto the adjacent wetland floodplain, serving as salmonid and other fish habitat (Stillwater 2013). This creek is currently being impacted from non-native invasive plants such as Himalayan blackberry, English holly (*Ilex aquifolium*), and cotoneaster (*Cotoneaster sp.*). Additionally, the creek banks are being impacted by cattle grazing, causing bank instability and increased sediment in the water column.

In 2005, AES performed a wetland delineation on Martin Ranch. In 2011, Winzler & Kelly performed additional wetland delineation efforts on Martin Ranch for the Humboldt Road Project. These reports indicated the site contains palustrine prairie and forested wetlands. The wetland prairie map unit consists of agricultural lands on the Martin Ranch property dominated by common rush, slough sedge, buttercup, plantain, velvet grass and curly dock (AES 2005). The other major wetland feature in close proximity to the proposed mitigation wetland cells is red alder/mixed deciduous forest located along the upper reaches of the north creek. This feature consists of red alder, red elderberry (*Sambucus racemosa var. racemosa*), salmonberry (*Rubus spectabilis*), thimbleberry (*Rubus parviflorus*), western azalea (*Rhododendron occidentale*) and a dense understory thicket of

Himalayan blackberry in some cases. The AES wetland report included a soils map, which identifies soil types Hp2 (Hutsinpiller silty clay loam) and Ry3 (Rowdy Loam) within or in close proximity to the proposed mitigation sites (AES 2005). Figure 4 below, shows the soil mapping, monitoring well locations, and site contours.

Common species observed in the upland areas where wetland mitigation is proposed includes Himalayan blackberry, hairy cats ear (*Hypochaeris radicata*), beach strawberry (*Frageria chiloensis*), Iris (Iris sp.), creeping bentgrass (*Agrostis capillaris*), English daisy (*Bellis perennis*), western brackenfern (*Pteridium aquilinum*), white clover (*Trifolium repens*).These observations were noted by GHD during the well installation in 2011.



Soil Type:
- Ry6 (Rowdy Clay Loam)
- Ti2 (Timmons Clay Loam)
- Hp2 (Hutsinpillar Silty Clay Loam)
- Ry3 (Rowdy Loam)
- Un-Surveyed

- Northern Stream
- California Coastal Zone Boundary
- Contours (1 ft)
- Monitoring Wells

Paper Size ANSI A
0 100 200 300 400 500
Feet
Map Projection: Transverse Mercator
Horizontal Datum: North American 1983
Grid: NAD 1983 UTM Zone 10N

N

Elk Valley Rancheria, California
Humboldt Road Improvements

Job Number 0182810001
Revision A
Date 29 Jan 2014

Martin Ranch Mitigation Site
Existing Conditions

Figure 4

718 Third Street Eureka T 707 443 8326 F 707 444 8330 E eureka@ghd.com W www.ghd.com

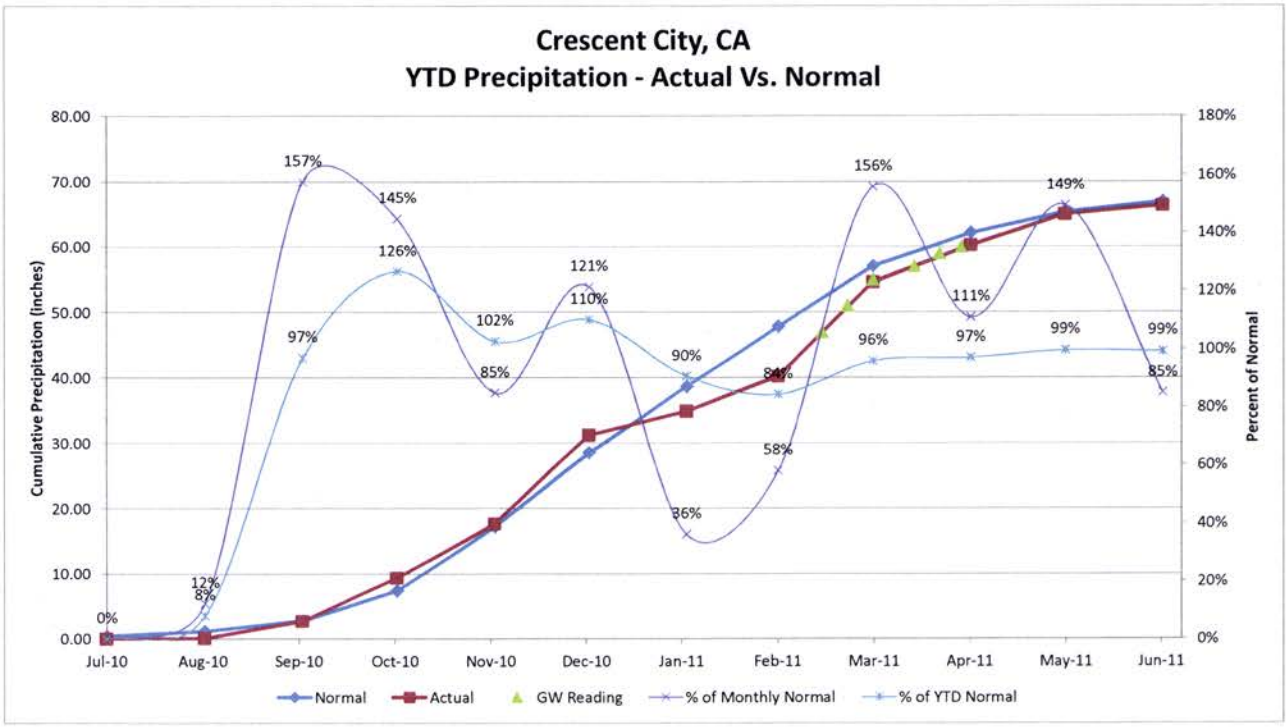
\\ghdnet\ghd\US\Eureka\Projects\01828 ElkValleyRancheria\8410956 Humboldt Road\08-GIS\Maps\Figures\MMP\F4_Existing Conditions_Map.mxd

Data source: Richard B. Davis, Co. Inc. 2000; AES, 2004. Created by:porogers

4.3 Groundwater

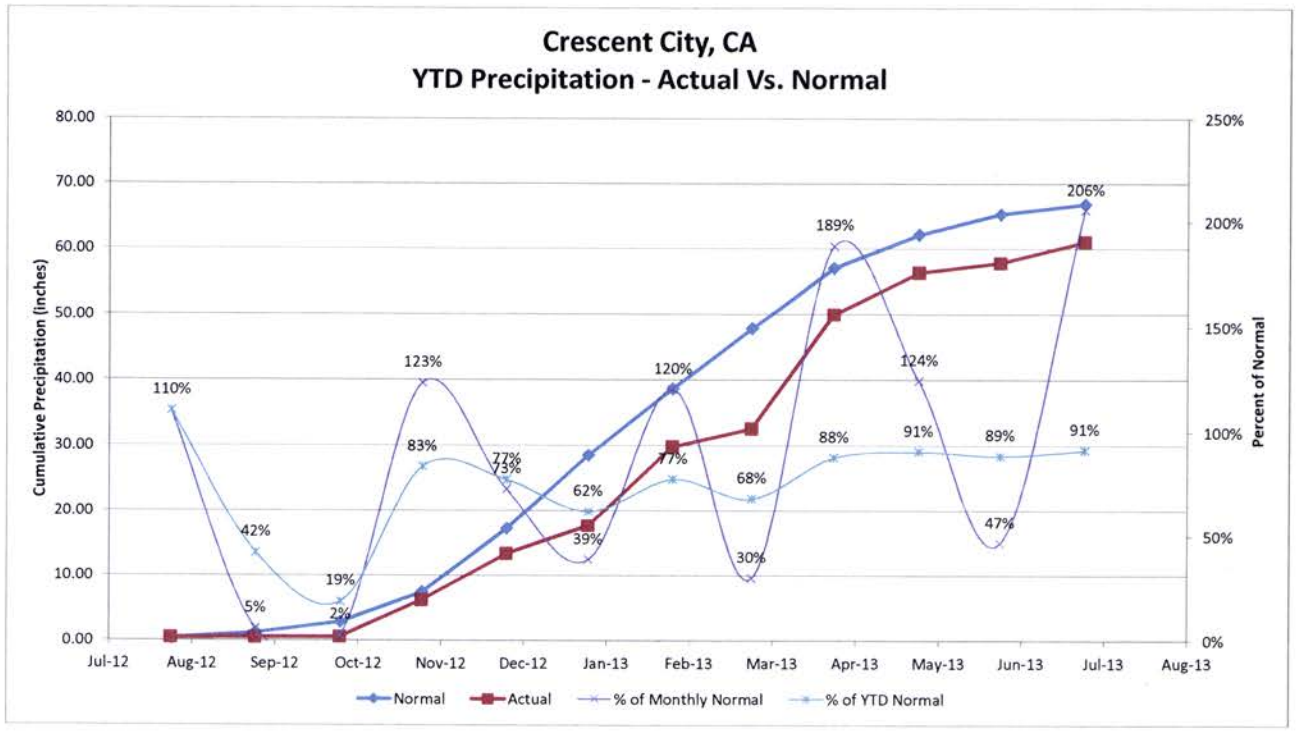
Six groundwater monitoring wells were installed in the proposed mitigation sites and monitored for a total of 10 weeks throughout the rainy season of 2010/2011. The data collected from these wells provides depth to groundwater for both sites. In 2013, the original wells installed in 2010/2011 were decommissioned due to damage from cattle and replaced within six new wells; additionally, two more shallow wells were installed in the event of a perched groundwater table (Figure 4, above). These wells will be monitored throughout the rainy season (winter/spring 2014) and results will continue to refine the shape and size of each wetland cell. Groundwater well data is located in Appendix A. The 2011 well data acquired during monitoring at Martin Ranch inferred that it was a very wet March. Therefore, in addition to the well data from 2011, our team analyzed the Crescent City Annual precipitation and plotted the actual vs normal rainfall event. This analysis was done for year 2010-2011; 2011-2012; 2012-2013; and 2013-2014 (Graphs 1- 4 below). The purpose of this analysis was to discern if the well data from 2001 is representative of normal years and to begin conceptual wetland design.

While March 2011, when compared to rainfall totals (over the past 10 years) for March and April were above average months (March 156% of normal, and April 111% of normal), cumulative YTD total (starting in July) was actually very close to normal (around 96% of normal) because January and February were relatively dry months. As a result, the data from groundwater well monitoring took place during a pretty normal water year and is suitable for wetland design.



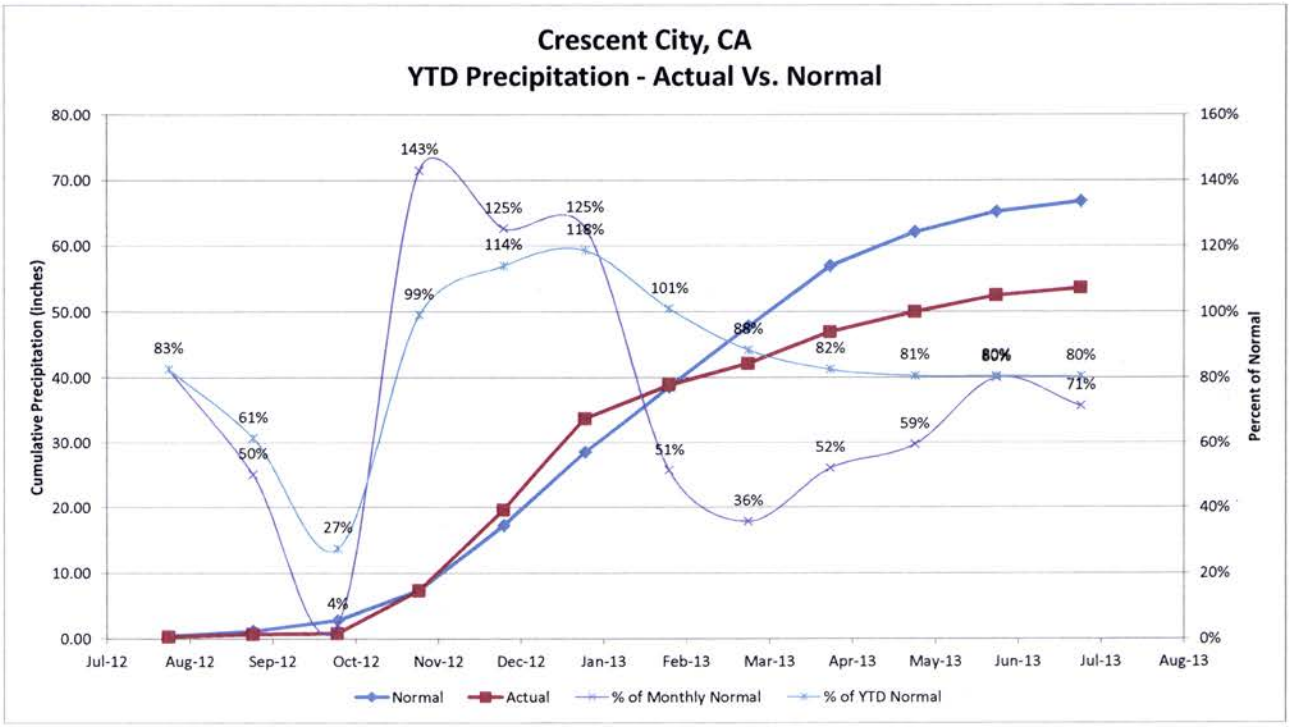
Year	Month	Monthly Normal	Cumulative Normal	Monthly 2010/2011 Actual*	Cumulative Actual	% of Monthly Normal	% of YTD Normal
2010	July	0.40	0.40	0	0.00	0%	0%
	August	0.74	1.14	0.09	0.09	12%	8%
	September	1.67	2.81	2.63	2.72	157%	97%
	October	4.56	7.37	6.59	9.31	145%	126%
	November	9.84	17.21	8.33	17.64	85%	102%
	December	11.23	28.44	13.59	31.23	121%	110%
2011	January	10.15	38.59	3.65	34.88	36%	90%
	February	9.18	47.77	5.31	40.19	58%	84%
	March	9.22	56.99	14.36	54.55	156%	96%
	April	5.13	62.12	5.68	60.23	111%	97%
	May	3.13	65.25	4.67	64.90	149%	99%
	June	1.57	66.82	1.33	66.23	85%	99%
	Total	66.82	66.82	66.23	66.23	99%	99%

Source: NWS Preliminary Monthly Climate Data for Crescent City
http://www.nws.noaa.gov/climate/index.php?wfo=eka



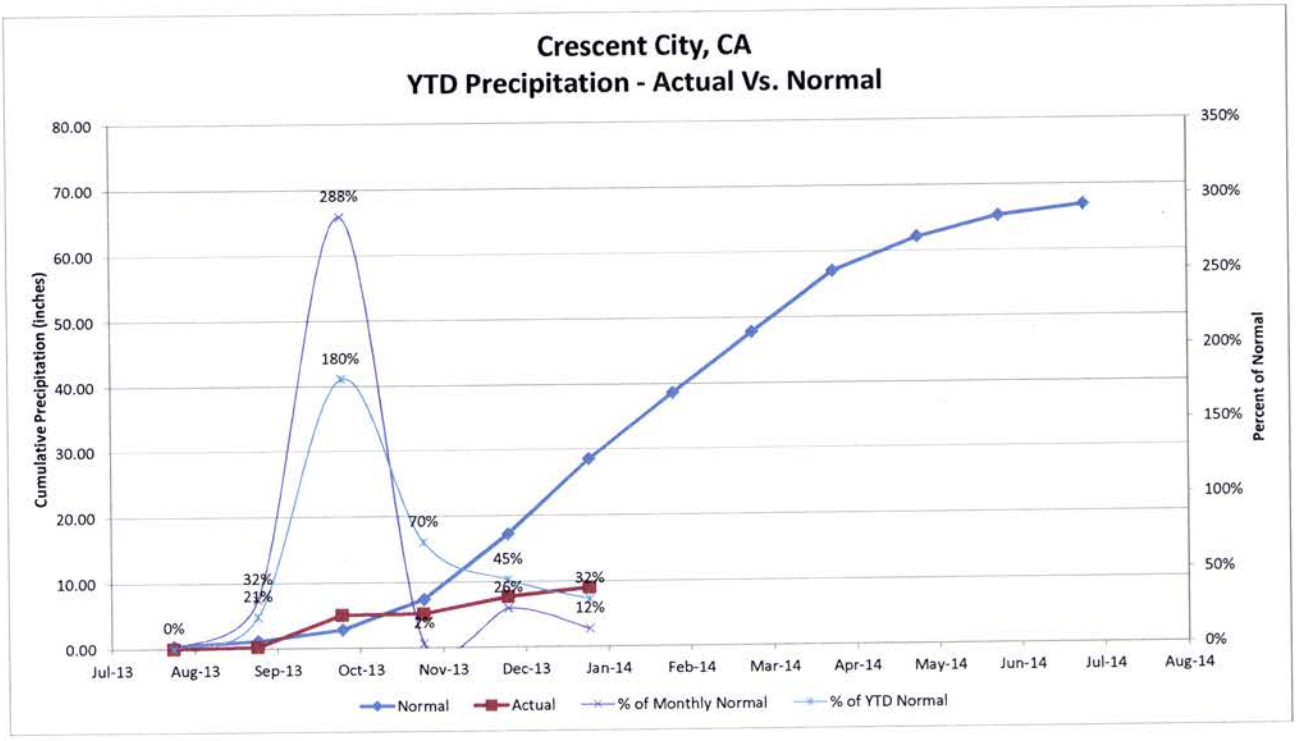
Year	Month	Monthly Normal	Cumulative Normal	Monthly 2013/2014 Actual*	Cumulative Actual	% of Monthly Normal	% of YTD Normal
2011	July	0.40	0.40	0.44	0.44	110%	110%
	August	0.74	1.14	0.04	0.48	5%	42%
	September	1.67	2.81	0.04	0.52	2%	19%
	October	4.56	7.37	5.62	6.14	123%	83%
	November	9.84	17.21	7.15	13.29	73%	77%
	December	11.23	28.44	4.34	17.63	39%	62%
2012	January	10.15	38.59	12.2	29.83	120%	77%
	February	9.18	47.77	2.73	32.56	30%	68%
	March	9.22	56.99	17.38	49.94	189%	88%
	April	5.13	62.12	6.38	56.32	124%	91%
	May	3.13	65.25	1.46	57.78	47%	89%
	June	1.57	66.82	3.23	61.01	206%	91%
	Total	66.82	66.82	61.01	61.01	91%	91%

Source: NWS Preliminary Monthly Climate Data for Crescent City
http://www.nws.noaa.gov/climate/index.php?wfo=eka



Year	Month	Monthly Normal	Cumulative Normal	Monthly 2013/2014 Actual*	Cumulative Actual	% of Monthly Normal	% of YTD Normal
2012	July	0.40	0.40	0.33	0.33	83%	83%
	August	0.74	1.14	0.37	0.70	50%	61%
	September	1.67	2.81	0.07	0.77	4%	27%
	October	4.56	7.37	6.52	7.29	143%	99%
	November	9.84	17.21	12.32	19.61	125%	114%
	December	11.23	28.44	14.09	33.70	125%	118%
2013	January	10.15	38.59	5.2	38.90	51%	101%
	February	9.18	47.77	3.27	42.17	36%	88%
	March	9.22	56.99	4.79	46.96	52%	82%
	April	5.13	62.12	3.05	50.01	59%	81%
	May	3.13	65.25	2.5	52.51	80%	80%
	June	1.57	66.82	1.12	53.63	71%	80%
	Total	66.82	66.82	53.63	53.63	80%	80%

Source: NWS Preliminary Monthly Climate Data for Crescent City
http://www.nws.noaa.gov/climate/index.php?wfo=eka



Year	Month	Monthly Normal	Cumulative Normal	Monthly 2013/2014 Actual*	Cumulative Actual	% of Monthly Normal	% of YTD Normal
2013	July	0.40	0.40	0	0.00	0%	0%
	August	0.74	1.14	0.24	0.24	32%	21%
	September	1.67	2.81	4.81	5.05	288%	180%
	October	4.56	7.37	0.11	5.16	2%	70%
	November	9.84	17.21	2.52	7.68	26%	45%
	December	11.23	28.44	1.31	8.99	12%	32%
2014	January	10.15	38.59				
	February	9.18	47.77				
	March	9.22	56.99				
	April	5.13	62.12				
	May	3.13	65.25				
	June	1.57	66.82				
	Total	66.82	66.82	8.99	8.99	13%	13%

Source: NWS Preliminary Monthly Climate Data for Crescent City
http://www.nws.noaa.gov/climate/index.php?wfo=eka

4.4 Soils

According to the web soil survey of Del Norte County, Hutsinpillar Silty Clay Loam soils dominate the proposed mitigation area. Huntsinpillar soils are associated with alluvial material found at the basin of small streams occurring at elevations between 50-100 feet. Parent material is derived from the Franciscan formations such as greywacke, shale, and sanstone. The soils are generally dark brown, poorly drained, and have a distinct profile. These soils are imperfectly drained, run-off is slow and permeability is retarded. Common vegetation is mainly bulrush, silverweed, and hydrophytic plants (USDA 1966) and is largely used for pasture and if drained properly, land-use can include vegetable agriculture. According to the soils series description, these oils have an aquic soil moisture regime; in normal years, soil moisture is common between 4-12 inches below ground surface (bgs) and is saturated between December and April in some parts. The series description also describes the drainage and saturated hydrologic conductivity as: Very poorly drained; very high runoff; moderately low saturated hydraulic conductivity; rare flooding; frequent ponding (National Cooperative Soil Survey 2013)

The soils observed and logged during the well installation reveal dark loam soils with no hydric soils indicators noted. Starting at about 3.5 feet bgs a sandy clay loam was observed in monitoring well 1a, a clay loam was observed at 2.5 in monitoring well 1b, and sandy clay loam at three feet bgs in monitoring well 1c. Monitoring well 1a-1c is associated with the proposed wetland cell B. Similarly at 2.5 feet bgs a clay layer was observed in monitoring well 2c, clay loam at 3.5-5 feet bgs, at monitoring well 2b, and silty caly at four feet bgs at monitoring well 2a. Monitoring wells 2a- 2c are associated with the proposed wetland mitigation cell C. Soil boring data sheets can be found in Appendix B.

5. Mitigation Work Plan

The following are major activities proposed on Martin Ranch to serve as mitigation for impacts associated with the Humboldt Road Safety Improvement Project:

1. Relocate the man-made and three parameter wetland drainage ditch;
2. Create forested and emergent wetland habitat;
3. Establish riparian buffer;
4. Improve northern creek by reducing sediment and bank erosion from cattle crossing; and
5. Improve northern creek by removing and managing for invasive plant species.

5.1 Relocate Ditch

A portion of the impacts described above result from removing and replacing the existing man-made drainage ditch (0.15 acres). This temporary impact, requires a 2:1 mitigation ratio (0.30 acres) where 1:1 of the mitigation will be relocating the ditch in-place, in-kind using and the remaining 1:1 ratio will be offset through planting of riparian habitat in the mitigation area on Martin Ranch. A portion of the ditch impacts described above result from removing and replacing the three parameter wetland (0.17 acres) drainage ditch requiring 4:1 mitigation ratio (0.68 acres). This impact will be offset by relocating the three parameter ditch in-place, in-kind for 1:1 ration along the

new Humboldt Road, creating 2:1 (0.34 acres) ratio of emergent wetland and the remaining 1:1 ratio will be offset through planting of riparian habitat in the mitigation area on Martin Ranch.

The project will widen the roadway into existing ditches and replace the ditch with equivalently and is considered "self-mitigating." The applicant will not be responsible for monitoring this new man-made ditch. However, the new ditches will not be considered "mitigation", nor will they be monitored. However, the temporary impacts associated with the relocation of the ditch does warrant mitigation, and at this time, the proposal is to include the spatial acreage of the impacted ditch (0.15 acres) towards wetland mitigation (creation). Thus, the wetland creation described below will include an additional 0.15 acres in an effort to offset the temporal impacts of the ditch relocation. Therefore, the relocation of the ditch is considered part of the "mitigation package" (see below).

5.2 Wetland Creation

The proposed mitigation sites, currently upland pasture, have been chosen due to the close proximity to existing wetland resources on site (Figure 5). Groundwater data collected at the two mitigation sites indicates that soil excavation would not need to exceed six vertical feet and would likely not exceed four vertical feet. Groundwater wells are being monitored through this winter/spring (2014) and the excavation cut calculations and cross sections will be refined as necessary for the construction documents. As a result of the wetland mitigation occurring adjacent/connected to existing wetlands, the intention of the design is to maximize the amount of wetland size with the least amount of disturbance. The proposed wetland will connect to the existing red alder deciduous wetlands and the wetland prairie habitats. Though the final design will occur in the proposed mitigation areas shown, the final design will be based on topographic mapping and could shift in location, orientation, size, and content in the construction documents. Appendix C provides groundwater profiles for the existing 2011 well monitoring data for MW 1 and 2.

The soil for the mitigation sites will be salvaged from wetland grading and earthwork activities. The upper 8-12 inches of soil will be segregated and will be spread within the upland pasture of Martin Ranch Property. The soils excavated from 18" will be stockpiled for backfilling. Once over excavation grades have been met and the surface contours achieved, the stockpiled soil will be placed in the wetland basin and be prepared for revegetation. Wetland plants used for revegetation will come from locally grown native plant stock. The species will be selected based on their ability to thrive in the native soils and hydrologic regime designed for the site. After revegetation out planting is complete, the site shall be periodically inspected and maintained appropriately based on observations from the periodic inspections. Expected maintenance activities include: watering, weeding, mulching, plant and root protection repair and/or fencing repairs.

5.3 Northern Creek Improvements

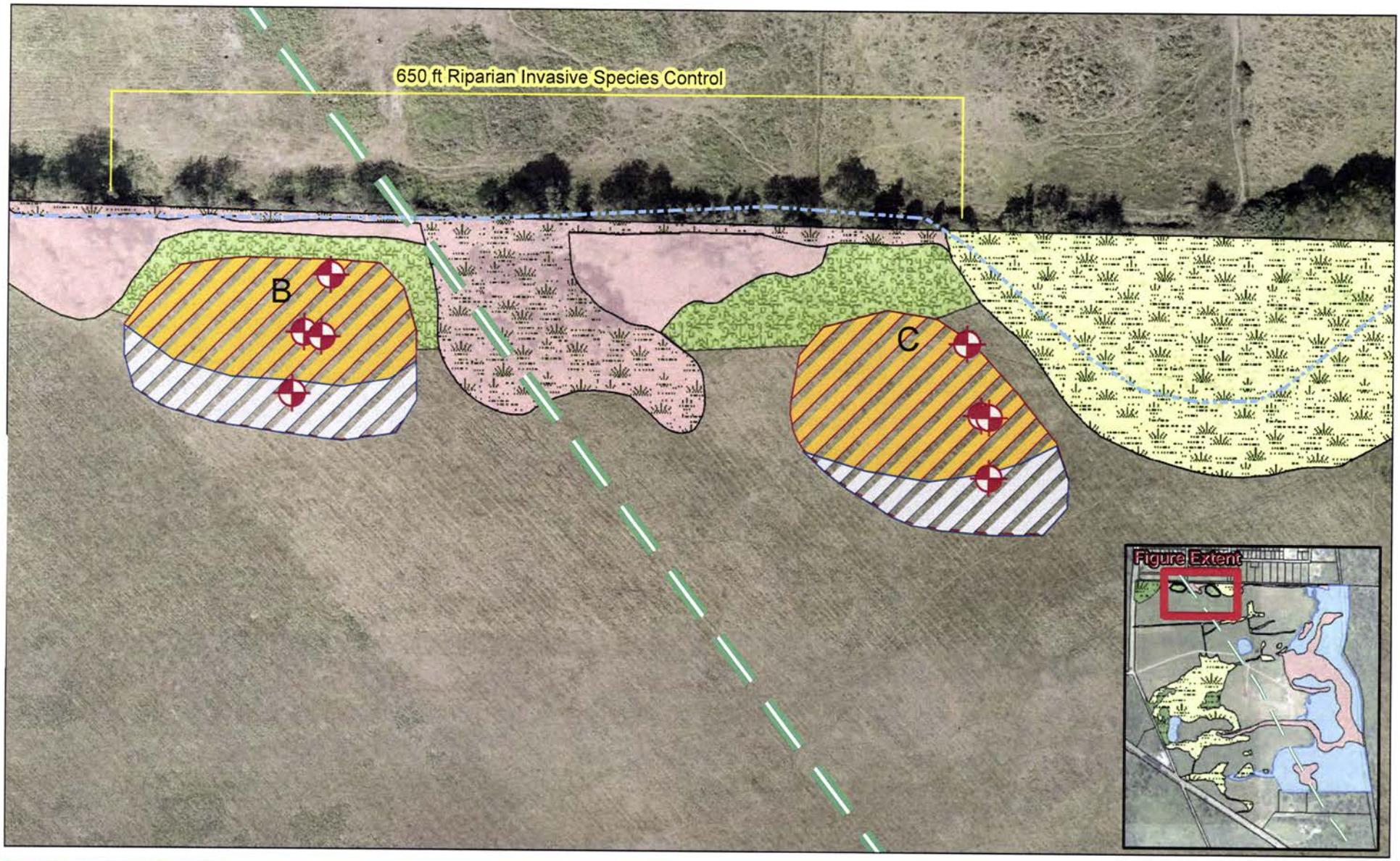
As part of the mitigation package, the design includes enhancing the northern creek corridor by way of removing invasive plant species identified along 650 linear foot reach of the channel, directly adjacent to the wetlands creation site. The species to be removed along the northern creek riparian corridor include Himalayan blackberry, cotoneaster, English holly, Cape Ivy and English ivy.

Himalayan blackberry shall be removed using a long reach excavator with a bucket (36") with a 48" bar welded over the teeth of the bucket. This bar acts as scrapper and removes the understory vegetation from the creek without impacting the channel geomorphology or adjacent native plants.

This technique may also be used to remove the invasive ivy (Cape and English) groundcover when found in monotypic stands with little potential to adversely impact adjacent native flora. Invasive plant removal and control methods are further described below in Section 5 - Invasive Plant Control. Approximately 0.87 acres of this area will be replanted with native riparian plant species.

5.4 Access and Staging

Access from existing roads will be used for constructing the mitigation areas where habitat establishment, re-establishment, or enhancement is proposed. Staging areas will likely be established near the intersection of Humboldt Road and Sandmine Road on disturbed upland ground or other areas outside of wetlands or sensitive habitats on the Martin Ranch property.



Paper Size ANSI A

0 50 100 150

Feet

Map Projection: Transverse Mercator
Horizontal Datum: North American 1983
Grid: NAD 1983 UTM Zone 10N

N

Northern Stream
Coastal Zone Boundary
Wetlands

Sitka Spruce Forest
Red Alder Mixed Deciduous Woodland
Riparian Wetland
Wetland Prairie

Approximate Parcel Boundary
Forested Wetland (0.36 Acres)
Emergent Wetland (0.79 Acres)
Riparian Planting (0.39 Acres)

Elk Valley Rancheria, California
Humboldt Road
Proposed Wetland Mitigation Areas

Job Number 8410956
Revision B
Date 21 Feb 2014

Proposed Wetland Mitigation Figure 5

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Data source: Data Custodian, Data Set Name/Title, Version/Date, Created by:porogers

718 Third Street Eureka, CA 95501 T 707 443 8326 F 707 444 8330 E eureka@ghd.com W www.ghd.com

5.5 Construction Timing and Sequence

The mitigation component of the project is expected to commence in late summer or fall of 2014, with monitoring lasting for five years post revegetation. The schedule would generally occur in the following phases:

- Invasive species removal, native seed collection, and plant propagation: June 2014 to December 2014.
- Equipment mobilization and site preparation: July 2014 to August 2014.
- Construction: August 2014 to November 2014.
- Clean up and demobilization: November 2014.
- Monitoring of restoration: June 2015 to August 2020.
- Ongoing maintenance: December 2014 to August 2020, or as mandated by permit conditions. The Tribe would be responsible for maintenance of the mitigation area throughout the monitoring period.

Construction activities would be conducted in compliance with applicable Tribal, federal, state and local regulatory requirements and in a manner that would minimize disturbance to adjacent properties and disruption to traffic. Construction would occur between the hours of 7 AM and 6 PM, Monday through Friday, and 10 AM to 5 PM on Saturdays. No construction would be allowed on Sundays, except in an emergency. The number of construction workers present on the mitigation sites at any given time is anticipated to be up to 10. The number of motor vehicles at any time would be up to 10, along with no more than six pieces of heavy machinery. The mitigation project would require the delivery of equipment, workers and materials via public roads in the area.

5.6 Erosion Control

Temporary erosion control measures shall be implemented during construction to avoid adverse impacts to natural resources, adjacent property, or to sensitive habitat in the mitigation project vicinity. A storm water pollution prevention permit (SWPPP) plans have been prepared by GHD for both the Project and mitigation site construction. Erosion control measures proposed for implementation prior to and concurrent with construction activities include straw wattles, silt fence, plastic stormwater berms and straw bale barriers and will be shown on the final construction grading plans and will include details and specifications. Measures to be implemented after construction is completed include revegetation. Biodegradable straw matting would be applied on any slopes that exceed 3:1. The matting shall have a mesh netting that will biodegrade within several months to minimize long-term impacts to wildlife. Straw wattles may also be used to function as runoff diversions.

5.7 Planting Plan

A detailed planting plan has been developed for three habitat types included in this mitigation plan: emergent wetland – Planting Zone 1, forested wetland Planting Zone 2, riparian buffer – Planting Zone 3. The tables below are intended to be representative based on information available at this

time and species quantities shown below have been developed using acres as the unit of measure. After agency permitting discussions are complete the most up to date tables would be included in the construction plans and specifications. The wetland planting plugs are currently spaced using six feet on center, shrubs are currently spaced using 10 feet on center, and trees will be planted 15 feet on center. Some natural recruitment is expected based on the close proximity to existing flora and fauna sources to draw from when and will allow passive recolonizing the created and enhanced wetlands.

Table 2 Emergent Wetland Planting Zone 1

Planting Zone 1- Seasonally Emergent Wetland				0.7 Acres[1]
Species Quantity	**Scientific Name**	**Common Name**	**Unit**	**Location[2]**
204	*Carex obnupta*	slough sedge	4" plug	c
204	*Scirpus microcarpus*	small fruited bullrush	4" plug	b
306	*Juncus balticus*[3]	Baltic rush	4" plug	a
204	*Oenanthe sarmentosa*	water parsley	4" plug	c
511	*Juncus effuses*	soft rush	4" plug	a
306	*Lysichiton americanum*	skunk cabbage	4" plug	c
306	*Athyrium filix-femina*	common lady fern	4" plug	b
2041	**= Total**			

1. 0.20 acres of palustrine emergent wetland impacts using a 3:1 ratio totals 0.60 acres of wetland creation and 0.15 acres is included in this habitat to offset the temporal ditch impacts at a 1:1 ratio. The created emergent wetland will total 0.75 acres.
2. a- outer edge (least amount of inundation); b- inner edge (moderate amount of inundation); c- center (highest amount inundation) 3. Accepted name: *Juncus arcticus ssp. littoralis*

Planting Zone 1 -Seasonally Emergent Wetland			Acres 0.87
Species Quantity (LBS)	**Vegetation Strata/ Species Name**	**Common Name**	**Unit**
	NATIVE SEED		
6.5	*Carex obnupta*	slough sedge	LB of P.L.S. 76 %
8.7	*Calamagrostis nutkaensis*	Pacific reed grass	LB of P.L.S. 76 %
8.7	*Deschampsia cespitosa*	tufted hairgrass	LB of P.L.S. 76 %
6.5	*Juncus effuses*	soft rush	LB of P.L.S. 76 %
8.7	*Sisyrinchium californicum*	yellow-eyed grass	LB of P.L.S. 76 %

4.4	*Prunella vulgaris var. lanceoloata*	self-heal	LB of P.L.S. 76 %
43.5			

Table 3 Forested Wetland Planting Zone 2

Planting Zone 2- Forested Wetland				0.12 Acres1
Species Quantity	***Scientific Name***	**Common Name**	**Unit**	**Spacing Type**
	Trees			
7	*Picea sitchensis*	Sitka spruce	4" plug	cluster
7	*Abies grandis*	grand fir	4" plug	cluster
5	*Alnus rubra*	red alder	1-gallon	cluster
5	*Salix sitchensis*	Sitka willow	Live-stake	cluster
24	**= Total**			
	Shrubs			
13	*Rhododendron occidentale*	western azalea	container	cluster
10	*Spiraea douglasii*	Douglas spiraea	container	cluster
10	*Lonicera involucrata*	twinberry	container	cluster
18	*Petasites palmatus*	coltsfoot	4" plug	cluster
51	**= Total**			

Notes: 1. 0.04 acres of forested wetland impact using a 3:1 ratio totals 0.12 acres of wetland creation

Table 4 Riparian buffer- Planting zone 3

Planting Zone 3-Riparian				0.87
Species Quantity	***Scientific Name***	**Common Name**	**Unit**	**Spacing Type**
	Shrubs			
26	*Corylus cornuta*	beaked hazelnut	1 gallon	random
40	*Symphoricarpos albus*	snowberry	1 gallon	random
53	*Cornus sericea ssp. occidentalis*	western dogwood	1 gallon	random

53	*Physocarpus capitatus*	Pacific ninebark	1 gallon	random
53	*Baccharis glutinosa*	marsh baccharis	1 gallon	random
40	*Rhamnus purshiana*	cascara	1 gallon	random
265	**= total**			
	Herbaceous			
158	*Frageria vesca*	woodland strawberry	4" plug	cluster
105	*Polystichum munitum*	sword fern	4" plug	cluster
158	*Camassia quamash*	camas	4" plug	cluster
158	*Aquilegia formosa*	western columbine	4" plug	cluster
158	*Deschampsia ceaspitosa*	tufted hairgrass	4" plug	cluster
105	*Pteridium aquilinum*	western brackenfern	4" plug	cluster
211	*Tellima grandiflora*	fringecups	4" plug	cluster
1053	**= total**			

5.7.1 Source of Propagules

In order to maintain the unique genetic diversity common to seasonal wetland, wetland plants used for revegetation will come from locally grown native plant stock. The species are selected based on their ability to thrive in the native soils and hydrologic regime designed for the site. After revegetation out planting is complete, the site will be periodically inspected and appropriate maintained activities based on those inspections shall take place. The expected maintenance activities include watering, weeding, mulching, and/or plant and root protection repair and possible replanting. All plant stock will be inspected to ensure it meets the design plan by a Restoration Construction Oversight Manager (RCOM) to be designated by Tribe. The RCOM shall be informed at least five days prior to plant stock being transported to the site to ensure they are available to conduct inspection upon delivery. The plant nursery(ies) will be selected well in advance (approximately 9-12 months is ideal depending on material being supplied) so that time is allowed to collect seed and to ensure adequate quantities and sizes (for container stock) of species will be available at time of planting. By using plant material from sources in close proximity to the sites, and within the boundaries of the project watershed, better success is predicted due to the well-adapted ecotypes being utilized.

Seed: The seed mix selected will consist of native hydrophytic plants that are local to the region. Seed shall be delivered to the site tagged and labelled in accordance with the California Agricultural

Code and shall be acceptable to the County Agricultural commissioner. Bag tag figures shall be evidence of purity and germination. Time since date of seed test shall not exceed nine months. An agreement with a native plant nursery should be made well in advance of restoration planting to collect seed, and/or propagation and germinating by the subcontractor. In addition, consideration should include supplemental and/or incidental planting in anticipation of long-term maintenance efforts for the following year.

Native Plants: Plants or propagules including seeds will be purchased from nurseries (when practical) and collected as follows:

- Propagules shall consist of locally genetic, native stock from within a 20 miles radius of the from the project impact site, and/or directly from the mitigation site(s).
    - If native local plant stock is not available during the time of implementation then the plant stock shall come from within the Northern California Eco-region.
- Live willow stakes shall be harvested directly from Martin Ranch. If there are no willows on a particular mitigation site, and the planting plan requires live stakes, then the willows shall come from the next closest site and/or the impact site. Mitigation Implementation

5.7.2 Seeding

Broadcast Seeding: this method can be used throughout the site, but is intended to cover bare soil areas in-between container plantings and for areas prone to erosion or where the Contractor will access the site for revegetation implementation.

It is recommended that the following seed quantities be used for revegetation seeding:

- Wetland broadcast seeding mixture shall be 30 lbs per acre per application
- Following the broadcast seeding application, straw mulch shall be applied at a rate of 1,500 pounds per acre (Pickart and Sawyer 1998). A tackifier is not required, but may be used if desired. The mulch will consist of natural fiber (virgin wood fiber is preferred), be free of synthetic materials (e.g., plastic), and contain no more than seven percent ash or 250 parts per million of boron. The seed and mulch can be applied separately, or mixed dry then spread evenly onsite. After application, the seed/mulch mixture will be lightly raked into the soil surface to help ensure good soil/seed contact. Application shall not occur when heavy rainfall is anticipated within 24 hours. When planting after broadcast seed application has occurred, planting activities will be performed carefully so as to result in minimum damage to the broadcast seeded areas.

Additionally, natural plant recruitment is expected to occur on site.

5.7.3 Plant Installation

The following plant material protocols should be considered prior to all plant installations:

1. Contractor shall be responsible for coordination and timing of plant material delivery to site or pick up. Plant material will be picked up no later than three days prior to installation.

2. Plants shall be graded and tagged in accordance with the American Standard for Nursery Stock as sponsored by American Association of Nurserymen, Incorporate (ANSI 260.1). Tags shall remain on plants until inspected and accepted by the RCOM. Notify the RCOM when plants are on-site to allow for an inspection to verify species or variety and acceptability of plants for robustness, and branching structure.
3. Plants shall comply with federal and state laws requiring inspection for plant diseases and infestations. Inspection certificates, as required by law, shall accompany each shipment of plants and shall be submitted to the RCOM. Nurseries are to demonstrate protocols and strategies for managing fungal pathogens, non-native plants, and non-native insects through submittals to the RCOM prior to placing the nursery order.
4. Plants will be purchased from nurseries and shall be grown from local watershed genetic stock within a 20 miles radius of the mitigation site or directly from the mitigation site. Plant material will be inspected, any diseased or root bound stock will be rejected.

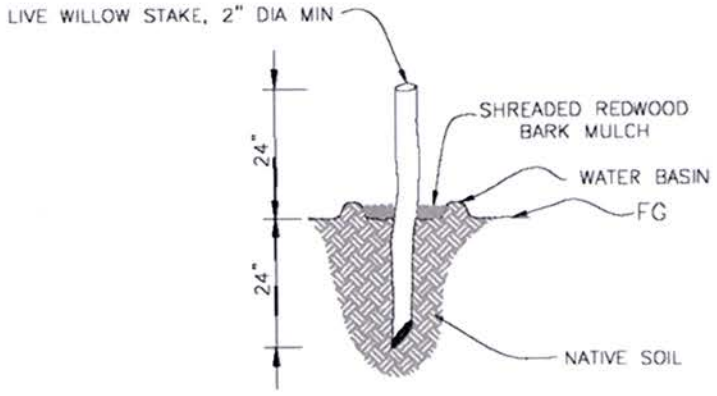
The following steps are recommended for container stock plant installation:

1. Planting sites shall mimic a natural pattern spacing type and individual spacing as specified in the planting plan and will not be planted in a grid like pattern (see tables 2, 3, & 4).
2. Remove grasses, weeds, and other non-native vegetation that adjoins the planting site.
3. Planting depth should be two times deeper and two times wider than the dimensions of the root ball. Depending on the soil, the planting hole can be excavated by hand digging or using an auger, shovel, Pulaski, pick or pry bar. Scarify bottom of planting pit to a depth of two to three inches. Repeat cultivation in areas where equipment used for hauling and spreading topsoil has compacted subsoil to enable root penetration.
4. Nursery stakes in plant containers shall be removed before planting. The container should be moist to reduce friction when removing plant. Roll or squeeze container to break surface tension between the plant and container. Tap the outside of the container, cradle till the plant is removed; do not pull on the stem.
5. Scarify each side of the root ball. Matted roots on the sides shall be sliced longitudinally 1/8-1/4 inch deep at least once per side. Matted roots on the bottom of the root ball shall be sliced a 1/4 inch deep.
6. Do not allow "J" bending to occur to the tap root or root ball during installation. The crown of the plants will be a minimum of 2 inches above finish grade to account for any settling. The crown shall remain above finish grade after any adjustments have been made. Plant should not be deeper than the original soil line; no roots shall be left exposed.
7. Install plant protection measures such as foliage and root protectors made of fine mesh wire fencing material, as appropriate.
8. An initial watering will be conducted to further eliminate air spaces and ensure adequate contact of the root surface with the soil medium after planting, taking care to avoid erosion and ensuring no roots are exposed after watering.
9. Maintain the planting area from weeds by hand scraping with a hoe to bare soil around each planting to reduce competition from weeds and to reduce thatch utilized by small

mammals. Install weed-mats or provide continual weed maintenance. If weed mats are used ensure they are biodegradable fabric such as coconut, or core fiber and attached to the surface using ground staples or equivalent. No plastic filament or other non-biodegradable material that could entrap wildlife will be used.

5.7.4 Willow (Salix ssp.) Planting Instructions:

1. Prior to planting soak cuttings (in a pond, ditch, garbage can or deep enough water) so the cutting is protected from wind and sun exposure during the soak for at least 24 hours to increase root and shoot production.
2. Willow cuttings shall be placed with the basal 2/3 of the slip (painted top) in the ground, with approximately 10-12 inches above the soil surface, spaced 15' apart.
3. If holes are dug or augured for the willows the soil shall be tamped around each willow slip so no air void occurs.
4. Below is an image depicting planting parameters of a live willow stake.



5.8 Invasive Plant Control

Re-establishing native emergent and forested wetlands on Martin Ranch and managing for invasive plants in restored areas is a goal for this plan. Weed competition is a major factor to consider throughout the mitigation timeframe and extending into long-term management timeframe. In order to allow the low vigor, slow germinating native plants to grow, intensive invasive species management and weed control are required to compete against the vigorous, quickly germinating, high-density non-native annuals. The main factors for the establishment of native plant species are adequate sunlight, soil moisture and nutrients availability for the plants to mature (Anderson 2001).

A variety of techniques have been studied in California wetlands and riparian corridors; literature suggests that a combination of techniques will yield the most successful results when managing for invasive plants. The combined methods include manual, mechanical and chemical techniques, such as hand pulling, herbicides (pre and post), burning, and mowing. Because of regulatory and other constraints, some methods may not be available for use at the Martin Ranch site.

5.8.1 Target Invasive Plant Species

Invasive plant species of concern at the mitigation site are identified as plant species listed with a rating of high or moderate by the California Invasive Species Council (Cal-IPC), as well as, the Humboldt/Del Norte Weed Management Area (WMA) Strategic Management Weed List. Invasive and non-native plants of concern present at the mitigation project site are listed in Table 5 below.

Table 5 Invasive Plants of Concern for Wetland and Creek Enhancement

Scientific Name	Common Name	Habitat
Cytisus sp	broom sp.	Ag field
Festuca arundinacea	tall fescue	Ag-field/ prairie wetland
Rubus armeniacus	Himalayan blackberry	Northern Creek riparian
Cotoneaster franchetii	cotoneaster	Ag-field
Ilex aquifolium	English holly	Northern Creek riparian
Holcus lanatus	velvet grass	Ag-field
Delairea odorata	Cape Ivy	Northern Creek riparian
Hedra helix	English ivy	Northern Creek riparian

This section summarizes locations and suggested removal or management methods for invasive species at the mitigation sites. In general, manual removal or other minimally intrusive methods will be used in or near sensitive species habitat. While there are other invasive plants currently present on site such as Italian ryegrass (*Festuca perennis*) and creeping buttercup (*Ranunculus repens*), these are common annuals that are widespread and have persisted on site for many years and don't appear to be monotypic or having major ecological adverse impacts at the mitigation site

5.8.2 Invasive Plant Control Techniques

Mechanical removal, including hand pulling and mowing, and burning/flaming will be the primary means of removing and controlling invasive and undesirable vegetation in the mitigation area. A combination of herbicide, mowing, hand pulling, mechanical clearing, tree shelters, and re-seeding will yield the most successful results in the re-vegetation plan and reduction of non-native plants

Several strategies are described below that could assist to address the issue of invasive species at the mitigation site, both before initial planting, as well as, during the post construction monitoring phase. In many cases, multiple strategies combined will be most effective in eliminating specific unwanted species from the project site, and in all cases monitoring and adaptive management will be key to long-term success of the restored habitats and elimination of invasive species. Once the native target species are established, the need for intensive invasive species control will diminish over time.

After the general strategies discussion below for invasive control, individual invasive species known to occur at the project site are addressed in the context of which strategy(s) should be considered for feasible elimination of that species. Seasonal control methods and timing may conflict with some species, and care should be taken when evaluating particular methods for more than one species. For example, mowing may provide more favorable results for one species if done in the spring versus having little effect on another species if done during the same timeframe. A combination of strategies, in site specific locations, pertaining to individual species will yield the highest success of controlling invasive and undesirable plants on the site.

Mowing

Where grazing is not practical due to potential impacts to restored habitat, mowing is sometimes used as a surrogate method of reducing annual invasive grasses and herbaceous plant species. Green machines and mowers can be used on a routine basis to weed around wetland plantings as needed. The weed management should be done in late summer when plants are established. Stakes or exclusion fencing would help to keep the mowers away from the planted plants. Machinery should not be used at the site during wet conditions. Mowing is difficult on steep, rough, and varied terrain; however slopes are gentle to moderate at this site. Height and timing of mowing should be planned to avoid impacts to sensitive species.

Mowing should be done a few times throughout the year. Mowing is a remedy that works well to combat unwanted grasses from the restoration site and should be timed in careful consideration to the northern red legged frog (NRLF). Mowing in late February through April has been successful in coastal areas (Anderson 2001); a second summer mowing in June or late spring helps to provide light to the young perennials and reduces the height of non-natives.

Mechanical Removal

Mechanical clearing can be applied to the riparian corridor of northern creek area designated for enhancement. Using a scraper attached to a frontloaded is applicable for removing Himalayan blackberry understory without damaging the adjacent native riparian trees and shrubs.

Hand Removal

The advantages of hand pulling include low ecological impact, minimal damage to neighboring plants, and low cost for equipment or supplies. The riparian corridor currently contains English holly and cotoneaster saplings which can be removed by hand using a shovel. Weed wrenches and/or extractigator and other tools can be used to remove larger sapling and shrubs that are too big to be pulled by hand. The agricultural grassland currently contains broom species which are adequately removed by the weed wrench. The wrench locks onto the base of the stem and leverage is used to remove the entire plant. The weed wrench is effective on many trees and shrubs up to 2.5 inches in diameter even on steep slopes. This method is best when the ground is moist in the winter or spring (January through May). Some soil disturbance will occur with removal, and the bare soil may favor new seedling sprouts. To minimize soil disturbance, soil should be replaced to disturbed areas. Trampled and disturbed areas can provide optimal germination sites for additional weeds, and replanting and use of seed mixes and/or erosion control mix is important. Hand pulling of plants will need to repeated and continued for many seasons until the seed bank is exhausted.

5.8.3 Removal Methods per Invasive Plant Species

French broom (*Genista monspessulana*) Spanish broom (*Spartium junceum*)

These species have the tendency to invade grasslands, scrub and woodlands. Spanish broom has a deep taproot up to six feet making it difficult to remove, more so, than French broom. The most effective way to control the brooms is by repeated hand pulling or burning; repeated hand pulling has been documented to yield the highest native plant cover (Alexander, and D'Antonio 2003). Removal can be achieved using a combination of the following processes:

Manual: The weed wrench is one of the most effective techniques for the complete removal of broom. Established infestations are difficult to eliminate because large, long-lived seedbanks typically accumulate. Minimizing soil disturbances, monitoring, and repeated manual pulling of young plants when discovered can help prevent new infestations. Repeated pulling of successive generations is currently thought the most effective method, if that level of management is feasible. A flush of broom seedlings may occur directly beneath the previously canopied area after mechanical removal.

Mechanical: Mowing or cutting the shrubs may prevent seed production; however, resprouts will still need to be managed. Machines and tools used to remove stands may inadvertently transport seed to uninfested sites. Cutting broom shrubs to ground level at the end of the dry season can help reduce re-sprouting from the crown. Cutting plants and girdling (peel tree bark down to ground surface) is an additional measure to dissuade resprouting. Planting native shrubs and trees within and around broom stands can eventually help to minimize infestations by shading (Food and Agriculture, CA Department of, 2009; and Cal-IPC 2004). Cutting and treating stumps with herbicide is an effective measure that reduces soil disturbance.

Grazing: Intensive goat grazing has been used to control brooms. Goats are most effective in controlling regrowth following initial control strategies. Goat grazing may be difficult if trying to reestablish natives during the control process since goats will also likely browse the native plants. Goats confined to a small area can help control stands of young shrubs or young re-growth from cut shrubs (CA Department of Food and Agriculture 2009).

Chemical: For brooms, glyphosate applied as a 2-3% v/v foliar spray has been an effective treatment. It is recommended on this site to use Triclopyr applied as a 25% basal bark application in an oil carrier after cutting older plants if they are not fully removed by a weed wrench or Pulaski. Some resprouting may occur with these mechanical treatments and follow-up pulling, or herbicide management may be necessary for future flushes of seedlings (CA Department of Food and Agriculture 2009). Cutting and treating stumps with herbicide is an effective measure that reduces soil disturbance.

Disposal: Pulled plants that have not gone to seed can be composted on site. Plants that have gone to seed should be immediately tarped and/or bagged and removed from the site for disposal.

Cotoneaster (*Cotoneaster franchetti*)

Contoneaster is an erect, evergreen flowering shrub that grows up to 10 feet tall. This plant has zig zag branches that start at ground level. The leaves are up to ¾ inch long, gray-green, simple and hairy on the bottom side. The flowers are abundant and can be seen in June through September, and the red berries are distinguishable from September through February. This plant has great

success from the number of seeds it produces which don't need fertilizer to germinate. Birds have a way of dispering this plant far beyond the parent source of seed. This pant can also spread by the roots and branches that can root at the nodes (Cal-IPC 2004).

Manual: The weed wrench is one of the most effective techniques for the complete removal of this plant if it a half inch or less DBH. Minimizing soil disturbances, monitoring, and repeated manual pulling of young plants when discovered can help prevent new infestations. Pulling is practical if used on small plants, due to the fact that this shrub has multiple stems and is difficult to pull from the base as it gets older. It is important to remove the entire plant as it does reproduce from stump sprouts. Repeated pulling of successive generations is currently thought the most effective method, if that level of management is feasible.

Mature plants can be controlled by cutting no lower than one inch from the ground surface just after berries are produced, but before the berries drop. This method takes into account that the stems will produce sprouts from the roots or trunk if it is cut any lower, and by not waiting for the berries to fall the risk of new propagules is minimized to seed already in the soil. This method includes covering the stump with a shade mat, black cloth, or landscape fabric for at least a year. Fabric should be checked two times a year, and cutting new growth that survived under the fabric is ok as long as it is replaced securely.

Chemical: Cotoneaster can be treated with the spot application technique or using a paint brush on the freshly cut woody stems, using a 50% concentration of glyphosate It is recommended on this site to use Triclopyr applied as a 25% basal bark application in an oil carrier after cutting older plants if they are not fully removed by a weed wrench or Pulaski. Some resprouting may occur with these mechanical treatments and follow-up pulling, or herbicide management may be necessary for future flushes of seedlings. Cutting and treating stumps with herbicide is an effective measure that reduces soil disturbance.

Disposal: Plants can be piled on site and covered, chipping is recommended for larger material.

Velvetgrass (*Holcus lanatus*) & tall fescue (*Festuca arundinacea*):

Mechanical: For small isolated patches it is possible to remove the clump of grass by hand before the seed sets. The plant can also be removed by cutting at the base with a paring knife. This is most successful during the winter rainy season from January through April. Weed whacking then scraping is another method used to control the grass before the seed set. Chopping the root crown using a blade or McLeod is another option. Cutting patches of the grass in the spring followed by mulching with 4-6 inches of onsite material has been used to suppress resprouts in small areas. Follow up treatments are necessary for all hand methods.

Disposal: The plant material should be bagged and disposed of offsite.

English ivy (*Hedera helix*) & Cape Ivy (*Delairea odorata*):

H. helix belongs to the family Araliaceae (ginseng) and is a native of Europe. Brought to North America by colonial settlers, H. helix has become naturalized in the US. English ivy is cultivated in Europe and North America in gardens, landscapes and as house plants. This plant grows easily in many types of soil and in sun or shade. English ivy is fairly drought tolerant once it is established. Leaves are alternate and simple with the juvenile leaves 3-5 lobed and adult leaves ovate to rhombic. Mature plants will bear greenish-white flowers. The fruit is berry-like and black.

Manual/Mechanical: Cutting is successful with persistence but does not always kill the plant. However, the use of cutting and then applying an herbicide may provide better control (see Chemical control section).

Using a shovel to remove plants provided immediate control with little regrowth. Weeding plants by hand or with pliers successfully allowed regeneration of most native species. Do not leave the pulled plants on the ground; they can continue to grow. If removal of the plants is not possible, place the pulled plants on a wooden platform to dry and decompose.

Manual/Chemical: Immediately control ivy that is growing up trees by cutting the vine at waist height, loosening the vine around the limbs and removing the roots. If the root cannot be removed by hand, strip the bark and notch the exposed section of the vine. Paint on an undiluted herbicide such as glyphosate. If English ivy is growing on trees, take care that all pieces of the ivy are removed. The growth of English ivy can be sustained by the fibrous nature of the trunk. If the vine goes above the height of full removal, the plant should be cut in two places and the middle and bottom section removed so that it cannot utilize the fibrous nature of the trunk.

6. Maintenance Plan

6.1 Maintenance Plan

The re-established habitats have been designed to be as self-sustaining as possible. However, natural ecosystems are dynamic and subject to change over time. This is especially true in modern, fragmented preserves, where the vast landscapes and ecological processes which once maintained a habitat mosaic may have been partially or entirely disrupted. Among the natural processes that can modify the habitats are flood and drought, fog, fire, wind, disturbance by burrowing animals, and grazing.

As a result of human-induced change, management is usually required to maintain preserves and prevent gradual degradation. In the short term, management will likely be necessary to minimize invasive plant species that could recruit within created wetland, and enhanced riparian communities. The following discussion identifies maintenance requirements to ensure the continued viability of the resource once initial construction is completed.

The construction contractor will be responsible for habitat planting. The Tribe will be responsible for implementing and financing the initial plant establishment maintenance period to ensure the site has been prepared properly and does not have deficiencies or damages, that target invasive plants comprise no more than 10% of the re-established habitat areas, after five years and that rooted stock is planted correctly and is exhibiting healthy and vigorous growth. After the initial plant establishment maintenance period, the Tribe will be responsible for implementing and financing maintenance activities for the duration of the five year monitoring period.

The following discussion identifies approaches for maintaining the site at the end of the construction and planting period.

6.2 Inspection Activities and Frequencies

The following inspections will be generally performed on a bi-annual basis throughout the mitigation monitoring timeframe unless a different interval is specified below. Field notes will document if conditions are normal or abnormal, and the annual monitoring report will recommend remedial adaptive management actions to address any significant issues, as deemed necessary. In addition to the annual monitoring criteria listed above, annual monitoring will also note whether the following conditions are observed within each habitat type:

1. Are planting areas exhibiting excessive water or drought stress (too much or too little water as evidenced by leaf wilt, leaf drop, plant die off, etc.)?
2. Is there any presence of new or re-established populations of invasive or undesirable plants?
3. Is there a distinctive pattern of plant die off (i.e., all species of a single plant or a cluster of plants within a small area)?

Inspections shall occur bi-annually and be documented in a maintenance logbook as to the date, time, site conditions, general observations, type of work to be done, and equipment used or required for follow-up maintenance. Inspection frequency may be altered depending on ambient conditions or the amount of work required at the site. The logbook will be submitted on an annual basis with the annual monitoring report.

6.3 Maintenance Schedule and Activities

Inspection of the mitigation site and associated maintenance shall be conducted quarterly for five years. Maintenance activities can include revegetation irrigation, maintenance of herbivory root and foliage protectors, supplemental planting, and/or weeding.

The work will be guaranteed against invasive plants (listed above, Table 5) and weed growth during the five year monitoring period. Weed management such as with a mower, weed whacker, weed wrench or extractigator, or hand pulling, applications should be done seasonally, throughout the year until plants are established. The NRLF is common on coastal sites and can be active at any time of year. Highest risk of impacts during vegetation maintenance is from middle to late summer when juveniles are dispersing or anytime in the rainy season; no herbicides are allowed at this time. If timing of maintenance needs to be modified for certain items, the rationale for the decision will be documented in annual monitoring reports and in the maintenance logbook. Inspections and Maintenance shall occur bi-annually using the schedule for maintenance during the monitoring period is shown in Table 6 as a guide for determining when to visit the mitigation site.

Table 6 Schedule for Wetland and Riparian Maintenance during the Monitoring Period

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wetland Revegetation Inspection and Maintenance	I, M			I, M			I, M			I, M		
Northern creek Inspection and Maintenance	I, M			I, M			I; M			I, M		
Invasive Plant Inspection and Maintenance	I, M			I	M	M	I, M	M	M	I, M		

I = Inspection, M = Maintenance Predators (bullfrogs) are not expected to be a significant issue in coastal or seasonal wetlands.

6.3.1 Revegetation Inspection and Maintenance

Revegetation maintenance will be conducted quarterly to ensure wetland revegetation out-planting is becoming established.

- Supplemental planting for areas that have deficiencies in the seeding or planted material stock (may be in-kind, or if a particular species is not doing well at the site, a suitable replacement species can be supplemented for original plant species);
- Supplemental replacement plants for when a plant becomes damaged or injured by maintenance activities (may be in-kind, or if a particular species is not doing well at the site, a suitable replacement species can be supplemented for original plant species);
- Supplemental watering to maintain adequate moisture depth in soil to insure vigorous growth;
- In years one and two of the maintenance period, the Contractor shall establish an agreement with a native plant nursery to collect seed to propagate and germinate for supplemental and/or incidental planting in anticipation of long-term replanting efforts for the following year;
- Fence repair around wetlands and northern creek riparian corridor from cattle damage;
- Watering will be provided through an informal irrigation system and the timing and frequency of irrigation will be reduced after year two of maintenance to allow for the plant to acclimate to the existing moisture conditions; and
- The wetland areas will be maintained with minimal weeds; weed mats can be used to help achieve this criterion.

6.4 Success Criteria

Performance standards for the Humboldt Road mitigation project are intended to be measurable by systematic monitoring methods.

6.4.1 Hydrology Criteria

H1: Palustrine Emergent & Forested Wetland: During an average year of rainfall (68 inches), the created wetland will meet the USACE definition of wetland. Small localized portions within the wetland will be saturated to within 6 inches of the surface for greater than 25 consecutive days.

H2: Palustrine Emergent & Forested Wetland: At the end of five years, the total area of created wetlands shall be sufficient to meet agreed upon mitigation ratios as determined by a 0.87 acre post project jurisdictional delineation.

6.4.2 Vegetation Criteria

V1: Palustrine emergent wetland post-planting cover shall meet the annual criteria identified in Table 7.

Table 7 Palustrine Emergent Wetland

Monitoring Year	Success Criteria*
Year 1	40% or greater absolute cover of native or naturalized wetland species. No more than 25% absolute cover of target invasive plants.
Year 2	50% or greater absolute cover of native or naturalized wetland species. No more than 20% absolute cover of target invasive plants.
Year 3	70% or greater absolute cover of native or naturalized wetland species. No more than 15% absolute cover of target invasive plants.
Year 4	75% or greater absolute cover of native or naturalized wetland species. No more than 15% absolute cover of target invasive plants.
Year 5	80% or greater absolute cover of native or naturalized wetland species. No more than 10% absolute cover of target invasive plants.

*No large unvegetated bare spots (greater than 25%) or erosional areas, no evidence of oversaturation or permanent inundation.

V2: Palustrine forested wetland post-planting cover shall meet the annual criteria identified in Table 8:

Table 8 Palustrine Forested Wetland

Monitoring Year	Success Criteria*
Year 1	20% or greater absolute cover of native or naturalized wetland species. No more than 25% absolute cover of target invasive plants.
Year 2	30% or greater absolute cover of native or naturalized wetland species. No more than 20% absolute cover of target invasive plants.
Year 3	50% or greater absolute cover of native wetland species. No more than 15% absolute cover of target invasive plants.
Year 4	60% or greater absolute cover of native or naturalized wetland species. No more than 15% absolute cover of target invasive plants.
Year 5	65% or greater absolute cover of native or naturalized wetland species. No more than 10% absolute cover of target invasive plants.

*No large unvegetated bare spots (greater than 25%) or erosional areas, no evidence of oversaturation or permanent inundation

V3: Riparian Corridor: No more than 5% absolute cover of target invasive plants shall be present at the end of the five year monitoring period.

7. Monitoring

7.1 Hydrology Monitoring

Monitoring of hydrology will be completed through physical survey measurement using staff plates and piezometers for wetland hydrology. If there are changes in ground elevations at these locations as a result of storm damage, excessive inundation, excessive drought, or excessive accumulation of vegetation corrective actions will be evaluated. If determined appropriate, a solution to remediate impacts will be proposed to the regulatory agencies. Monitoring will occur for five years and reports are due annually by December 31st and will be submitted to the USACE, CCC, CDFW, and USFWS.

Hydrology monitoring will document precipitation and weather conditions. In the event of prolonged (more than one year) drought, extension of the monitoring period or other appropriate adaptive management action will be proposed. Methods for quantifying the hydrologic function of the wetlands are described below.

Palustrine Wetlands: Methods for quantifying the geomorphic and hydrologic function of the wetlands will include:

- Install staff gages and piezometers within created wetlands for the purpose of measuring depth to saturation and duration of water inundation.
    - During the rainy season, the staff gages shall be monitored a minimum of one time per month (November through April).

- The Technical Standard for Wetland Hydrology will be met if wetland hydrology occurred in at least 50 percent of years per Hydrology Criteria #1 (EPA 2005).
- Monitor piezometers weekly, eight consecutive times, for one month, during the winter season (November through April).

The created wetland area at Martin Ranch mitigation site will be determined by a jurisdictional delineation, per Hydrology Criteria #2.

7.2 Vegetation Monitoring

Vegetation sampling will occur every year for the duration of the five year monitoring period. The goal is to estimate the percent surface area cover and document the species composition once revegetation activities are complete. Monitoring would be conducted between June 1 and July 31st and be scheduled within the same month each monitoring year for best comparison of results.

Either the quadrat or point-line intercept methods may be used to estimate absolute vegetative cover, native cover, species cover, and invasive plant cover. The method to be used will be selected by the biological monitors after discussion with resource agencies. The selected method will be used in each created and enhancement habitat type areas (wetland and riparian corridor) and will be used to determine whether mitigation areas are meeting set success criteria for vegetative cover (Tables 7 and 8). Within any site methods shall be consistent through the monitoring period.

7.2.1 Determining Sample Size

Power analysis. An a priori power analysis will be used to determine the monitoring effort required. We define the specific question to be addressed as follows:

Is the true value of the percent cover less than or equal to the percent cover requirement?

The allowable certainty for percent cover will be a margin of error of +/- 10% at the 95% confidence interval. The confience interval is the probability that the true value would be encapsulated in the margin of error around the reported percentage; the lower the confidence interval, the smaller the margin of error. Margin of error (ME), confidence interval and required number of sampling points (n) are related by the following equation for the 95 % confidence interval:

ME = 0.98/sqrt (n)

The number of sampling points required to evaluate percent cover will be calculated using this equation.

7.2.2 Monitoring Protocol and Analysis for Estimating Vegetative Cover

Non-native Invasive Plant Monitoring

During spring or early summer of Years one to five, non-native invasive plant cover will be calculated from the data collected, as described above. In addition to this monitoring, areas with greater than ten percent cover of target non-native species will be mapped using GPS as long as areas are safely accessible. Maintenance activities to control non-native invasive species will be targeted in these areas. Each year the acreage of mapped highly invasive species will be compared.

A spring inspection in subsequent years comparing mapped non-native invasive cover from the prior year will be conducted to determine if a non-native invasive species population has spread or a new species has invaded. In either scenario, maintenance activities may be required.

Additional Data Collection

In addition to data collected along transects, quantitative and qualitative data will be collected each year of monitoring. These general site assessments are intended to help determine if data from sampling transects is an accurate representation of site conditions, to help assess the overall functioning of the site as a whole, and also to help identify localized or low-level trends such as new invasive species formations, localized changes in species abundance, and other changes that might be overlooked if only transect data are analyzed.

The following data will be collected during the site assessment:

- Species richness: this general site data will be used for calibrating similar data taken at transects, and is not intended for comparison with success criteria. Data will also help to evaluate whether invasive or non-native species are outcompeting native plants, and whether more active management might be required.
- Assessment of the health and vigor of the planted stock will be documented using the attributes in Table 9.
- Other site characteristics, including patterns of plant die-offs, erosion, hydrological issues, trespass, herbivory or grazing pressure, or other land use issues. This information is intended for use in recommending management actions as necessary

Table 9 Qualitative Score for Assessing the Health and Vigor of Planted Stock

Score	Description of Score
Excellent	No evidence of stress; minor pest or pathogen damage may be present. No chlorotic leaves, no or very minor herbivory (browse). Evidence of new growth, flowering, seed set on majority (greater than 75 %) of plants observed.
Good	Some evidence of stress. Pest or pathogen damage present, few chlorotic leaves (> 5%), minor evidence of herbivory (browse). Evidence of new growth, flowering, seed set on most (greater than 50%) of plants observed.
Fair	Moderate level of stress; high levels of pest or pathogen damage, some chlorotic leaves (> 10%), some herbivory damage (few snapped leaves, stems, wear marks etc.). Evidence of new growth, flowering, seed set on some (less than 50%) of plants observed.
Poor	High level of stress; high levels of pest or pathogen damage, many chlorotic leaves (> 30%), severe herbivory damage (massive forage damage, main stems/leaves stripped etc.). No evidence of new growth, flowering, or seed set, or only a few plants (less than 25%) with these characteristics.

7.3 Photo-monitoring

Permanent photo-documentation points will be established within the mitigation sites. Four photopoints (looking north, south, east, and west) will be taken for each created wetland habitat monitored at Martin Ranch. GPS coordinates will be obtained for each photopoint, and the points included on a GIS map of the site.

Photographs will be taken throughout the monitoring period, during each monitoring event. One photograph will be taken from the monitoring point, and the cardinal direction will be documented. Photos will be taken with a digital camera with a moderate wide angle lens (approximately 35mm focal length if a full-frame sensor, approximately 24 mm focal length if a DX sensor, at the widest setting if a consumer-level digital camera with a built in zoom). The make and model of camera and type and focal length of lens will be noted in monitoring documentation. Photographs will be taken from approximately five feet in height above ground surface, or as determined appropriate to accurately depict the habitat and existing conditions.

7.4 Monitoring Schedule

Monitoring will be implemented annually for five years. The wetland community will be monitored between June 1 and July 30. Implementation flexibility to accommodate variability in weather conditions is acceptable. The site will be inspected for general parameters including observations of invasive and non-native plants, signs of erosion, cattle disturbance, potential fence repair, and vitality of plant survivorship.

8. Long-term Management Plan

Long-term management is a strategy for managing the site once the performance standards are achieved to ensure the long-term viability of the resource. While mitigation program for Humboldt Road has been designed to restore self-sustaining ecological processes and functions and to perform in perpetuity, there will still be a need to make occasional inspections and if necessary, perform remedial actions. Once the five-year monitoring time period is over and Tribe satisfies the permit requirements outlined in this mitigation plan, the ownership of the mitigation sites will remain in the Tribe's ownerships and will be responsible for the long-term management of the mitigation site and shall inspect and finance all activities moving forward.

9. Adaptive Management

Adaptive management is a tool used to cope with the inherent changes and instability fundamental to habitats and the ecological processes that define them. Adaptive management offers a feedback system and a suite of practical methods based on research and monitoring. As a management framework, it holds that conservation and restoration programs should be designed in ways to accumulate knowledge as quickly and accurately as possible so that the management plan can be responsively adapted to improve management activities. This approach allows managers to learn by experience within site specific environments and apply lessons learned to remedy deficiencies using a controlled and scientific approach.

Adaptive management procedures will be recommended on a case-by-case basis, to address any issues identified at the site during monitoring or maintenance activities. Adaptive management actions could include one or more of the following activities (not exclusive) if success criteria are not met:

1. Adjusted weeding method to reduce weeds around the planted wetland or upland to decrease competition from non-native grasses and forbs;
2. Supplemental planting for areas that have deficiencies in the seeding or planted material stock (may be in-kind, or if a particular species is not doing well at the site, a suitable replacement species can be supplemented for original plant species);
3. Supplemental replacement (may be in-kind, or if a particular species is not doing well at the site, a suitable replacement species can be supplemented for original plant species);
4. Supplemental watering (for non-performing plants that required supplemental planting);
5. Additional erosion control;
6. Hydrologic modification or minor regrading.

Unpredictable natural changes could alter the mitigation areas and consequently necessitate changing the goals, objectives, strategies, and actions set forth in this plan. These changed conditions include, but are not limited to:

- Unusual weather patterns, such as extended drought or excessive rainfall;
- Change in species composition, such as through invasion of a new non-native invasive plant or wildlife species to the site, or increase in spread of existing non-native plants listed as limited in Table 5, yet exhibits similar adverse 4
- Change in the listing of species status that could occur or have potential to occur in the habitat mitigation area;
- Erosion or deposition of sediments;.

9.1 Initiating Procedures

Standards for when to implement adaptive management will be if the percent cover in any monitoring year (averaged over sample plots) is 15 percent below the target level described under "Annual Success Criteria," or if absolute cover of target invasive species is over ten percent in monitoring years three, four or five; or if additional final criteria are not met.

The hydrologic triggers that will dictate remedial actions are erosion and sedimentation. If an annual performance criterion is not met, a report shall be prepared analyzing the cause of failure and, if necessary, proposing remedial action.

9.1.1 Revegetation

Replanting would be recommended if it is deemed that no other procedure could be employed to restore the target habitat to meet monitoring criteria if there is a lack of survival from targeted planting efforts. Vegetation monitoring surveys may reveal the presence of poor survival rates of planted stock or natural recruitments. Replanting would be recommended if it is deemed that no other procedure could be employed to restore the target habitat to meet monitoring criteria if targeted planting is 15 percent below the target level of cover or 15 percent below success criteria on years three, four, or five.

Replanting may be deemed appropriate to replace dead plants. Plants should be replaced during the next rainy season. This should be considered throughout the monitoring period, considering the six month window may not include potential casualties during the dry season.

- Replanting will also be incorporated if success criteria are not being met to remedy the lack of live plant stems. There is potential to change the plant palette if a lack of diversity has occurred and is coordinated with the Tribe and Project RCOM.
- If a particular species has poor success throughout the site it may be replaced with a new species of botanical equivalence to the restoration habitats.
- If selected areas are receiving too much or too little water, the system may be modified accordingly.
- Use of weed mats or mulch as remedial action to reduce invasive plant recruitment.
- Potential application of fertilizer for plants that are nutrient deprived.

9.1.2 Hydrologic Modification

Hydrologic modification by re-grading or re-contouring could be recommended if it is deemed that no other procedure could be employed to restore the target habitat to meet hydrology criteria (H1 and H2).

- Re-grade if sediment accumulation augments the seasonal water regime of the targeted palustrine emergent or forested habitat type.
- Re-grade if hydrologic regime is not met in year three, assuming normal precipitation (within NRCS WET tables).

9.1.3 Invasive Species Control

An early detection rapid response mechanism should be in place for weed management throughout the year. Reducing non-native invasive plants should occur throughout the year if needed.

Machinery should not be used at the site during wet conditions. Invasive species control will likely require repeated effort for at least several years and possibly throughout the monitoring period. Specific needs will be identified based on each year of monitoring, and documented in annual reports. Appropriate control methods will be utilized depending on the species, the abundance and distribution of the species, and the location within the site and relative to wetlands or other sensitive resources.

- If using weed whackers or mowers, their operation should be timed for early or mid-summer, after annuals have desiccated and turned brown. Hand removal of weeds using a hoe to scrape the surface is adequate if this is done in the spring, there will be a reduction of annual grass seeds in the soil (McCreary 2009).
- Reducing non-native annuals and invasive plants should occur throughout the year if needed.
- Periodic grazing in the spring and late summer can be implemented as an adaptive management activity.

- When any new plant is listed or if a ranking status has been revised by Cal-IPC as medium or high priority and it has been identified during monitoring it should be removed according to the most recent up to date methods.
- When new invasive plant control methods are released that are more effective than a previously employed method for control and removal the plan should accommodate the new techniques for the remainder of the monitoring period.
- Invasive plants will be removed extending three to five feet into areas surrounding the re-established habitat.
- Routine weeding will be implemented as part of the maintenance.

9.1.4 Browsers and Predators

Deer and rodents are the main concern for browsing on the plantings. The Project Representative and the monitoring staff may meet and confer from time to time to revise the adaptive management plan to better meet management objectives and preserve the restored and enhanced habitat and conservation values of the property. Any proposed changes to the plan shall be discussed with the necessary agencies. Any proposed changes will be designed with input from all parties. Amendments to the plan shall be approved in writing, shall include required management components, shall be implemented by the land manager and have the coastal permit amended if legally appropriate.

10. Financial Assurances

The Tribe will identify suitable funding vehicle agreeable to the resource agencies to assure adequate funding is available to complete required mitigation activities. The intent is to ensure that mitigation is completed even in the event of unforeseeable future circumstances.

11. References

AES, 2006. *Biological Resources Assessment: Elk Valley Rancheria, Martin Ranch Fee-to-Trust Project.* Analytical Environmental Services (AES). May

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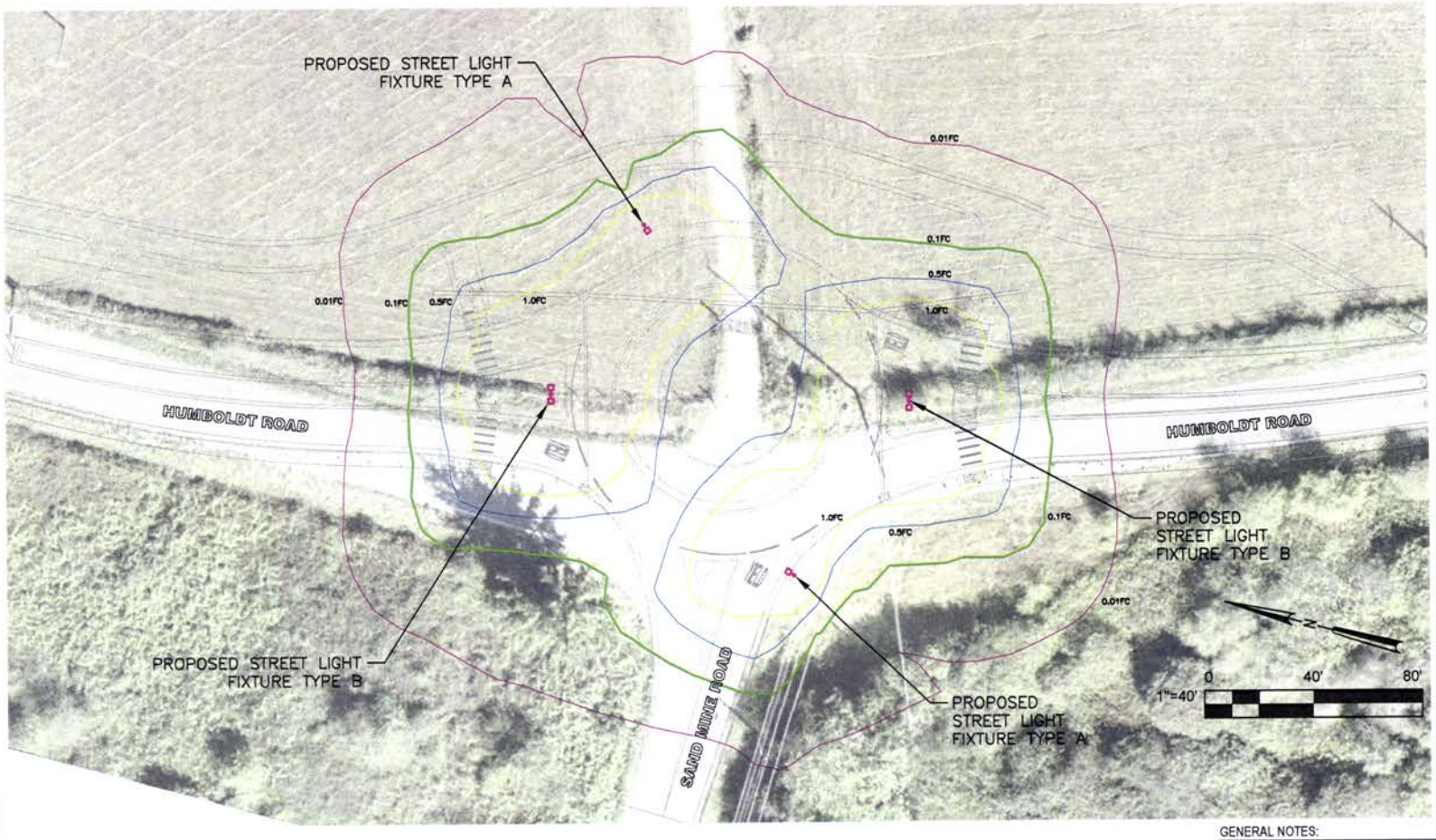

EXHIBIT NO. 9

APPLICATION NO.

A-1-DNC-12-021 and
CC-0001-14 (Elk Valley Rancheria)
LIGHTING PLANS (1 of 5)

GENERAL NOTES:

1. ISOLINES SHOWN AT 1.0FC, 0.5FC, 0.1FC AND 0.01FC.
2. FIXTURE TYPE A: SINGLE LED FIXTURE MODEL EPIC CLASSICAL MEDIUM BY COOPER INDUSTRIES, DOWNCAST AND SHIELDED ILLUMINATION, 95W, 3000k, SINGLE POLE MOUNT ARM ON 16-FOOT TALL POLE.
3. FIXTURE TYPE B: DOUBLE LED FIXTURE MODEL EPIC CLASSICAL MEDIUM BY COOPER INDUSTRIES, DOWNCAST AND SHIELDED ILLUMINATION, 2 X 95W, 3000k, DOUBLE POLE MOUNT ARM ON 16-FOOT TALL POLE.

No.	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

Reuse of Documents:
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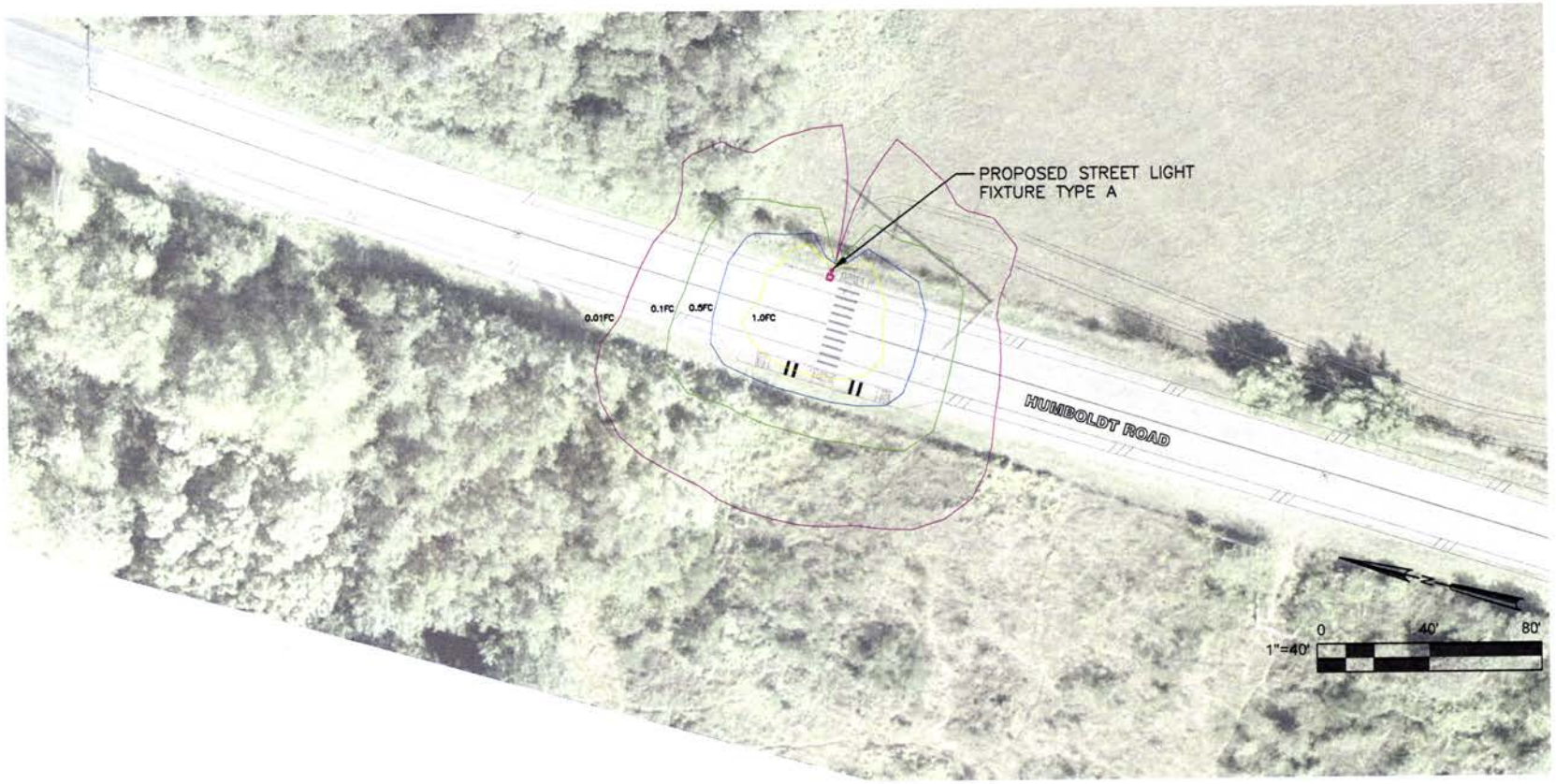
GHD Inc.
718 Third Street Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330
W www.ghd.com

Drawn	SEG	Designer	
Drafting Check		Design Check	
Approved (Project Director)			
Date			
Scale	AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client: ELK VALLEY RANCHERIA, CALIFORNIA
Project: HUMBOLDT ROAD IMPROVEMENT
Title: ROUNDABOUT PHOTOMETRIC PLAN

Original Size: Ansi B
Drawing No: L1
Rev:

Plot Date: 10 April 2014 - 1:14 PM
Plotted by: Josh Wall
Cad File No: G:\2005 & Beyond\61828 ElkValleyRancheria\61828-10-001 HumboldtRdImprovement\11-003 EngDesign\Lighting\SE\61828100011-L1-PhotometricPlan1.dwg



GENERAL NOTES:

1. ISOLINES SHOWN AT 1.0FC, 0.5FC, 0.1 FC AND 0.01FC.
2. FIXTURE TYPE A: SINGLE LED FIXTURE MODEL EPIC CLASSICAL MEDIUM BY COOPER INDUSTRIES, DOWNCAST AND SHIELDED ILLUMINATION, 95W, 3000K, SINGLE POLE MOUNT ARM ON 16-FOOT TALL POLE.

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date

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Plot Date: 10 April 2014 - 1:13 PM Plotted by: Josh Wolf
Cad File No: G:\2006 & Beyond\001628 Elk Valley Rancheria\001628-10-001 Humboldt Rd Improvement\11-003 Eng Design\Lighting\SE\001628110001-L2-Photometric Plan2.dwg

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Drawn: SEG	Designer	Client: ELK VALLEY RANCHERIA, CALIFORNIA	
Drafting Check	Design Check	Project: HUMBOLDT ROAD IMPROVEMENT	
Approved (Project Director)		Title: PEDESTRIAN CROSSING PHOTOMETRIC PLAN	
Date			
Scale: AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	Original Size: Ansi B	Drawing No: L2 Rev:

INVUE®

DESCRIPTION

The EPIC Collection delivers custom luminaire flexibility with high quality, yet availability expectations of standard specification grade product. The EPIC Collection can be dressed to suit any application. Recognizing evolving environmental and legislative trends, EPIC Collection delivers world class LED optical and performance solutions to the decorative luminaire marketplace.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

TOP: Cast aluminum classical top housing maintains a nominal 1/8" sidewall thickness. Top attaches to cast aluminum mounting arm hub with four (4) stainless steel fasteners. One-piece silicone gasket between mounting hub and top casting seals out moisture and contaminants. MIDSECTION: Continuous silicone gaskets seal lens to top casting and shade. The following mid section options feature cast aluminum construction and stainless steel assembly hardware: SO Solid Rings. SHADES: Heavy gauge precision spun aluminum shades offer superior surface finish and consistency in form. DOORFRAME: Die-cast aluminum 1/8" thick door and doorframe seal to underside of shade with a thick wall continuous silicone gasket. Mounting hub ships attached to mounting arm.

Optics

DISTRIBUTION: Choice of twelve (12) patented, high-efficiency AccuLED Optics™ that maximize light collection and direction distribution onto the application region. Each optical lens is precision manufactured via injection-molding, then precisely arranged and sealed on the board media. LEDs: High output LEDs, 50,000+ hours life at >70% lumen maintenance, offered standard in 4000°K (+/- 275K) CCT and nominal 70 CRI.

Electrical

ELECTRICAL TRAY: Driver and related electrical componentry are mounted to one piece tray. Quick disconnect wiring plugs allows for tray removal during routine maintenance. DRIVER: LED drivers are potted and heat sunk for optimal performance and prolonged life. Standard drivers feature electronic universal voltage (120-277V/50-60hz), greater than 0.9 power factor, less than 20% harmonic distortion and feature ambient temperature range of +40°C (104°F) down to minimum starting temperature of -30°C (- 22°F). Shipped standard with Cooper Lighting proprietary circuit module designed to withstand 10kV of transient line surge. All LED LightBARs and drivers are mounted to dedicated mounting trays and are easily replaced by use of quick disconnects for ease of wiring. Options to control light levels, energy savings and egress capabilities (separate circuit) are available.

Finish

Housing is finished in 5-stage Super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR™ cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.

Warranty

ECM LED features a five-year limited warranty.

ECM EPIC CLASSICAL MEDIUM LED

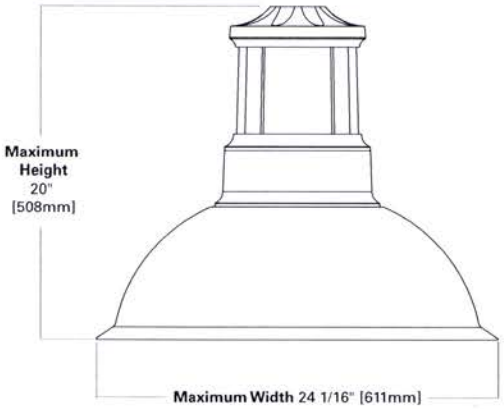
1 - 4 LightBARs

Solid State LED

DECORATIVE AREA

DESIGNLIGHTS CONSORTIUM

DIMENSIONS



NOTE: See configurations for more detailed information.

CERTIFICATION DATA

UL/cUL Listed
ISO 9001
IP66 LightBARs
ARRA Compliant
LM79 / LM80 Compliant
3.5G Vibration Tested

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 & 60hz, 347V/60hz, 480V/60hz
-30°C Minimum Temperature
40°C Ambient Temperature Rating

EPA

Effective Projected Area: (Sq. Ft.)
0.94

SHIPPING DATA

Approximate Net Weight:
45 lbs.

POWER AND LUMENS BY BAR COUNT

Number of LightBARs	Power [Watts]	Current @ 120V [A]	Current @ 277V [A]	DISTRIBUTION T2	T3	T4	SL2	SL3	SL4	5MQ	5WQ	5XQ	RW	SLR/ SLL
7 LED LIGHTBAR														
C01	27	0.23	0.13	1,873	1,866	1,817	1,836	1,756	1,807	1,937	1,907	1,911	1,847	1,704
C02	54	0.46	0.21	3,716	3,701	3,605	3,642	3,485	3,585	3,843	3,783	3,792	3,665	3,380
C03	77	0.65	0.29	5,475	5,453	5,311	5,366	5,134	5,282	5,661	5,573	5,586	5,399	4,980
C04	101	0.86	0.37	7,282	7,253	7,064	7,137	6,829	7,026	7,530	7,413	7,430	7,181	6,624
21 LED LIGHTBAR														
B01	27	0.23	0.13	2,304	2,295	2,235	2,258	2,160	2,223	2,382	2,345	2,351	2,272	2,096
B02	51	0.43	0.20	4,571	4,553	4,434	4,480	4,286	4,410	4,726	4,653	4,664	4,508	4,158
B03	73	0.62	0.28	6,734	6,707	6,533	6,600	6,315	6,497	6,963	6,855	6,871	6,641	6,125
B04	95	0.81	0.35	8,957	8,921	8,689	8,779	8,399	8,642	9,262	9,118	9,139	8,833	8,148

LUMEN MULTIPLIER

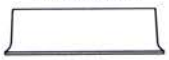
Ambient Temperature	Lumen Multiplier
10°C	1.04
15°C	1.03
25°C	1.00
40°C	0.96

PRODUCT CONFIGURATION

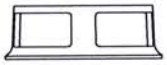
HOUSING

Classical
8.6" H x 8.7" W

MID SECTION



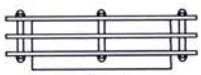
Solid
3.4" H x 9.9" W



Window
3.4" H x 9.9" W

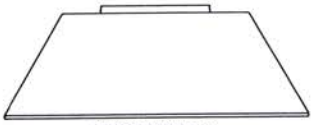
Louvered
3.4" H x 9.9" W

Slot
3.4" H x 9.9" W



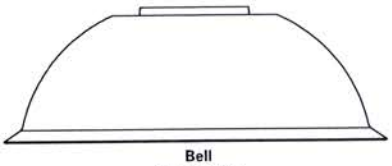
Solid Rings
3.4" H x 12" W

SHADE

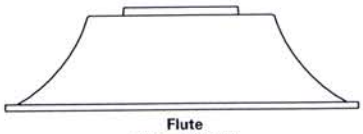


Straight Narrow
6.6" H x 19.1" W

Straight Wide
5.1" H x 23.9" W

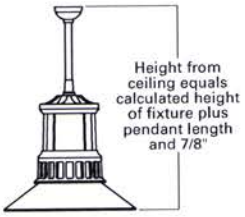


Bell
8" H x 24" W



Flute
6" H x 22.5" W

MOUNTING OPTION



ORDERING INFORMATION

Sample Number: ECM-B04-LED-E1-T2-FL-BK-2L

Product Family [1,2]
ECM=Epic Classic Medium

Number of Lightbars [3,4]
B01=[1] 21 LED LightBAR
B02=[2] 21 LED LightBARs
B03=[3] 21 LED LightBARs
B04=[4] 21 LED LightBARs
C01=[1] 7 LED LightBARs
C02=[2] 7 LED LightBARs
C03=[3] 7 LED LightBARs
C04=[4] 7 LED LightBARs

Lamp Type
LED=Solid State Light Emitting Diodes

Voltage
E1=Electronic (120-277V)
347=347V
480=480V

Distribution
T2=Type II
T3=Type III
T4=Type IV
5MQ=Type V Square Medium
5WQ=Type V Square Wide
5XQ=Type V Square Extra Wide
RW=Rectangular Wide
SL2=Type II w/Spill Control
SL3=Type III w/Spill Control
SL4=Type IV w/Spill Control
SLL=90 Degree Spill Light Eliminator Left
SLR=90 Degree Spill Light Eliminator Right

Mid Section Type
SO=Solid
WN=Window
LV=Louvered
ST=Slot
SR=Solid Rings

Shade Type
SN=Straight Narrow
SW=Straight Wide
BL=Bell
FL=Flute

Finish [5]
BK=Black
AP=Grey
BZ=Bronze
WH=White
DP=Dark Platinum
GM=Graphite Metallic

Options
2L=Two Circuits[6]
LCF=LightBAR Cover Plate Matches Housing Finish
7060=70 CRI/6000K CCT[7]
8030=80 CRI/3000K CC[7]
MS-LXX=Motion Sensor for on/off[8] operation
MS/X-LXX=Motion Sensor for bi-level[9] switching
PM48=Pendant Mount 48" Length or [10] Specify Pendant Length Inches (XX)

Accessories [11]
VA6150-XX=Bishop Wall Mount Arm
VA6151-XX=Bishop Wall Mount Arm w/Cross Rod
VA6152-XX=Traditional Wall Mount Arm
VA6153-XX=Traditional Wall Mount Arm w/45 Degree Strap
VA6154-XX=Bishop Single Pole Mount Arm
VA6155-XX=Bishop Single Pole Mount Arm w/Cross Rod
VA6156-XX=Bishop Twin Pole Mount Arm
VA6157-XX=Bishop Twin Pole Mount Arm w/Cross Rods
VA6158-XX=Traditional Single Pole Mount Arm
VA6159-XX=Traditional Single Pole Mount Arm w/Rounded Upper Bar
VA6160-XX=Traditional Single Pole Mount Arm w/Rounded Lower Bar[15]
VA6161-XX=Traditional Single Pole Mount Arm w/45 Degree Upper Bar
VA6162-XX=Traditional Single Pole Mount Arm w/45 Degree Lower Bar[15]
VA6163-XX=Traditional Single Pole Mount Arm w/45 Degree Upper Strap
VA6165-XX=Traditional Twin Pole Mount Arm
VA6166-XX=Traditional Twin Pole Mount Arm w/Rounded Upper Bars
VA6167-XX=Traditional Twin Pole Mount Arm w/Rounded Lower Bars[15]
VA6168-XX=Traditional Twin Pole Mount Arm w/ 45 Degree Upper Bars
VA6169-XX=Traditional Twin Pole Mount Arm w/ 45 Degree Lower Bars[15]
VA6170-XX=Traditional Twin Pole Mount Arm w/ 45 Degree Upper Straps
VA6171-XX=ECM Mast Arm Adapter
OA/RA1016=NEMA Photocontrol - Multi-Tap
OA/RA1027=NEMA Photocontrol - 480V
OA/RA1201=NEMA Photocontrol - 347V

Accessory Options [12]
V=Victorian Finial[13]
M=Modern Finial[13]
A=Architectural Finial[13]
N=Nostalgic Finial[13]
R=NEMA Twistlock Photocell Receptacle[14]

Notes:
1. DesignLights™ Consortium Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Arm not included. Order seperately. See accessories.
3. Standard 4000 K CCT and greater than 70 CRI.
4. 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
5. Custom and RAL color matching available upon request. Consult your customer service representative for further information.
6. Low-level output varies by bar count. Consult factory. Requires quantity two or more LightBARS.
7. Consult customer service for lead times and lumen multiplier.
8. Sensor mounted to the luminaire. Available in B01 - B06 and C01 - C06 configurations. Replace XX with mounting height in feet for proper lens selection, (i.e., MS-L25). Consult factory for additional information.
9. Sensor mounted to luminaire. Available in B02 - B06 and C02 - C06 configurations. Replace X with number of bars operating in low output mode and replace XX with mounting height in feet for proper lens selection, (i.e., MS/3-L25). Maximum 4 bars in low output mode. Consult factory for additional information.
10. PM option must be used with INVUE Pendant Kit only. Includes 48" long pendant pipe, swivel hanger and canopy cover. Other pendant lengths can be specified in inches (XX). Minimum pendant length is 9.5". For lengths avobe 48", consult Invue Lighting Systems representative.
11. Order separately, replace XX with color suffix.
12. Add as suffix to accessory. Example: VA6158-BK-R.
13. Only available with Traditional arms.
14. Not available with finials, pendant mount (PM48) or bishop wall mounts.
15. Requires use of 4" O.D. round straight pole.

Fixture A: ECM-B04-LED-E1-SL4-ST-BL-BK-8030 Fixture Watts = 95W
Fixture B: ECM-B04-LED-E1-SL4-ST-BL-BK-8030 Fixture Watts = 95 x 2 = 190W

Stillwater Sciences

850 G Street, Suite K, Arcata, CA 95521
phone 707.822.9607 fax 707.822.9608

TECHNICAL MEMORANDUM

DATE: 4 December 2013

TO: Josh Wolf, GHD

FROM: Dennis Halligan, Senior Fisheries Biologist, Stillwater Sciences

SUBJECT: Fisheries Assessment for Elk Valley Rancheria's Humboldt Road Safety Improvement Project

1 INTRODUCTION

The Elk Valley Rancheria, California, a Federally-recognized Indian tribe (Tribe), located in Del Norte County, California proposes to improve an approximately 2,930-foot section of Humboldt Road that is adjacent to the Tribe's Martin Ranch property. The road improvements are intended to increase safety for motorists, bicyclists, and pedestrians. The proposed project includes road realignment, installation of a roundabout, construction of a bike path and sidewalks, and culvert extensions. The proposed project would require the relocation of an existing ditch adjacent to the road. The project is not expected to impact the unnamed creek located along the northern boundary of Martin Ranch.

Stillwater Sciences was contracted by GHD to conduct a fisheries habitat assessment of the Humboldt Road ditch and the creek and make a preliminary determination of (1) their suitability to provide fish habitat and (2) the ability of the culverts that run under Humboldt Road to allow upstream fish migration to fish habitat.

This memorandum contains a professional assessment of the ditch's and creek's fish habitat characteristics and the ability of the culverts to pass fish. This assessment is based on review of:

- aerial photographs,
- documents and maps produced by the Tribe and its consultants,
- a public comment letter by Bradford Norman, and
- field observations of the ditch, creek, and culverts.

2 DITCH AND CREEK HABITAT ASSESSMENT

The Humboldt Road Safety Improvement Project is located along an approximately 3,000-ft-long stretch of Humboldt Road between Highway 101 and Roy Ave, in Del Norte County, California (Figure 1). The field review of the Humboldt Road ditch, creek, and culverts was conducted on 24 October 2013.

Figure 1. Study area map.

The fish habitat assessment of the eastside Humboldt Road ditch began at the Humboldt Road/Highway 101 intersection and proceeded north to the northwest corner of the Martin Ranch property line. The assessment consisted of visual observations along the entire ditch with notes and photographs taken at 11 different sites (Figure 2 and Appendix). Observations of fish presence, instream habitat characteristics (pools, spawning habitat, cover elements, and substrate type), and connectivity to potential fish-bearing waters were noted.

The first 500 feet of the Humboldt Road ditch is a heavily vegetated drainage facility that does not contain any fish habitat and does not have the potential to support fish populations (Appendix, Photographs 1 and 2).

The next 150 feet of ditch straddles culvert #1. This section of the ditch is also heavily vegetated, but more incised than the previous 500 feet due to drainage from the adjacent wetland (Appendix, Photograph 3). There was a small amount (1 inch deep by 8 inches wide) of water in the bottom of this section of the ditch during the time of the survey. This water appeared to be coming from diffuse seepage from the adjacent wetland. A defined channel draining the wetland was not observed. This section of ditch contained very marginal intermittent fish habitat. The culvert drained into a defined ditch on the west side of Humboldt Road that contained standing water. No fish were observed in the ditches on either side of the road.

The next 2,000 feet of ditch that includes culverts #2 and 3 is also heavily vegetated and does not contain any fish habitat (Appendix, Photographs 5–10). The ditch on the west side of Humboldt Road, which receives water from the culverts, is also heavily vegetated and non-fish-bearing. This entire section of ditch also has no connection to any fish-bearing waters.

The northern-most section of ditch is located in the northwest corner of the Martin Ranch property and is adjacent to riparian habitat. This creek flows under Humboldt Road and continues flowing to the west into a large marsh that empties directly into the ocean. The surveyed section of ditch is approximately 280 feet long, includes two 36-inch culverts (#4 and 5) (Appendix, Photographs 11 and 12), and is part of the fish-bearing creek that runs along the northern property boundary. Several three-spine sticklebacks, coastal cutthroat trout, and other unidentified salmonids (potentially juvenile steelhead) were observed around the culverts' inlets and outlets. Fish would likely occupy the riparian wetland during periods of high water that inundate this area.

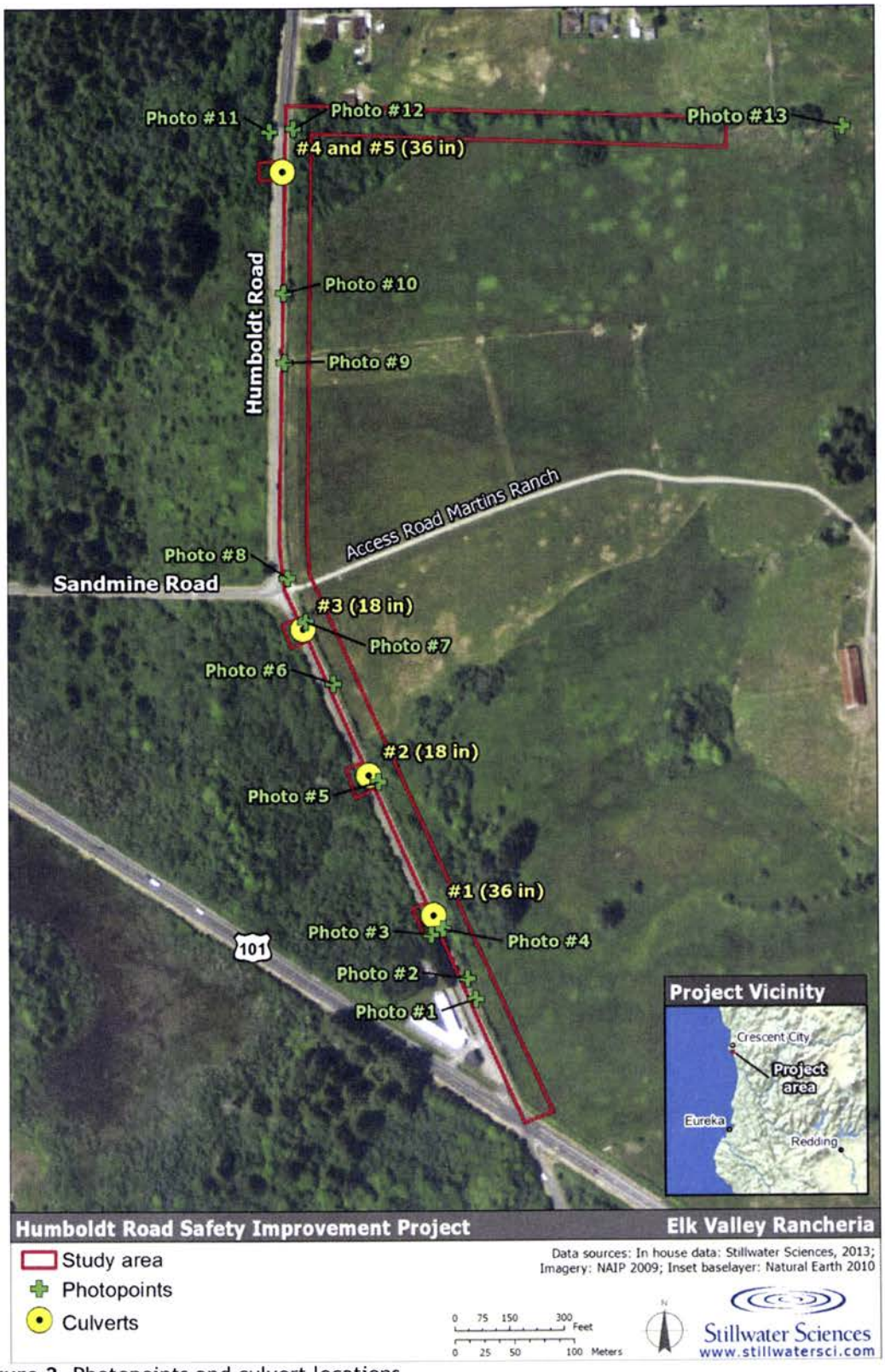


Figure 2. Photopoints and culvert locations.

The creek upstream (east) of the culverts contains spawning and rearing habitat for salmonids. However, the particle size distribution of the spawning habitat appears to be more suitable for coastal cutthroat trout than steelhead. It appears that steelhead habitat exists in the creek farther to the east.

This creek is currently being impacted by eroding banks that are a legacy of the historical dairy and cattle operations (Appendix, Photograph 13). Cattle had access to the creek and as a result have broken down the banks in places. These eroding areas are delivering sediment to the creek and adversely affecting downstream salmonid spawning habitat. In addition, the creek channel loses its definition approximately 1,400 feet east of Humboldt Road causing discontinuous surface flow to trickle through a wetland prairie area. The creek is also impacted by non-native vegetation.

3 CULVERT ASSESSMENT

The culvert fish passage assessment was conducted at a total of four road crossings and included five culverts. The assessment consisted of visually determining if the culverts were set at grade, were within a fish-bearing watercourse, and if so, the height of the outlet above the downstream water surface, length of the culvert, and depth of the jump pool. The assessment also began at the Humboldt Road/Highway 101 intersection and proceeded north to the northwest corner of the Martin Ranch property line. Photographs were taken of each culvert (See Appendix).

Culvert #1 is a 36-inch concrete pipe that is located approximately 600 feet north of the intersection of Humboldt Road and Highway 101 (Appendix, Photographs 3 and 4). This pipe is set at grade. The outlet of the culvert enters a defined ditch that contains standing water and has a mud bottom. The inlet of the culvert drains the wetland on the east side of the road. No defined channel leads from the wetland to the ditch feeding the culvert. No fish were observed in the inlet or outlet of this culvert. Fish would be able to pass this culvert if they are present.

Culvert #2 is an 18-inch concrete pipe that is located approximately 1,100 feet north of the intersection of Humboldt Road and Highway 101 (Appendix, Photographs 5 and 6). The culvert is set at grade. The culvert outlet enters a heavily vegetated non-fish-bearing roadside ditch. The inlet drains a non-fish-bearing roadside ditch.

Culvert #3 is an 18-inch concrete pipe that is located approximately 100 feet south of the Sandmine/ Humboldt Road intersection (Appendix, Photograph 7). This culvert is set at grade. The culvert outlet enters a heavily vegetated non-fish-bearing roadside ditch. The inlet drains a non-fish-bearing roadside ditch.

Culverts #4 and 5 are two 36-inch concrete pipes that are placed side-by-side and are located approximately 185 feet south of the northwest corner of the Martin Ranch property line. These pipes are set at grade and do not present a barrier to fish passage. The culvert outlets are about half-filled with sediment and drain into a flowing fish-bearing creek (Appendix, Photograph 11). One coastal cutthroat trout and several other unidentified salmonids were observed in the outlet pool. A concrete structure, of unknown purpose, is present about 20 feet to the north of the outlet pool. Surface flow wells up from under the structure. Several fish were observed in the pool at

this location. Standing water was also present in a shallow pool at the culvert inlets (Appendix, Photograph 12). Several three-spine sticklebacks were observed in the culverts' inlet pool.

4 CONCLUSIONS

Based on this field review, it appears that:

- Approximately 2,500 feet of the ditch does not contain habitat that could support fish species.
- Approximately 150 feet of the ditch straddling culvert #1 contains marginal intermittent fish habitat, but no fish were observed.
- The northern-most 280 feet of the ditch contains fish habitat and fish were observed.
- The northern creek is fish-bearing, contains salmonids and other fish species, and has been impacted by past land use (grazing) practices.
- Culvert #1 is set at grade and not a barrier to fish passage.
- Culverts #2 and 3 are set at grade, but do not connect to fish-bearing waters.
- Culverts #4 and 5 are set at grade and do not present a barrier to fish migration.
- Extending the existing culverts at their current grades would not affect fish passage.

DEL NORTE COUNTY COMMUNITY DEVELOPMENT DEP/
981 H STREET, SUITE 110
CRESCENT CITY, CA 95531

EXHIBIT NO. 11
APPLICATION NO.
A-1-DNC-12-021 and
CC-0001-14 (Elk Valley Rancheria)
NOTICE OF FINAL LOCAL ACTION & COUNTY FINDINGS FOR APPROVAL (EXCERPT) (1 of 10)

NOTICE OF ACTION

I. Notice is hereby given that the **Planning Commission** of Del Norte County took the following action on **July 11, 2012** regarding the application for development listed below:

Action: ✓ Approved ___Denied ___Continued ___Recommended EIR
___Forwarded to Board of Supervisors

RECEIVED
JUL 18 2012
CALIFORNIA
COASTAL COMMISSION

Application Number: GP2011-32C
Project Description: Coastal Grading Permit
Project Location: Humboldt Road, Crescent City
Assessor's Parcel Number: County right-of-way
Applicant: Elk Valley Rancheria c/o Brad Downes
Applicant's Mailing Address: 2332 Howland Hill Road, Crescent City, CA 95531
Agent's Name & Address: Winzler and Kelly c/o Josh Wolf,718 3rd Street ,Eureka, CA 95501

A copy of any conditions of approval and/or findings adopted as part of the above action is attached.

II. **If Approved:**

✓ This County permit or entitlement serves as a Coastal permit. No further action is required unless an appeal is filed in which case you will be notified.

This County permit or entitlement DOES NOT serve as a Coastal permit. Consult the Coastal Zone Permit procedure section of your NOTICE OF APPLICATION STATUS or the Planning Division of the Community Development Department if you have questions.

III. **Notice is given that this project:**

Is not appealable to the California Coastal Commission, however, a local appeal period does exist.

✓ Is appealable to the California Coastal Commission.

✓ Any appeal of the above decision must be filed with the Clerk of the Board of Supervisors by July 23, 2012 for consideration by the Board of Supervisors.

✓ Any action of the Board of Supervisors on this item may be appealed to the California Coastal Commission within 10 working days or 21 calendar days subject to the requirements of Chapter 21.52 DNCC and Coastal Regulations.

Must be forwarded to the California Coastal Commission for final action. You will be notified of its status by the Coastal Commission Office.

(Continued on the next page)

Is not subject to Coastal Commission regulations, however, a local appeal process is available. Written appeals must be filed with the Clerk of the Board of Supervisors by N/A. Consideration will be by the Board of Supervisors.

Requests for deferment of road improvement standards or for modification of road improvement standards must be filed in writing with the Clerk of the Board of Supervisors by July 23, 2012, with a copy provided to the Secretary of the Planning Commission. Consideration will be by the Board of Supervisors.

Parcel map must be filed within 24 months of the date of approval.

N/A Record of Survey and new deeds must be filed within 24 months of the date of approval.

New deeds must be filed within 24 months of the date of approval.

EXTENSIONS – MAJOR & MINOR SUBDIVISIONS OR BOUNDARY ADJUSTMENTS – Maps (or Records of Survey/Deeds) must be filed within 12 months after the original date of expiration.

NOTICE – SECTION 1.40.070

The time within which review of this decision must be sought is governed by the California Code of Civil Procedure, Section 1094.6, and the Del Norte County Ordinance Code, Chapter 1.40. Any petition seeking judicial review must be filed in the appropriate court not later than the 90th day following the date on which this decision was made; however, if within 10 days after the decision was made, a request for the record of the proceedings is filed and the required deposit in an amount sufficient to cover the estimated cost of preparation of such record is timely deposited, the time within which such petition may be filed in court is extended to no later than the 30th day following the date on which the record is either personally delivered or mailed to you or your attorney of record.

FISH AND GAME FILING FEES

Projects subject to CEQA are also subject to the following fees as required by the California Department of Fish and Game:

Applicable Fee - ✓ Neg. Dec. ($2151.50) ___ EIR ($2,969.00) ___ Exempt

This fee is due and payable to the County Clerk's Office. The applicant or agent is responsible for paying the current Fish and Game fee, which is subject to change. If not paid within 5 working days of the date of action of the Planning Commission, your project may be invalid by law (PRC 21089(b)) and will be referred to Fish and Game's Department of Compliance and External Audits in the Clerk's monthly deposit and report to Fish and Game.

ATTENTION APPLICANT

As a subdivider or adjuster of property, this notice is to advise you that **all taxes** must be paid in full prior to the recordation of your map or deeds. If the map or deeds are filed **after December 16th, you must pay all taxes due PLUS NEXT YEAR'S TAXES** before the map or deeds can be recorded.

2012

If you have any questions regarding the payment of taxes, call the Del Norte County Tax Collector's Office at (707) 464-7283.

Agent: Winzler and Kelly – Josh Wolf

APP# GP2011-32C

STAFF REPORT

APPLICANT: Elk Valley Rancheria

APPLYING FOR: Coastal Grading Permit for Pedestrian and Safety Improvements

AP#: 115-020-20, 28, 29 LOCATION: Humboldt Road, near Sandmine Road, Crescent City

PARCEL(S) SIZE: N/A EXISTING USE: Road right-of-way EXISTING STRUCTURES: N/A

PLANNING AREA: 4 GENERAL PLAN: AgGen 5, Ag Gen 20, RCA

ADJ. GEN. PLAN: Same

ZONING: Ag5, Ag20, RCA-2(fw), RCA-1 ADJ. ZONING: Same, R1-B6

1. PROCESSING CATEGORY: NON-COASTAL; NON-APPEALABLE COASTAL X; APPEALABLE COASTAL; PROJECT REVIEW APPEAL

2. FIELD REVIEW NOTES: DATE: 11/4/11 HEALTH DEPT; PLANNING X; BUILDING INSP X; ENGINEERING/SURVEYING X

ACCESS: Project is Humboldt Road ADJ. USES: Residential, Agriculture, Undeveloped
TOPOGRAPHY: Generally flat project area DRAINAGE: Surface

DATE OF COMPLETE APPLICATION: December 15, 2011

3. ERC RECOMMENDATION: Application complete. Post Public Hearing Notice. Adopt Negative Declaration. Approve with conditions.

4. STAFF RECOMMENDATION:

The Elk Valley Rancheria is proposing to reconstruct Humboldt Road from U.S. Highway 101 to approximately 300 feet south of Roy Avenue in Crescent City, CA. The project limits include the intersection of Humboldt Road and Sand Mine Road. This project is a safety improvement project funded through the Public Lands Highway Discretionary Program. The proposed safety improvements include a multi-use trail, paved shoulders, and a roundabout at the intersection of Humboldt Road and Sand Mine Road. This project is not associated with any other development plans of the Elk Valley Rancheria.

To insure that the structural integrity of the proposed road and associated improvements meet County Code and are equal to or better than the existing improvements, the County has requested a geotechnical study, drainage study, and plans for the proposed improvements. Since the applicant is proposing to reconstruct a road that has already been accepted into the County maintained road system,

they will be required to do materials testing. Materials testing will be based upon the 2010 Caltrans Standard Specifications. Specifications for concrete, asphalt, signs, and culverts have also been incorporated into the conditions.

Humboldt Road in its present alignment is within the County's right-of-way either by a formal dedication of right-of-way or by prescriptive easement. To complete the proposed project, the applicant has requested to widen Humboldt Road towards the east; the applicant owns said property. This could place the reconstructed Humboldt Road outside of the existing right-of-way. As a result, the County is requesting that the applicant dedicate sufficient right-of-way to Del Norte County for all road improvements associated with this project through a Memorandum of Understanding that has been approved by the Board of Supervisors. The Memorandum of Understanding will allow the applicant to dedicate the right-of-way upon project completion. Otherwise, the applicant would need to dedicate the right-of-way prior to the issuance of the Grading Permit. This condition will most likely require a larger than usual dedication of right-of-way around the proposed roundabout; roundabouts typically consume more right-of-way than standard intersections. The County is requesting that the right-of-way surrounding the roundabout have a radius (width) equal to the diameter (two times the radius) of the constructed roundabout improvements. The Rancheria will also need to ensure that the centerline of the road is at least thirty feet from the right-of-way edge. If the right-of-way edge is not at least thirty feet from the centerline of the road the Rancheria will need to dedicate additional right-of-way. If the multiuse trail is in conflict with the dedication of right-of-way, the County will still request the right-of-way and will require the Rancheria to maintain any portion of the multiuse trail that would end up in the County's right-of-way.

As mentioned earlier, this project would occur on a road already accepted into the County maintained road system. As a result, the applicant will also need to bond for the proposed improvements. The County requires bonding at a rate of 100% for projects of this scale. The project will require a Performance Bond and Payment Bond. The Performance Bond insures that the improvements are properly constructed and the Payment Bond insures that the applicant pays for the materials and labor used to construct the improvements.

After reviewing this project, the Environmental Review Committee had a lengthy discussion regarding the future development plans of the Elk Valley Rancheria. The Elk Valley Rancheria has not provided the County with details regarding the timing of development on the Martin Ranch property, their property to the east. Through the discussion, it was clear that members of the ERC were concerned about the unknown future plans of the Elk Valley Rancheria and whether or not this project should be constructed prior to underground utilities being extended to their property to the east. Staff informed the ERC that road moratorium and drainage conditions were included in an attempt to eliminate unknown future impacts.

Since the majority of the project will occur within Humboldt Road's traveled way, the County must be available to inspect and investigate any complaints for public safety in a timely fashion without undue burden being placed on staff. As a result, the ERC restricted work in the County right-of-way. Work in the County right-of-way shall occur Monday through Friday between 8:00 a.m. and 5:00 p.m. No work shall occur in the County right-of-way on County holidays or County furloughs. As with any work in a County right-of-way, an Encroachment Permit will be required. Construction shall occur during the County's grading season, April 30 and October 30. Providing these restrictions on this permit should aid the applicant in developing a construction schedule.

The County has not received any comments regarding cultural resources in the vicinity of this project. As a result, staff recommends allowing the Elk Valley Rancheria to secure and use a cultural monitor, as appropriate.

Staff is requesting that the proposed multi-use trail be constructed outside of the County's right-of-way and that the applicant maintain any improvements on the approved set of plans that require hardwired electricity (i.e. streetlights) and/or medium to high maintenance landscaping (i.e. vegetation).

The Planning Division assisted the Engineering Division in the review of this project's environmental issues and for compliance with the California Environmental Quality Act (CEQA). An initial study was prepared for the project to discuss and evaluate environmental issues by the applicant's agent Winzler & Kelly (now GHD). The initial study noted several issues which required mitigation and the proposed document for adoption is a Mitigated Negative Declaration (MND).

Planning staff had concerns related to the Biological section of the CEQA proposed Mitigate Negative Declaration. Specifically, upon review of the document it appeared that Winzler & Kelly had discussed wetland impacts and wetland mitigation but failed to specify locations and lacked specificity in how impacts to wetlands associated with the development of the road and the bike path would be dealt with. Planning staff discussed these concerns with Winzler & Kelly who were able to supplement the initial study with a wetland mitigation feasibility report that identified two areas onsite for wetland mitigation. The supplemental report stated that mitigation could be accomplished in each of these areas to satisfy a 2:1 mitigation ratio and in combination a 3:1 mitigation ratio. The only areas found to be available for onsite wetland mitigation are located outside of the County and State jurisdiction on the Martin Ranch (Indian trust lands) therefore the County has not recommended conditions specific to wetland mitigation into the approval of the project but the requirement for mitigation will remain in effect through the adoption of the CEQA document. If necessary wetland mitigation, as prescribed in the CEQA document, does not actually occur the project could be found to be in violation of CEQA. Wetland mitigation and monitoring will be conducted by the agency with wetland jurisdiction, in this case the Army Corps of Engineers (USACE). Staff recommends that the County and the Department of Fish and Game maintain contact with the USACE during the mitigation and monitoring process to ensure CEQA compliance, as stated in the CEQA document, to the extent allowable upon trust lands.

Other areas discussed in the initial study requiring mitigation were reviewed by staff and found to be acceptable with respect to the mitigation proposed (see proposed Mitigated Negative Declaration for more details). The County did receive several letters from the agencies involved in the CEQA review process. The Regional Water Quality Control Board submitted a letter stating concern that the impacts to wetland and riparian areas be adequately mitigated if avoidance is not possible. Also, the Water Board states their requirement that storm water concerns be addressed through low impact development strategies. Finally, the Water Board states what other permits may be required for the project. It is staff's opinion that the concerns stated in the Water Board letter have been addressed in the CEQA document and/or the conditions of the project approval. The Department of Forestry & Fire Protection (CalFire) submitted a CEQA comment letter stating general CalFire concerns related to development within State Responsibility Areas. It is staff's opinion that the concerns stated in the CalFire letter have been addressed in the CEQA document, conditions of the project approval, and/or are not relevant to this road project.

This project is subject to a Department of Fish and Game Environmental Review and associated Environmental Review Filing Fee. The applicant is required to pay the applicable CDFG Environmental

Review Filing Fee prior to recording a Notice of Determination. State of California Public Resources Code Section 21152(a) states that a Notice of Determination must be filed within 5 working days of an approval, therefore the Environmental Review Filing Fee must also be submitted within this timeframe. The applicant may request that Department of Fish and Game waive the filing fee by submitting the request to the appropriate regional office.

Specific provisions for the construction of a roundabout are not included in the County's Urban and Rural Public Road Standards (Public Road Standards) and therefore require approval from the Board of Supervisors. After reviewing the County's Public Road Standards there are three processes for an applicant to request that the Board delete, modify or defer road improvements. They are as follows: (a) appeal, (b) modification or (c) deferment. In this situation an appeal is the recommended process since the intent and outcome of a modification or deferment request do not match the applicant's need. For example, the County Public Road Standards state that a modification from a road standard may be requested for hardship cases where a road standard less than the minimum is needed for topographical or economic reasons. The proposed roundabout is not a hardship case as it is not proposed to address topographical features or to avoid economic difficulties. Additionally, if constructed, the roundabout is expected to exceed the County's minimum road standards. For obvious reasons a deferment request is not needed as the applicant intends to construct the roundabout.

Therefore, Condition 33 has been placed on the project which requires the applicant to receive Board approval for the use of the roundabout prior to issuance of the subject permit. The appeal process shall be followed as it allows the Board to consider the use/construction of a roundabout in a public hearing forum. All provisions of Condition 15 shall be adhered to including to the filing deadline with the Board of Supervisors.

A related condition has been placed on the project in the event that the Board approves the use of the roundabout. Condition 25 states that the applicant shall receive Board approval for any artwork or landscaping prior to placement. This approval may be considered separately or concurrently with the appeal if the applicant chooses.

The existing conditions are adequate in case the use of a roundabout is not granted by the Board of Supervisors as they were written to address the adopted Urban and Rural Public Road Standards.

5. FINDINGS:

A) The project is consistent with the policies and standards of the General Plan and Title 21 Zoning;
B) An initial study has been conducted by the lead agency so as to evaluate the potential for adverse environmental impact;
C) A Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act, which the Commission has considered in reviewing the project and making its decision;
D) Reports prepared by professional engineers and biologists have been prepared for this project that have been incorporated into the project and the action of the Planning Commission;
E) The project site has been inspected on-site and the project has been reviewed by the Environmental Review Committee;
F) The approval of the Coastal Grading Permit will not materially affect adversely the health and safety of persons residing or working in the neighborhood of the project site, and will not, be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood; and

G) This project would create an increase in the density and intensity of land use and would cumulatively contribute to the overall reduction in wildlife populations and habitat, the de minimis finding cannot be made for this project. Therefore the project is subject to the Fish and Game mitigation fee. The Commission further finds that this finding may be voided if the California Department of Fish and Game provide in writing a statement that it determines their mitigation fee to be not applicable to this project.

6. CONDITIONS:

1) This permit shall not apply to any land held in Trust by the Bureau of Indian Affairs that upon project completion will not be dedicated to the County of Del Norte;
2) Prior to the issuance of the Grading Permit, the applicant shall submit road improvement plans to the Engineering Division for review and acceptance. The plans shall be prepared by a California Registered Civil Engineer;
3) Prior to the issuance of the Grading Permit, the applicant shall submit a grading and drainage plan to the Engineering Division for review and acceptance. The plan shall be prepared by a California Registered Civil Engineer. The grading and drainage plan shall be a component of the road improvement plans;
4) Prior to the issuance of the Grading Permit, the applicant shall submit an erosion and runoff control plan to the Engineering Division for review and acceptance. The erosion and runoff control plan shall demonstrate that during and post construction, erosion and runoff on the site will be controlled to avoid adverse impacts to adjacent properties and water resources. The erosion and runoff control plan shall include arrows showing the direction of flow from the construction site, temporary erosion and runoff control methods (i.e. silt fence), and permanent erosion and runoff control methods (i.e. grass seed and straw). The plan shall be prepared by a California Registered Civil Engineer. The erosion and runoff control plan shall be a component of the road improvement plans or SWPPP;
5) Prior to the issuance of the Grading Permit, the applicant shall submit a traffic control plan to the Engineering Division for review and acceptance. The plan shall be prepared by either a California Registered Civil Engineer or California Licensed Contractor. The plan submitted shall be similar to the traffic control plans found in the 2010 Caltrans Standard Plan Book. An additional written description may accompany the plans;
6) During construction, the applicant shall construct the improvements per the approved set of plans;
7) ** Amended per PC Meeting 7/11/12 ** During construction, the applicant shall perform materials testing per Caltrans Standard Specification to verify that the constructed roadbed structural section is consistent with the recommendations of the geotechnical study; ** Amended per PC Meeting 7/11/12 **
8) During construction, the applicant shall have any hot mix asphalt placed in the County right-of-way materials tested to meet all of the provisions listed in Section 39 of the 2010 Caltrans Standard Specifications for HMA – Type A. Refer to page 433 and 434 for frequency of sampling and refer to page 453 and 454 for quality control and quality assurance standards.
9) ** Amended per PC Meeting 7/11/12 ** Prior to the issuance of the Grading Permit, the applicant shall submit a geotechnical study prepared by either a California Registered Geotechnical Engineer or California Certified Engineering Geologist to the Engineering Division for review and acceptance. The geotechnical study shall recommend a roadbed structural section and appropriate geotextile fabrics; ** Amended per PC Meeting 7/11/12 **
10) Upon project completion, any asphalt concrete placed in the County right-of-way shall be at least two inches thick and placed upon seven inches of compacted three-quarter inch minus aggregate base;

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11) ** Amended per PC Meeting 7/11/12 ** Upon project completion, any concrete placed in the County right-of-way subjected to motorized traffic shall be at least six inches thick and placed upon four inches of compacted three-quarter inch minus aggregate base. Fiber shall be mixed into the concrete; rebar is not acceptable except in the center of the roundabout and apron. The concrete shall have a broomed finish; a smooth finish is not acceptable; ** Amended per PC Meeting 7/11/12 **
12) ** Amended per PC Meeting 7/11/12 ** Upon project completion, any concrete placed in the County right-of-way subjected to non-motorized traffic shall be at least four inches thick and placed upon four inches of compacted three-quarter inch minus aggregate base. Fiber shall be mixed into the concrete; rebar is not acceptable except in the center of the roundabout and apron. The concrete shall have a broomed finish; a smooth finish is not acceptable; ** Amended per PC Meeting 7/11/12 **
13) ** Amended per PC Meeting 7/11/12 ** Upon project completion, any concrete in the center of the roundabout and apron shall be constructed with rebar; ** Amended per PC Meeting 7/11/12 **
14) Prior to the issuance of the Grading Permit, the applicant shall provide the County with a Performance Bond and Payment Bond for any improvements that may impact a County maintained road right-of-way. The applicant shall provide the Engineering Division with a California Registered Civil Engineer's Estimate or a California Licensed Contractor's Estimate to construct the improvements and repair any potential damage to existing infrastructure (road, sewer, water, etc.) at prevailing wage rates. The applicant shall submit the estimate to the Engineering Division for review and acceptance. Upon acceptance, the County will require the bonds to equal 100% of the approved estimate. Either of the methods listed below may be used to satisfy this condition:
    - The Property Owner or Government Agency shall bond directly with Del Norte County;
    - The Government Agency's Contractor may bond with both the Government Agency and Del Norte County. Language must exist stating that the bond may not be released without Del Norte County's consent;
15) The applicant shall file a request for modifications or deferments to an urban and rural public road improvement condition with the Clerk of the Board of Supervisors and the Community Development Department within ten days of the Planning Commission's approval for at least the roundabout;
16) During construction, the applicant shall improve the right-of-way within the project limits. The property is not located within the Urban Services Boundary, therefore, improvements shall include graded shoulders and open graded storm drainage systems or better. Drainage features shall be designed to carry runoff from a ten-year storm. The shoulders shall be constructed with four inches of compacted three-quarter inch minus aggregate base or better. Minimum rural road improvement widths shall be:
    - Collector Road: twenty-four foot paved surface with four foot shoulders

    The minimum right-of-way width shall be:
    - Collector Road: sixty feet
17) ** Amended per PC Meeting 7/11/12 ** Prior to the issuance of the Grading Permit, the applicant shall sign a Memorandum of Understanding with the County regarding the dedication of sufficient right-of-way as described in the staff report and obtain the final signature from the Bureau of Indian Affairs on the Memorandum of Understanding. ** Amended per PC Meeting 7/11/12 **
18) *** Deleted per PC Meeting 7/11/12 ***
19) It is the applicant's responsibility to determine if permits are required from additional agencies, to obtain said permits, and to provide the County with a copy said permits;
20) Upon project completion, the proposed project shall comply with the Americans with Disabilities Act (ADA);

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21) Prior to the issuance of the Grading Permit, the applicant shall obtain an Encroachment Permit from the Engineering Division for any work in the County rights-of-way;
22) ** Amended per PC Meeting 7/11/12 ** No grading within the County right-of-way shall occur between October 30 and April 30 of any year unless the applicant has obtained written authorization from the County Engineer; ** Amended per PC Meeting 7/11/12 **
23) The applicant shall be on notice that once road improvements are constructed they are not to be damaged (i.e. saw cut) within a ten year period after project completion. Otherwise, the applicant shall overlay the entire width of the roadbed for the length of the constructed improvements or 50 feet, whichever is greater. If an overlay is necessary, both ends of the existing roadbed shall be ground to create a smooth transition and crack sealed to protect the roadbed;
24) ** Amended per PC Meeting 7/11/12 ** The Elk Valley Rancheria shall enter into a maintenance agreement with the County for any improvements on the approved set of plans that require hardwired electricity (i.e. streetlights) and/or medium to high maintenance landscaping (i.e. any vegetation); ** Amended per PC Meeting 7/11/12 **
25) Prior to placement, any artwork or landscaping in the vicinity of the roundabout shall be approved by the Board of Supervisors;
26) Upon project completion, the applicant shall be responsible for maintaining any portion of the multi-use trail that is constructed within the County's right-of-way.
27) Prior to the issuance of the Grading Permit, the applicant shall submit a drainage study prepared by a California Registered Civil Engineer to the Engineering Division for review and acceptance. The drainage study shall include calculations for the routing of all water through the project. Any culvert that is undersized or metal shall be replaced. Drainage calculations shall include any anticipated development on the Martin Ranch Property and in the immediate project vicinity. Future development that is not accounted for in this drainage study shall be mitigated on-site. Drainage features shall be designed to carry run-off from a ten-year storm;
28) ** Amended per PC Meeting 7/11/12 ** The applicant shall remove or move the existing waterline located in the Humboldt Road culvert to facilitate maintenance; ** Amended per PC Meeting 7/11/12 **
29) ** Amended per PC Meeting 7/11/12 ** Upon project completion, any culverts within the project limits shall not be metal; ** Amended per PC Meeting 7/11/12 **
30) *** Deleted per PC Meeting 7/11/12 ***
31) During construction, the applicant shall be responsible for securing and using a cultural monitor, as appropriate, for the lifetime of the project;
32) Upon project completion, any signs installed in the County right-of-way shall be constructed of diamond grade steel, attached to a galvanized steel pole that is 2 ¼ inches in diameter, and installed using a V-Loc anchoring system. The signs shall comply with the most recent addition of the CA MUTCD for dimensions, reflectivity, etc.;
33) *** Deleted per PC Meeting 7/11/12 ***
34) Work in the County right-of-way shall occur Monday through Friday between 8:00 a.m. and 5:00 p.m. No work shall occur in the County right-of-way on County holidays and County furlough days;
35) Pursuant to legislative action effective January 1, 2007, this project is subject to Section 711.4 of the California Department of Fish and Game (DFG) Code. This section requires that a filing fee is due and payable to the Department of Fish and Game (DFG). The amount of the fee paid is determined by whether a Negative Declaration or an Environment Impact Report is prepared for the project. The filing fee is due upon the filing of the Notice of Determination (NOD) and the amount is subject to change. DFG Code section 711.4 provides that, "no project shall be operative, vested, or final" until the required filing fees are paid. A project proponent who believes their project will have

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no effect on fish and wildlife must contact DFG to obtain a form signed by a representative of DFG officially exempting the specific project from this fee requirement;

36) Should any archaeological resources be found during project activities, construction activities shall be halted until an evaluation of the find is made by either a qualified archaeologist or representatives of the local tribes. Any mitigation measures that may be deemed necessary must have the approval of the local tribes and the County of Del Norte, and shall be implemented by a qualified archeologist representing the County of Del Norte prior to resumption of construction activities. If human remains are exposed by a project related activity, the County of Del Norte shall comply with California State Health and Safety Code, Section 7050.5, which states that no further disturbance shall occur until the County Coroner has made the necessary findings as to the origin and disposition pursuant to California Public Resources Code, Section 5097.98; and

37) This entitlement is specifically conditioned on the applicant agreeing to indemnify and hold harmless the County of Del Norte, the Planning Commission of the County of Del Norte, the Board of Supervisors of the County of Del Norte, their officers, employees and agents against any and all claims arising out of the issuance of the entitlement and specifically against any expense arising from defending any legal action challenging the issuance of the entitlement, including but not limited to the value of time devoted to such defense by County officers, employees and agents and the amount of any judgment, including costs of suit and attorney fees, recovered against the County or any of its officers, employees or agent in such legal action. The County of Del Norte reserves the option to either undertake the defense of any such legal action or to tender such defense to the applicant. Should the County tender such defense to the applicant and the applicant fail or neglect to diligently defend such legal action, the County may consider such failure or neglect to be a material breach of this conditions and forthwith revoke this entitlement.

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