

## CALIFORNIA COASTAL COMMISSION

SAN DIEGO AREA

3111 CAMINO DEL RIO NORTH, SUITE 200

SAN DIEGO, CA 92108-1725

(619) 521-8036

WED 10b



Staff: WNP-SD  
Staff Report: 6/21/98  
Hearing Date: 7/7-10/98

REVISED FINDINGS

Application No.: 6-97-11

Applicant: City of Carlsbad

Agent: Sherry Howard

Description: Completion of Reach 1 of Cannon Road to construct a 450 foot long bridge over Macario Canyon from its west rim to its east rim with two bridge abutments and four piers, requiring approximately 265,000 cubic yards of fill. Also, construction of Reach 2 from the east rim of Macario Canyon to El Camino Real, about 1.54 miles as a major arterial (104 ft. right-of-way) with two 12-foot lanes in each direction, a 18-foot wide landscaped median, two 8-foot wide bicycle lanes in addition to curb, gutter, streetlights, signage, drainage facilities, a 5 foot wide sidewalk and a 4.5 foot wide parkway. Also proposed is the construction of a bridge over Agua Hedionda Creek at El Camino Real with a 130 foot by 90 foot cast-in-place reinforced concrete slab and reinforced steel bar, two bridge abutments and two piers; also proposed is a mitigation plan to mitigate project impacts to riparian habitat and brackish marsh.

Plan Designation	Open Space
Zoning	P-U, E-A

Site: Easterly extension of Cannon Road, extending from present terminus at west side of Macario Canyon to El Camino Real, Carlsbad, San Diego County.

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DATE OF COMMISSION ACTION: February 4, 1998

COMMISSIONERS ON PREVAILING SIDE: Allen, Armanasco, Flemming, Kehoe, Nava, Pavley, Potter, Reilly, Staffel, Tuttle, Wan and Chairman Areias

SUMMARY OF COMMISSION ACTION:

Staff recommends the Commission adopt the following findings in support of the Commission's concurrence with the staff recommendation to not accept the funding of an endowment to the Department of Fish and Game for restoration and administration of the Aqua Hedionda Lagoon Preserve in-lieu of actual creation of habitat to mitigate the project impacts to sensitive resources. The Commission found that although it supports the concept of the funding of endowments, the proposed funding of the restoration of

3.02 acres within the Agua Hedionda Preserve in-lieu of actual on-site mitigation would set an adverse precedent and result in potential loss of habitat. The Commission also added the Tijuana Estuary as a potential off-site mitigation location due to the difficulty the City has had in locating a mitigation site within the watershed of Aqua Hedionda Lagoon.

Substantive File Documents: City of Carlsbad Certified Agua Hedionda Segment Land Use Plan; CDP #6-84-617; "Cannon Road: Reach 1 Final Environmental Impact Report" (City of Carlsbad EIR 87-2, March 21, 1989); CDP #6-89-195, CDP #6-97-10. Revised Macario Canyon Bridge Revegetation Plan, dated August 8, 1989; Maintenance and Monitoring Program for the Cannon Road Reach I Mitigation Plan, dated June 1990; Macario Canyon Bridge least Bell's Vireo Summary (undated), The Conceptual Wetlands Mitigation plan for Reaches 1 and 2 of the Cannon Road Extension Project, dated January 1997.

#### PRELIMINARY STAFF RECOMMENDATION:

The staff recommends the Commission adopt the following resolution:

##### I. Approval with Conditions.

The Commission hereby grants a permit for the proposed development, subject to the conditions below, on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

##### II. Standard Conditions.

See attached page.

##### III. Special Conditions.

The permit is subject to the following conditions:

1. Wetland Mitigation/Restoration. Prior to the issuance of the coastal development permit, the applicant shall submit to the Executive Director for review and written approval, a detailed wetland mitigation plan for all temporary and permanent impacts associated with the proposed project. The plan shall contain a detailed site plan of the wetland impact area(s), clearly delineating all areas of impact (temporary and permanent), which shall identify the exact acreage of each impact so identified. The wetland mitigation plan shall also incorporate the following:

a. Identification of the required offsite mitigation site(s). Said mitigation shall occur on one or more of the following sites: the 3.31 acre site upland of Macario Canyon as identified in the City's Conceptual Wetlands Mitigation Plan for Reaches 1 and 2 of the Cannon Road Extension Project, dated January 1997, the .44 acre site on Kelly Ranch adjacent to El Camino Real (reference Exhibit 4), the Tijuana Estuary and up to 3.02 acres within the Agua Hedionda Preserve as identified in consultation with the California Department of Fish and Game. The proposed fee payment in-lieu of restoration of 3.02 acres within the Agua Hedionda Preserve is specifically not authorized. Use of any other site to meet the mitigation requirement, other than those identified above, would require an amendment to this permit. The applicant shall also submit a site plan of the mitigation site(s) which quantifies the existing wetland and upland areas of the property(ies), including those to be restored within the Agua Hedionda Preserve.

b. Mitigation of permanent direct wetland impacts associated with the proposed development by creation/restoration of Southern Willow Riparian Scrub and Riparian Scrub at a 3:1 ratio (creation to loss). Thus, 4.77 acres of riparian habitat must be created to mitigate proposed direct permanent impacts to 1.59 acres of riparian habitat. Mitigation of permanent impacts to open water (0.14 acres) is required at a 1:1 ratio. Said mitigation shall only involve upland suitable for conversion to wetlands, (Macario Canyon and Kelly Ranch sites), as described in the Conceptual Wetlands Mitigation Plan for Reaches 1 and 2 of the Cannon Road Extension Project, dated January 1997 and/or restoration as proposed in the Agua Hedionda Preserve area.

c. In-kind mitigation at a replacement ratio of 1:1 for all brackish marsh and riparian vegetation shading impacts (0.9 acres) shall be required provided that mitigation is shown to be successful by the five year monitoring plan described below; otherwise, such mitigation shall be provided at the ratio of 2:1 at the end of the five year monitoring period.

d. In-kind revegetation/mitigation at a replacement ratio of 1:1 for all temporary construction impacts to brackish marsh and riparian vegetation resulting from construction of haul roads, stockpile and staging areas, work areas extending a maximum 90 feet from the outside edge of Macario Canyon Reach 1 bridge, and 1,200 feet southwest of Reach 1 bridge by revegetating and restoring the impact area to the original condition before disturbance shall be required. Revegetation will include remedial work such as decompaction and surface treatment of the ground and restoration of natural contours, with monitoring for three years, pursuant to the United States Fish and Wildlife Service's Biological Opinion on Reaches 1 and 2 of Cannon Road dated October 8, 1997, as amended 1/13/98 and Special Condition #7 below.

e. The applicant shall provide evidence in a form and content acceptable to the Executive Director, that the owner of all identified mitigation sites has executed irrevocable offers to dedicate to a public agency or private association acceptable to the Executive Director, an easement for habitat restoration, habitat maintenance, open space and habitat protection over any portion or all of the above properties identified in #1a. The easement shall:

1. Permit the applicant, its agents, and/or the accepting agency to enter the property, create and maintain habitat, revegetate portions of the area, and fence the newly created/revegetated area in order to protect such habitats.

2. Restrict all development, vegetation clearance, fuel modification and grading within the Environmentally Sensitive Habitat open space easement.

3. Permit the Coastal Commission staff to enter and inspect for purposes of determining compliance with Coastal Development Permit #6-97-11.

The easement area shall be described in metes and bounds. The offer shall be recorded free of prior liens and encumbrances which the Executive Director determines may affect the interest being conveyed. The offer shall run with the land in favor of the People of the State of California, binding all successors and assigns, and shall be irrevocable for a period of 21 years, such period running from the date of recording.

f. With the exception of the in-lieu fee payment to the endowment fund as an option for 3.02 acres of mitigation, the proposed project shall conform to the provisions identified in the United States Fish and Wildlife Service's Biological Opinion on Reaches 1 and 2 of Cannon road dated October 8, 1997, and the amendment to the Biological Opinion dated January 13, 1998.

2. Monitoring Program. Prior to the issuance of the coastal development permit, the applicant shall submit for review and written approval of the Executive Director in consultation with the Department of Fish and Game, a detailed monitoring program designed by a qualified wetland biologist, applicable to all mitigation sites approved pursuant to Special Condition #1 above and acceptable to the Executive Director. Said monitoring program shall provide the following:

a. Submittal of evidence of the completion of the mitigation plan(s) addressed in Special Condition #1 above, through submittal of "as built" plans in substantial conformance with the final plans approved pursuant to Special Conditions #3.

b. Monitoring reports on the extent of coverage, rate of growth and species composition of all created wetland areas shall be submitted to the Executive Director on an annual basis for five years following project completion.

c. The monitoring program shall include provisions for augmentation and maintenance of the restoration efforts, including specific performance standards, designed to assure 90% coverage in a five year period. The program shall include criteria to be used to determine the quality and extent of the revegetation efforts, which shall include, but not be limited to, survival rates and species composition.

d. At the end of the five year period, a more detailed report prepared in conjunction with a qualified wetland biologist shall be submitted to the Executive

Director. If the report indicates that the mitigation has been, in part, or in whole, unsuccessful, the applicant shall be required to submit a revised or supplemental mitigation program to compensate for those portions of the original program which were not successful. The revised mitigation program, if necessary, shall be processed as an amendment to their coastal development permit.

3. Final Plans/Conformance with Mitigation Measures. Prior to issuance of the coastal development permit, the applicant shall submit to the Executive Director for review and written approval, final site, grading and drainage plans, i.e., construction drawings, in substantial conformance with the submitted preliminary plans and approved by the City of Carlsbad, which shall clearly delineate the construction corridor associated with the Macario Canyon bridge. Said plan shall indicate that the construction corridor is the minimum width necessary to construct the project and shall be developed by the City in consultation with Cal-Trans. Any proposed changes to the approved plan shall be reported to the Executive Director. No change to the plan shall occur without a Commission-approved amendment to the permit unless the Executive Director determines that no such amendment is required.

4. Least Bell's Vireo and Southwestern Willow Flycatcher Nesting. Prior to the issuance of the coastal development permit, the applicant shall submit to the Executive Director for review and written approval, in consultation with the Army corps of Engineers (COE) and California Department of Fish and Game (DFG), evidence that mitigation for impacts to Least Bell's Vireo and Southwestern Willow Flycatcher have been incorporated into the project consistent with the requirements of the United States Fish and Wildlife Service's Biological Opinion on Reaches 1 and 2 of Cannon Road dated October 8, 1997. Any modification to the mitigation requirements in the Biological Opinion shall be reviewed and may require an amendment to this coastal development permit.

5. Runoff Control. Prior to the issuance of a coastal development permit, the applicant shall submit a runoff control plan designed by a licensed engineer qualified in hydrology and hydraulics for those portions of the project which drain to Macario Canyon, Agua Hedionda Creek and the Agua Hedionda Lagoon floodplain which would assure no increase in peak runoff rate from the developed site over runoff that would occur from the existing undeveloped site, as a result of a ten-year frequency storm over a six-hour duration (10 year, 6 hour rainstorm). Discharge of storm flows shall not contribute to erosion. Energy dissipating measures at the terminus of the proposed outflow drains shall be constructed. The runoff control plan shall also include soil or sand filtration or its equivalent sufficient to trap oils and suspended solids, preventing them from entering the riparian and wetland areas located in Macario Canyon, Agua Hedionda Creek and the Agua Hedionda Lagoon floodplain. The runoff control plan, including supporting calculations, shall be submitted to, reviewed and approved in writing by the Executive Director. If meeting the above standards results in sediment control facilities such as desiltation or detention basins being required, an amendment to this permit or a separate coastal development permit shall be required.

6. Erosion Control. Prior to the issuance of the coastal development permit, the applicant shall submit final grading and erosion control plans in conformance with the Regional Water Quality Control Board General Construction Activity Permit, which shall incorporate the following:

A. All permanent runoff and erosion control devices shall be developed and installed prior to or concurrent with any on-site grading activities.

B. All areas disturbed shall be stabilized in advance of the rainy season (October 1 to March 31 of each year). The use of temporary erosion control measures, such as berms, interceptor ditches, sandbagging, filtered inlets, debris basins, and silt traps shall be utilized in conjunction with plantings to minimize soil loss from the construction site.

C. All grading is prohibited between October 1 and April 1 of any year.

7. Revegetation Plan. Prior to the issuance of the coastal development permit, the applicant shall submit a detailed revegetation plan indicating the type, size, extent and location of all plant materials, any proposed irrigation system and other landscape features to revegetate brackish marsh and riparian resources within Macario Canyon, Agua Hedionda Creek and the Agua Hedionda Lagoon floodplain, including the construction corridors of Macario Canyon and the Agua Hedionda Creek bridge crossing as well as all disturbed or manufactured steep slope areas, including the fill structure on the east side of Macario Canyon. Drought tolerant native plants compatible with adjacent natural vegetation shall be utilized to the maximum extent feasible to re-establish the area consistent with its present character. Said plan shall be submitted to, reviewed by and approved in writing by the Executive Director in consultation with the California Department of Fish and Game.

8. Staging Areas. Prior to issuance of the coastal development permit, the applicant shall submit to the Executive Director, for review and written approval, detailed plans incorporated into the construction bid documents, for the location of haul roads, construction corridors and staging areas. Construction corridors and staging areas shall be located in a manner that has the least impact on biological resources of the area, and shall be limited to existing disturbed areas and roadways to the greatest extent feasible. Encroachment into environmentally sensitive habitat areas shall not be permitted.

#### Findings and Declarations

The Commission finds and declares as follows:

1. Detailed Development Description and History. Completion of Reach 1 of Cannon Road to construct a 450 foot long bridge over Macario Canyon from its west rim to its east rim requiring approximately 265,000 cubic yards of fill. The proposed bridge would have four piers placed in wetland habitat to support the proposed structure. Also

proposed is the construction of Reach 2 from the east rim of Macario Canyon to El Camino Real, about 1.54 miles. Road construction of the major arterial (104 ft. right-of-way) is proposed to travel northeasterly about 1.5 miles to its intersection with El Camino Real, an existing major arterial that serves as a portion of the coastal zone boundary within the City. The arterial will provide two 12-foot lanes in each direction, an 18-foot wide landscaped median, and two 8-foot wide bicycle lanes in addition to curb, gutter, streetlights, signage, drainage facilities, a 5 foot wide sidewalk and a 4.5 foot wide parkway. Reach 2 proposes the construction of a bridge over Agua Hedionda Creek at El Camino Real. The proposed bridge at El Camino Real would consist of a 130 foot by 90 foot cast-in-place reinforced concrete slab with a reinforced steel bar, two bridge abutments and two piers. The City proposes a mitigation plan to mitigate project impacts to riparian and brackish marsh impacts.

Cannon Road Reach 2 is the second segment of four segments in the City's plans to extend the roadway eastward four miles. Only Reaches 1 and 2 are within the coastal zone. Its present improved terminus is at Lego Drive east of and near I-5 in the Carlsbad Ranch, a multi-use project, including Legoland, on 447 acres located about 1/2 mile from the ocean between Palomar Airport Road and Cannon Road.

Design and planning for Cannon Road Reaches I and II were both initiated prior to 1985. Both private development and public works approaches to constructing the road were initiated. Due to the economic downturn in the late 1980s and early 1990s, both projects were postponed and existing approvals expired. Reach I of the Cannon Road alignment was approved in CDP #6-89-195; however, the permit expired. In CDP #6-97-10 (October, 1997), the Commission approved Phase 1 of Reach 1 for the grading of Cannon Road from its easterly terminus at Lego Drive to the westerly bridge abutment at Macario Canyon. Phase 2 of Reach 1 includes the construction of the proposed bridge over Macario Canyon. Reach 2 of Cannon Road includes construction of the roadway from the eastern rim of Macario Canyon eastward to El Camino Real.

The alignment of Cannon Road Reach 2 was approved in CDP #6-84-617 in the Commission's approval of the Kelly Ranch Master Plan, another mixed use project on 433 acres located east of Agua Hedionda Lagoon. This project was not built but surcharge grading for Cannon Road was done. The Reach 2 project proposes to finish the grading that was previously approved which would include the removal of approximately 26,500 cubic yards of surcharge fill resulting in the ultimate construction of the road.

According to the City of Carlsbad, Reach 2 will generally be constructed as approved in CDP #6-84-617 with two exceptions. A slight modification has been made in the turn radius of the roadway and the Reach 2 bridge spanning Agua Hedionda Creek near El Camino Real would be 10 feet wider than originally planned. These changes would result in an additional .29 acres of impact to coastal sage scrub for the former and .14 acres of additional impact to riparian habitat for the latter. Because of these changes and the uncertain status of build-out of the Kelly Ranch project, the road project is being processed as a new permit. No upstream or downstream construction is proposed beyond the area impacted by the construction of the bridge spanning Agua Hedionda Creek. No

temporary or permanent impacts to the wetlands beyond the construction of the bridge are proposed.

The development of this area is subject to the certified Agua Hedionda segment Local Coastal Program Land Use Plan (LUP). The roadway is also contained in the City of Carlsbad LCP Circulation Element as a major road.

2. Environmentally Sensitive Habitat Areas. Section 30231 of the 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

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative...

In addition, Section 30233(c) of the Act states, in part:

(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. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

Section 30240 of the Act states:

(a) 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.

(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 such areas, and shall be compatible with the continuance of such habitat areas.

Finally, Section 30253 of the Act states, in part:

New development shall: [...]



(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

Agua Hedionda is one of 19 identified "high priority" wetlands in the Coastal Act. As such it is afforded special protection under the Act and the certified Agua Hedionda Land Use Plan (LUP). As originally submitted by the City in 1978 in the Agua Hedionda LUP submittal, Cannon Road would have resulted in about 11 acres of wetland fill. Subsequent to the Commission's action to deny the initial submittal, a negotiating committee was formed to address the remaining issues of the Agua Hedionda LUP, including Cannon Road. This committee developed a conceptual alignment involving the least amount of adverse impacts upon lagoon resources. This alignment was subsequently certified into the Agua Hedionda Lagoon Land Use Plan. As stated in the Policy 5.8 of the certified LUP, the policies regarding the protection of resources in conjunction with the extension of Cannon Road are as follows:

a) No portion of the road construction shall involve the filling or dredging of fresh or saltwater marsh wetlands, except as noted in the letter from the Coastal Commission to the State Department of Fish and Game.

b) To the extent that any portion of the road construction would occur in or adjacent to an environmentally sensitive habitat area other than a wetland, the road shall be sited and designed to prevent impacts which would significantly degrade such areas, shall avoid significant disruption of habitat values, and shall be sited and designed to be compatible with the continuance of habitat values.

c) To the extent that there are no feasible less environmentally damaging alternatives and the road as designed would nonetheless result in adverse impacts to environmentally sensitive habitat area, such impacts shall be fully mitigated in accordance with the recommendations of the State Department of Fish and Game.

In its April 1985 action in Agua Hedionda Land Use Plan Amendment #1-85, the Commission -approved a revised alignment of Cannon Road. The realignment provided for the road to extend across the wetlands of Macario Canyon. The realignment also provided for greater wetland impacts than the previously certified alignment.

The Commission subsequently approved construction of two parts of Cannon Road. CDP # 6-89-195 authorized construction of Reach 1, and CDP # 6-84-617 authorized construction of Reach 2. The permits authorized installation of the road in the alignment that was certified in LUP Amendment 1-85. The design of the road included two bridge crossings, one over the riparian and brackish marsh woodland at Macario Canyon and one over Agua Hedionda Creek, near El Camino Real. Both permits acknowledged that construction of the road in the approved alignment would result in fill of wetlands because of the need to support the bridges with piers in wetlands and creek. The

Commission found that the fill of wetlands would be consistent with Coastal Act Section 30233 because the fill was mitigated, the fill was the least environmentally damaging alternative, and the fill was an allowable use because it improved, and filled a gap in, an existing dirt road (Hidden Valley Road) and therefore constituted an incidental public facility.

Since the Commission's original approval of the permits, a number of sensitive plants and animals (least Bell's vireo, California gnatcatcher, southwestern willow flycatcher, arroyo southwestern toad and Pacific little pocket mouse) were listed as endangered species. As a result, the U.S. Army Corps of Engineers (ACOE) and the U.S. Fish and Wildlife Service (USFWS) determined that new studies were necessary before new permits could be approved by these agencies. (Existing approvals for Reach I and Reach II by the California Department of Fish and Game (CDFG) and the Army Corps of Engineers (ACOE) had expired.

As part of its permit review, the ACOE asked the USFWS to prepare a Biological Opinion regarding the impact of both Reach I and Reach II on the previously mentioned endangered species. The Biological Opinion identifies mitigation measures that can be implemented to mitigate adverse impacts to least Bell's vireo and southwestern willow flycatchers, both on federal and state endangered species lists, in riparian and wetland habitat adjacent to Macario Canyon and along the Reach II alignment. None of the mitigation measures include changing the approved alignment or bridges associated with either Reach I or Reach II, and no changes to the alignment or bridge designs are expected to occur as part of the ACOE permit. The CDFG has also indicated that no change in the alignment or bridge designs of Cannon Road will be recommended in its new streambed alteration agreement. Other alignments near the proposed alignment were considered but dismissed because resource and endangered species impacts associated with those alignments were not significantly less than the proposed alignment. That is, moving the road's alignment around impacted a number of environmentally sensitive plants or animals so that no clearly superior environmentally preferred alignment emerged to replace the proposed alignment. Consequently, the resource agencies agree there are no alternative alignments that are significantly better than the previously approved alignment with respect to protecting sensitive plants and animals, and the Commission concurs.

In light of the above, the Commission finds that the proposed road would be consistent with Section 30233 if there is no feasible less environmentally damaging alternative, and feasible mitigation measures have been provided. Also, the wetland fill is for an allowable use under Section 30233(a)(5). The proposed road consists of improving, widening, and filling in a gap of an existing dirt road, Hidden Valley Road. The Commission finds that fill of wetlands to improve and extend an existing road is an incidental public service. The fill of wetlands will occur primarily as a result of installing piers to support bridges over Macario Canyon and Agua Hedionda Creek. The use of supported bridges over the wetlands is the least environmentally damaging alternative for improving and extending the road. Less fill of wetlands occurs when bridging the wetlands, requiring pier supports to support a bridge, as opposed to having the road go directly through the wetlands.

The Commission finds that the proposed alignment of Cannon Road results in the least amount of fill of wetlands compared to alternative alignments. Thus, the remaining concern is whether the impacts are mitigated as required by Section 30233.

Regarding its previous review of Reach 1, the Commission accepted wetland and riparian impacts associated with bridge construction over Macario Canyon. Specifically, direct brackish marsh impacts for bridge pier construction was 547 sq. ft. (.012 acres), direct riparian impacts for bridge construction was 1.0 acre and temporary direct impacts for construction corridor impacts was .33 acres of brackish marsh. In addition, shading impacts were identified at 0.1 acres to brackish marsh and 0.8 acres to riparian vegetation. Direct brackish marsh impacts resulting from pier construction were required to be mitigated at a 4:1 ratio or 0.05 acres, direct riparian impacts were required to be mitigated at a 3:1 ratio or 3.0 acres. Shading impacts were required to be mitigated at a 1:1 ratio resulting in 0.1 acres of brackish marsh and 0.8 acres and construction corridor impacts were required to be mitigated at 1:1 or .33 acres for a total of 4.28 acres. Of this, 3.95 acres (all the above mitigation except that for temporary direct impacts which required revegetation only), was required to be wetland creation. Wetland creation is the creation of new habitat by converting upland to wetland and requires some grading of uplands to achieve appropriate elevations for the growing of wetland species.

In CDP #6-84-617, regarding its review of Reach 2, the Commission found the bridge spanning of Agua Hedionda Creek was found to be the least environmentally damaging alignment; however, the Commission accepted some wetland impacts associated with its construction. These impacts were not quantified but were associated with bridge construction and channel improvements within Agua Hedionda Creek and the construction of a desiltation basin near Cannon Road's intersection with El Camino Real. The City indicates impacts associated with Cannon Road Reach 2 as approved in CDP #6-84-617 have been mitigated.

One special condition of CDP #6-84-617 related exclusively to Cannon Road and was entitled Cannon Road/Wetland Encroachment/Wetland Restoration. It required that Cannon Road shall be constructed in accordance with the alignment identified in Policy 5.8 of the original LUP unless a wetlands restoration plan was followed which included: establishment of wetland habitat or re-establishment of wetland habitat (areas which have been previously filled or disturbed) on-site at a minimum ratio of 1:1; a map of the mitigation sites showing the areas in their present and proposed conditions in conjunction with the above wetland replacement ratio requirements; erosion control for construction of Cannon Road and the implementation of approved mitigation programs shall be subject to erosion control requirements contained in CDP #6-84-617; wetland restoration measures which required wetland restoration and enhancement plans for various locations within the proposed 186 acre Agua Hedionda preserve which was required to be put into open space as mitigation for impacts associated with the Commission's approval of Kelly Ranch. A mitigation plan was developed in response to the above provisions and implemented. Compliance with these provisions has been confirmed by the California Department of Fish and Game (attached).

Portions of the overall restoration plan have been accomplished through implementation of portions of the Kelly Ranch Master Plan. This includes a recorded offer to dedicate 186 acres of wetland to a public agency as part of the Aqua Hedionda preserve. There has also been some restoration work completed within the lagoon complex in accordance with the permit for the Kelly Ranch Master Plan. In the Commission's approval of the entire Kelly Ranch Master Plan, the Commission accepted approximately 11 acres of wetland impact associated with the alignment of Cannon Road and potential buildout of the master plan area, in exchange for an overall restoration effort which included securing the 186 acre Aqua Hedionda preserve as open space. The impacts associated with the actual construction of Cannon Road were to be reviewed and mitigated independent of the impacts associated with approval of the Kelly Ranch Master Plan. In the last two years the direct impacts to riparian woodland, coastal sage scrub and southern maritime chaparral associated with the completion of Reach 1 and Reach 2 have all been addressed by the USFWS as part of its Section 7 Consultation. The DFG has also concurred with the Biological Opinion of USFWS.

Currently, the project proposes the construction of a bridge over Agua Hedionda Creek at El Camino Real that is 10 feet wider than the previous bridge the Commission approved, which has resulted in some additional impacts. Additionally, a small realignment of the road has resulted in encroachment into disturbed riparian scrub in an existing desiltation basin. Thus, the bridge construction and road improvements will result in the permanent loss of three wetland habitat types: 0.16 acres of southern willow scrub, 0.14 acres of open water and 0.43 acres disturbed riparian scrub. This totals 0.73 acres of wetland impact.

The following is a table summary of the comparison of the City's identified impacts and proposed mitigation provisions for Reaches 1 and 2 with the requirements previously approved by the Coastal Commission in CDPs #6-84-617 (Reach 2) and #6-89-195 (Reach 1).

COASTAL COMMISSION'S (PREVIOUS) MITIGATION REQUIREMENTSReach I

	Impact	Mitigation
Direct Brackish Marsh	0.012 acres at 4:1 =	0.05 acres
Direct Riparian	1.00 acres at 3:1 =	3.00 acres
Temporary Direct	0.33 acres at 1:1 =	0.33 acres
Shading .8 ac. riparian .1 ac. br. marsh		
	<u>0.90 acres at 1:1 =</u>	<u>0.90 acres (if standards are met)</u>
Total	2.35 acres	= 4.28 acres

Reach 2

Direct riparian	0.59 acres at 3:1 =	1.77 acres
open water	<u>0.14 acres at 3:1 =</u>	<u>0.42 acres</u>
Total	0.73 acres =	2.19 acres

Commission requirements for Reach 1 and 2	= 6.47 acres
Reach 1 Creation	= 3.95 acres (all but .33 ac. temp. direct)
Reach 2 Creation	= 2.19 acres

CITY'S PROPOSED IMPACTS AND MITIGATION

	Impact	Mitigation
<u>Reach I</u>		
Direct Riparian	1.00 acres at 1:1 =	1.00 acres
Temporary Direct	0.68 acre at 1:1 =	0.68 acres
Shading .8 ac. riparian .1 ac. br. marsh		
	<u>0.90 acre at 1:1 =</u>	<u>0.90 acres</u>
Total	2.58 acres	= 2.58 acres

Reach 2

Direct riparian	0.59 acres at 1:1 =	0.59 acres
open water	<u>0.14 acres at 1:1 =</u>	<u>0.14 acres</u>
	0.73 acres	= 0.73 acres
TOTAL WETLAND IMPACTS		= 3.31 acres

CITY'S CONCURRENT MITIGATION

Total Acreage Proposed as Mitigation	6.77 ac.
Creation in Macario Canyon	3.31 ac.
1.73 ac. @ 1:1	
.90 ac. @ 1:1 shading	
.68 ac. @ 1:1 temporary direct	
Creation on Kelly Ranch Adjacent to El Camino Real	0.44 ac.
Payment to Agua Hedionda	
Lagoon Endowment at \$114,420 per Acre (Total \$345,548)	3.02 ac.

The City's impacts analysis for Reach 1 identifies that the Macario Canyon bridge construction will result in the impact of 1.9 acres of wetland through fill and shading (1.0 acre to fill and 0.9 acre to shading). Approximately 0.68 acres of wetland will be temporarily lost through construction impacts. This totals 2.58 acres of wetland impacts associated with Reach 1. As noted, Reach 2 impacts are proposed at 0.73 acres; total project impacts for both Reach 1 and Reach 2 are proposed at 3.31

Prior to November 1997, the City had proposed to mitigate the 3.31 acres of total impact with a 1:1 mitigation ratio to be installed and meet performance criteria before any impacts to wetlands were allowed. In this way impacts had to be mitigated in advance of actual project construction on the Macario Canyon bridge. The City's rationale for mitigation was to ensure that there was no net loss of wetlands. This reduced mitigation ratio was accepted by the resource agencies provided mitigation was deemed acceptable in advance of impacts (pre-impact) for Reach 1 and Reach 2 impacts. The agreed upon offsite wetland mitigation plan consists of excavating 3.31 acres of existing agricultural lands under City ownership adjacent to existing wetlands within Macario Canyon, upstream of the Macario Canyon bridge site, for the purpose of restoring wetland hydrology and creating riparian habitat. The riparian mitigation site will include a 100-foot wide band of upland habitat outside the 3.31 acres and buffer the riparian and wetland habitats in perpetuity. Active park uses inside the upland buffer would be limited. As noted, this location and design has been accepted by the resource agencies.

In November 1997, the City proposed a change in plans and now proposes bridge construction at Agua Hedionda Creek and construction of a bridge abutment at Macario Canyon to go forward in advance of developing the main mitigation site in Macario Canyon. Consequently, the City has amended the mitigation plan that was approved by the resource agencies as described above. The new mitigation plan is called the Concurrent Impact Option and is identified in the preceding table. While concurrent mitigation is now proposed at two locations outside the main mitigation site (.44 acres near El Camino Real and 3.02 acres within the proposed 186 Agua Hedionda Preserve) no mitigation plans have been submitted for the new mitigation sites. In summary, the resource agencies have agreed to the amended plan and the Biological Opinion is being amended to reflect this change. However, while the amended mitigation plan is acceptable to the resource agencies, it is not strictly consistent with past Commission action and current Commission practices regarding the adequate mitigation of environmentally sensitive habitats. The primary departure from mitigation requirements typically accepted by the Commission is that the applicant is being given an option to comply with the 3:1 mitigation requirement by paying a fee to an endowment fund administered by DFG in-lieu of restoration of 3.02 acres within the Agua Hedionda Preserve. The amended mitigation plan is described as the Concurrent Mitigation Option attached at the end of Exhibit 6.

The Commission's previous approval requires that the proposed construction corridor be revegetated in kind and amount. Although this was not offered as part of the City's mitigation package, the City has agreed to revegetate the corridor upon completion of the project to mitigate the temporary impacts associated with bridge construction. Similarly,

the Commission finds that this requirement is necessary to find the project consistent with the resource protection provisions of the Coastal Act. Also, the Commission is concerned about the width of the corridor. The Commission desires that the corridor be kept to a minimum width which would result in less impacts to sensitive vegetation. Therefore, the Commission is endorsing only a 90 foot wide corridor at this time.

Second, there are also differences in the amount of habitat creation between what the Commission approved and what the City is proposing. The City identifies total creation of habitat in Reaches 1 and 2 at 3.75 acres, an additional 3.02 acres is being proposed as an in-lieu payment or restoration for a total of 6.77 acres of mitigation. The Commission approved 3.95 acres as creation in Reach 1 and would typically require 2.19 acres of creation in Reach 2 (0.73 acres of riparian at 3:1) for 6.14 acres total. Thus, the City's proposal is deficient 2.39 acres with respect to actual creation of habitat for impacts when compared to the Commission's previous action. However, as conditioned, the Commission is requiring the impacts to 1.59 acres of riparian habitat be mitigated at a 3:1 ratio to mitigate proposed direct permanent impacts for a total of 4.77 acres. Mitigation of permanent impacts to open water (0.14 acres) is required at a 1:1 ratio. Mitigation for all brackish marsh and riparian shading impacts (0.9 acres) is required to be mitigated at a 1:1 ratio while mitigation for all temporary construction impacts to brackish marsh and riparian vegetation is required at a 1:1 ratio (0.68 acres).

As noted, the City's proposal does not identify 0.05 acres of direct impacts to brackish marsh for bridge pier construction which was identified by the Commission to be mitigated at 4:1. Thus, the City's proposal proposes no mitigation for this impact. The City's mitigation plan proposes the creation of 0.1 acres of brackish marsh to mitigate shading impacts to sensitive vegetation which will occur when the bridge is built. The Commission's decision was that shading impacts be mitigated at a 1:1 ratio provided that revegetation of the area under the bridge is shown to be successful through a 5 year monitoring plan; otherwise, mitigation shall be provided at a 2:1 ratio at the end of the five year monitoring period. The Commission again finds that this provision must be made part of a revised mitigation plan.

The City's proposed funding option acreage would fund the Agua Hedionda Preserve as envisioned by the California Department of Fish and Game (DFG). DFG is interested in administering 186 acres that was dedicated as open space in the Commission's approval of the Kelly Ranch Master Plan (#6-84-617). To administer this open space system, funding and or restoration of existing resources is necessary. In exchange for accepting project impacts associated with the construction of Cannon Road, DFG is requiring the 3.02 acres mitigation area shall be in the form of restoration of riparian vegetation (establishment of vireo-quality habitat, including a minimum of five years of monitoring, as well a success criteria and contingency plans) within the entire 186-acre Agua Hedionda Preserve or other area approved by the Service and California Department of Fish and Game.

As proposed, the restoration may occur prior to or concurrent with project impacts, or \$114,420.00 per acre (\$345,548.00 total, the City of Carlsbad estimate of per acre cost of wetland creation including grading, installation, irrigation, 5-year mitigation monitoring,

and 5-year least Bell's vireo monitoring) may be paid to an endowment fund for the required restoration of 3.02 acres. Under the latter circumstance, the full amount of these funds shall be placed in an interest bearing account for the identified restoration efforts. The habitat restoration and monitoring plans (to include at least 5 years of monitoring, success criteria and contingency measures) must be reviewed and approved by the Service. Documentation to demonstrate the establishment of this account shall be provided to the Service and the California Department of Fish and Game.

If, after three years, a suitable owner/manager for the Agua Hedionda preserve has not been identified, the Service shall provide notice to the permittee that they have 90 days in which to proceed with the creation program in another area approved by the Service and the California Department of Fish and Game. At this time, the \$345,548.00 would be transferred to the City to be utilized for this purpose.

However, the Commission can not support the in-lieu fee proposal. While the Commission recognizes that the proposal is supported by CDFG as insurance that project impacts would be mitigated within the proposed Reserve if restoration did not take place, the Commission has historically required impacts to be mitigated in a timely fashion through habitat creation or restoration rather than in the form of a payment for the funding of a public or private mitigation project. The Commission is wholeheartedly in support of the funding of habitat management programs such as that proposed by CDFG in the Agua Hedionda Preserve to assist in the operation and maintenance of such efforts, provided such funding efforts will not take the place of direct in-the-ground mitigation efforts. The payment option may not be invoked for a number of years and in that time impacts would go unmitigated. For that reason, the Commission has required that restoration precede or be accomplished concurrent with project impacts and be monitored to assure compliance with specific performance standards. To accept a fund in-lieu of restoration is not consistent with this policy and cannot be endorsed as proposed by the City. Additionally, the Commission notes that contribution of monies to a state agency for an endowment fund does not necessarily mean the money will find its way to the project. These funds are required to go to the state's General fund and may or may not be distributed as intended.

By not endorsing the City's in-lieu fee proposal, the Commission recognizes that mitigation may have to occur outside the Agua Hedionda Lagoon watershed to comply with the areal extent of the mitigation requirement. In that regard, the Commission can accept the Tijuana Estuary as an appropriate mitigation site should the City locate a potential site there. The Tijuana Estuary has both wetland and riparian resource areas that are proposed for restoration and as such would represent a form of "in kind" mitigation should the mitigation for the proposed project occur in that watershed.

Therefore, the Commission finds that the proposed restoration should occur at this time concurrent with impacts. The Commission also finds the proposed funding of the restoration of 3.02 acres within the Agua Hedionda Preserve would set an adverse precedent and result in potential habitat loss. The Commission has not previously allowed funding of an acquisition and maintenance program by a state agency or private individual to be accepted in-lieu of actual habitat restoration.



Notwithstanding the above, the City's mitigation plan has been accepted by the resource agencies as adequate to compensate for project impacts. The resource agencies state that the impacts described above would not jeopardize the continued existence of endangered species because the City has incorporated significant compensation measures including: 1) replacement through revegetation of any riparian and wetland habitat permanently destroyed by project construction activities at a 1:1 area ratio prior to construction, 2) replacement through revegetation of any riparian and wetland habitat temporarily destroyed by project construction activities at a 1:1 ratio within the temporary impact area, 3) the implementation of a cowbird trapping program, 4) the initiation of a pampas grass removal program, 5) the contribution of \$150,000 and any outstanding start-up costs to fund wildlife management practices in perpetuity within the 186-acre riparian habitat area, 6) use of noise barriers on Reach 1 bridge to reduce vehicle noise, 7) use of shields on lights to minimize the "spillover" of light on adjacent riparian habitats, and 8) construction outside the least Bell's vireo and southwestern flycatcher breeding seasons (March 15 - September 15). In addition, indirect impacts associated with construction will be reduced by fencing the right-of-way with a drift fence so impacts to adjacent sensitive habitats do not occur. Supplemental mitigation includes the removal of pampas grass and cowbird trapping from 28 acres of riparian habitat which will provide significant enhancement to the quality of the habitat. With the exception of the in-lieu fee payment option, the Commission concurs with the resource agencies, based on the above, that the proposed mitigation plan will adequately mitigate project impacts.

Special Condition #1 requires that a detailed revised wetland mitigation plan for all temporary and permanent impacts associated with the proposed project. It shall clearly delineate all areas of impact (temporary and permanent) and shall identify the exact acreage of each impact so identified. Mitigation plans have not been submitted for the proposed 0.44 acre site near El Camino Real or the proposed restoration sites in the 186 acre Agua Hedionda Preserve. The condition allows mitigation to occur in the Tijuana Estuary if desired by the applicant. The condition also requires preparation of the identified off-site mitigation area(s) such that the all identified wetland impacts associated with the proposed development are mitigated, in-kind, at a minimum 3:1 for all identified direct impacts to Southern Willow Riparian Scrub and Riparian Scrub (4.77 acres), 1:1 for brackish marsh and riparian shading impacts if performance standards are met (0.9 acres), mitigation of permanent impacts to open water (0.14 acres) and revegetation of all temporary construction impacts at a 1:1 ratio for a total of 0.68 acres. Additionally, temporary, direct construction impacts to riparian and brackish marsh must be mitigated in kind at a 1:1 ratio. The condition also provides that all identified mitigation sites have executed irrevocable offers to dedicate to a public agency or private association acceptable to the Executive Director, an easement for habitat restoration, habitat maintenance, open space and habitat protection over any portion or all of the above properties. The proposed fee payment to the endowment fund in-lieu of restoration of 3.02 acres within the Agua Hedionda Preserve is specifically not authorized. The project also must conform to the provisions identified in the USFWS Biological Opinion.

Special Condition #2 also requires that the proposed project shall also conform to the provisions identified in the United States Fish and Wildlife Service's Biological Opinion on Reachs 1 and 2 of Cannon Road dated October 8, 1997, and the amendment to the Biological Opinion dated January 13, 1998. Special Condition #2 also requires a detailed monitoring program including submittal of evidence of the completion of the mitigation plan(s) addressed in Special Condition #1 above, through submittal of "as built" plans in substantial conformance with the final plans approved pursuant to Special Condition #3. The program must include monitoring reports on the extent of coverage, rate of growth and species composition of all created wetland areas on an annual basis for five years following project completion, provisions for augmentation and maintenance of the restoration efforts, including specific performance standards, designed to assure 90% coverage in a five year period, and include criteria to be used to determine the quality and extent of the revegetation efforts, which shall include, but not be limited to, survival rates and species composition. At the end of the five year period, a more detailed report prepared in conjunction with a qualified wetland biologist shall be submitted to the Executive Director. If the report indicates that the mitigation has been, in part, or in whole, unsuccessful, the applicant shall be required to submit a revised or supplemental mitigation program to compensate for those portions of the original program which were not successful.

Special Condition #2 also requires that all recommendations contained in the various documents that identify the mitigation measures and the responses to those recommendation measures by the resource agencies be followed to mitigate project impacts. It also requires that the construction corridor at Macario Canyon be minimized to assure that project impacts to sensitive resources are kept to a minimum and that these provisions are identified in final plans.

Because of least Bell's vireo and Southwestern Flycatcher identified in the project area, the filling or other development of the riparian area cannot be allowed without additional protections for these endangered species. Both species have been identified on the site and may inhabit the site during any year's nesting season. For this reason, Special Condition #4 has been proposed. The USFWS Biological Opinion has identified mitigation measures to ensure that adverse impacts to both the least Bell's Vireo and Southwestern Willow Flycatcher are mitigated. These include: Ensuring that construction activities within or adjacent to southwestern willow flycatcher or within 300 feet of riparian habitat shall be performed outside the breeding season (September 15 through March 15); ensuring that a solid, three-foot high sound barrier be provided on the south side of the Reach 1 bridge spanning Macario Canyon during construction and prior to vehicle use of the bridge; and ensuring that "close grade asphalt" road surface material is utilized during the construction and maintenance of the road surface on the Reach 1 bridge spanning Macario Canyon, the Reach 2 bridge spanning Agua Hedionda Creek and the entire non-bridge portions of road surface spanning the entire 1.54 mile length of Cannon Road Reaches 1 and 2. For a complete set of additional mitigation measures required in the Biological Opinion, see Exhibit 6.

B. Upland Impacts. In CDP #6-89-195, the Commission found that although the placement of fill or other grading would ordinarily not be allowed to occur on the steeply-sloping, vegetated sides of Macario Canyon, the exemptions from such a restriction are provided for circulation element roads in the City's LCP documents. As such, such impacts could be accepted, if mitigated.

In response to addressing the proposed upland impacts of the project, the City has received a Habitat Loss Permit to "take" 2.4 acres of coastal sage scrub and 3.1 acres of southern maritime chaparral. The permit was received in response to the CDFG's Natural Community Conservation Planning (NCCP) effort. With the approval, DFG has found the project consistent with the NCCP Conservation Guidelines and the 4(d) rule and, by extension, the City's draft Habitat Management Plan (HMP) whose purpose is to preserve coastal sage scrub and other sensitive habitats within the City as part of the NCCP program. In the 4(d) approval, mitigation of 2.4 acres of coastal sage scrub at a 2:1 ratio was approved to be mitigated off-site through the purchase of mitigation credits from Carlsbad Highlands, a mitigation bank. Mitigation at a 2:1 ratio was approved for impacts to 3.1 acres of southern maritime chaparral to be mitigated through the purchase of mitigation credits from the Manchester Avenue Conservation Bank or the purchase of southern maritime chaparral within the City of Carlsbad. The above identified impacts to coastal sage scrub and southern maritime chaparral represent the entirety of impacts to those habitats for both Reaches 1 and 2. The Commission finds that approval of Cannon Road can be found consistent with the statewide NCCP process and the impacts to environmentally sensitive habitats, such as coastal sage scrub and southern maritime chaparral, can be accepted consistent with Section 30240 of the Coastal Act. The Commission finds that the impacts and mitigation can be accepted in this particular case only because Cannon Road is a "Circulation Element" road and the certified Agua Hedionda LUP acknowledges such impacts would occur. However, coastal sage scrub and southern maritime chaparral are considered environmentally sensitive habitat (ESHA) pursuant to Section 30240, of the Coastal Act and are afforded maximum protection under the Act. Particularly since the listing of the California gnatcatcher, impacts to such habitats should be avoided when possible, and otherwise mitigated consistent with Section 30240.

The Commission's previous action on Reach 1 required the revegetation of brackish marsh and riparian resources within the bridge construction corridor of Macario Canyon. Temporary impacts to riparian and brackish marsh vegetation resulting from construction of haul roads, stockpile and staging areas, and work areas extending on either side of the Macario Canyon bridge will be mitigated by revegetating and restoring the impact area to the original condition prior to disturbance. Revegetation will include remedial work such as decompaction and surface treatment of the ground and restoration of natural contours and be monitored for three years. The Commission finds it is again appropriate to require revegetation of those sensitive habitat areas that would be disturbed by construction of Cannon Road. As noted, the Agua Hedionda LUP allows for resource impacts associated with construction of Cannon Road as long as they are adequately mitigated. For that reason, Special Condition #7 requires a revegetation plan be provided that indicates all disturbed or manufactured steep slope areas shall be revegetated with native plants

compatible with adjacent natural vegetation to re-establish the area consistent with its present character.

The construction of the roadway and the bridges raise the issues of controlling runoff and retarding erosion, particularly on the large manufactured slopes associated with the project. Manufactured slopes of up to 40 feet in height will result from the project's implementation. Indirect impacts to riparian and wetland habitat are proposed to be reduced by fencing the right-of-way with a drift fence to prevent erosion and sedimentation. To further ensure that project impacts would be mitigated, Special Condition #5 would require the submittal of a runoff control plan for the areas adjacent to Macario Canyon, Agua Hedionda Creek and Agua Hedionda Lagoon. The emphasis of the runoff control plan should be controlling the runoff down the slopes, and should result in water delivered to the level of the canyon floor in such a fashion that no erosion or scour should occur as a result of the runoff reaching the canyon floor. This can take the form of energy dissipaters, detention facilities, etc. In addition, Special Condition #5 would require the provision of traps to prevent oils and suspended solids from reaching the sensitive resources of the canyon floor and downstream lagoon.

Special Condition #6 requires final grading plans in substantial conformance with the submitted plans, and in conformance with the Regional Water Quality Control Board General Construction Activity Permit, indicating that all temporary and permanent run off and erosion control devices shall be developed and installed prior to or concurrent with any on-site grading activities, and that all areas disturbed but not completed during the construction period shall be stabilized. The use of temporary erosion control measures, such as berms, interceptor ditches, sandbagging, filtered inlets, debris basins, and silt traps shall be utilized in conjunction with plantings to minimize soil loss from the construction site. Also, because of the potential adverse impact to downstream resources, grading is prohibited during the rainy season (October 1 - April 1).

The project also raises the potential for impacts associated with the construction materials and equipment. Inappropriate access and haul routes, inappropriate storage of equipment, construction materials or stockpiled soils all could result in damage to coastal sage scrub and southern maritime chaparral. For this reason, Special Condition #8 has been proposed. It requires that a plan and construction bid documents identifying all construction staging sites and haul routes be submitted for the Executive Director's review and approval after determining that no impacts to sensitive resources will result beyond those associated with the road construction itself.

Given the attached special conditions, the potential impacts to environmentally sensitive habitat areas will be reduced to the maximum extent feasible. Therefore, the Commission finds that the subject permit, as conditioned, is consistent with Sections 30231, 30240 and 30253 of the Act and the certified Agua Hedionda LUP.

3. Local Coastal Planning. Section 30604 (a) also requires that a coastal development permit shall be issued only if the Commission finds that the permitted development will not prejudice the ability of the local government to prepare a Local

Coastal Program (LCP) in conformity with the provisions of Chapter 3 of the Coastal Act. As noted above, the project lies in the areas under the jurisdiction of the certified Agua Hedionda Land Use Plan which was prepared by the City and approved by the Commission, and which has been subject to several LUP amendments.

The proposal for the construction of the Cannon Road project has been reviewed by the Commission in several separate formal actions. First, the Commission denied certification of the Agua Hedionda LUP as submitted, based, in part, upon the originally proposed alignment's impacts upon the sensitive resources of Agua Hedionda Lagoon. In response to this denial, a negotiating committee comprised of Commission members, City officials and members of both City and Commission staff was formed to identify a conceptual alignment for Cannon Road, as well as address other remaining issues resulting from the denial of the LUP.

Second, the conceptual alignment agreed upon by the negotiating committee was included in the City's LUP resubmitted (subsequently certified by the Commission), along with design criteria and mitigation policies to be applied to the roadway project. The policies regarding mitigation are included in Policy 5.8 of the certified LUP.

Based on the endorsement of the City's mitigation plan by the resource agencies, the Commission can find the project, as conditioned, will not result in any conflicts with the certified LUP. Therefore, the Commission finds that the subject development, as conditioned, is consistent with the certified Agua Hedionda LUP and Chapter 3 policies.

#### 4. Consistency with the California Environmental Quality Act (CEQA).

Section 13096 of the Commission's Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the permit, as conditioned, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(i) 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 impact which the activity may have on the environment.

The proposed project has been conditioned in order to be found consistent with the resource protection policies of the Coastal Act. The attached mitigation measures will minimize all adverse environmental impacts. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is the least environmentally-damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.

STANDARD CONDITIONS:

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 period of time. Application for extension of the permit must be made prior to the expiration date.
3. Compliance. All development must occur in strict compliance with the proposal as set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.
6. 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.
7. 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.

Wed 7/2 a

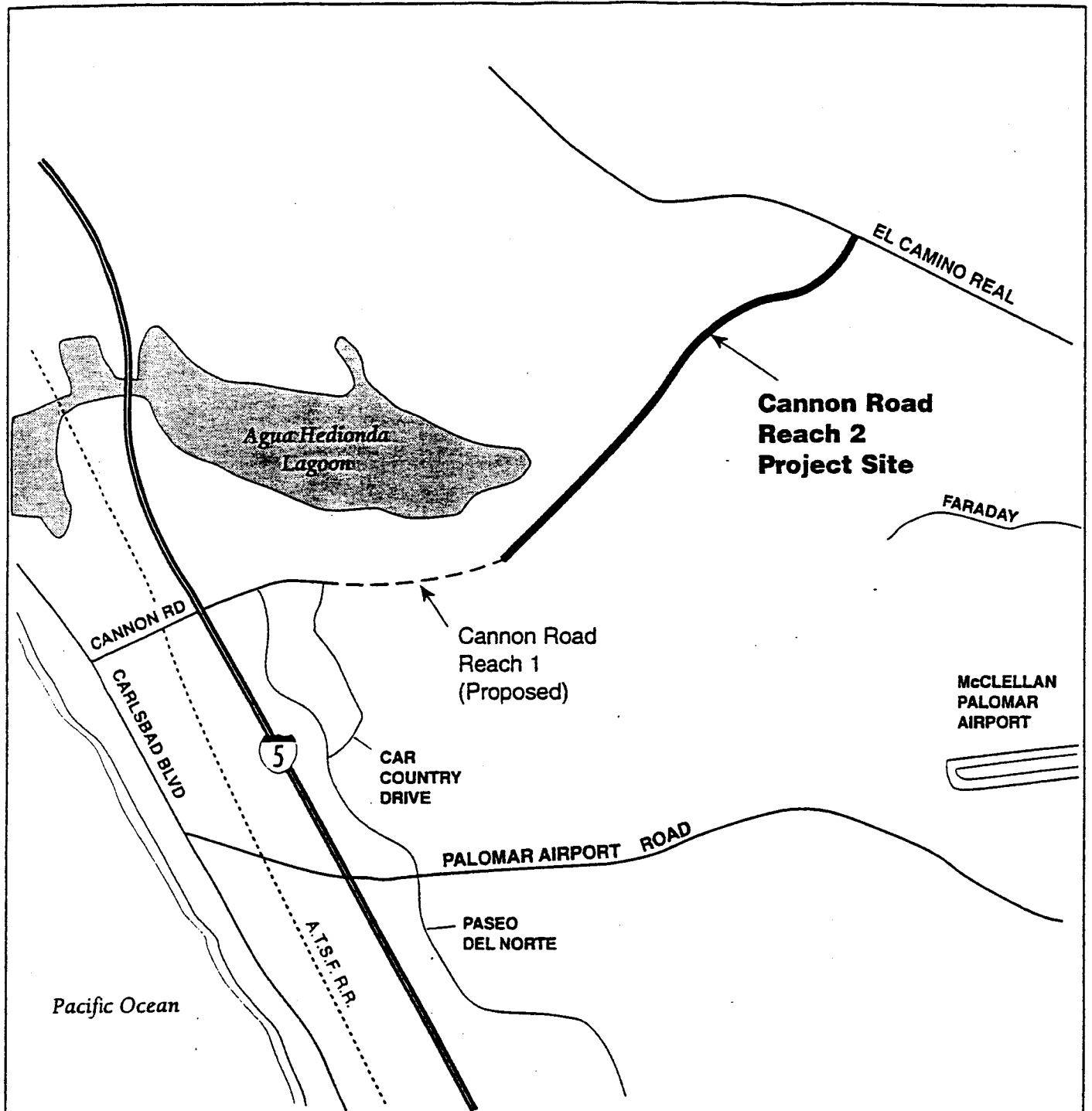


EXHIBIT NO. 1
APPLICATION NO.
6-97-11
Location Maps
California Coastal Commission



TETRA TECH INC.

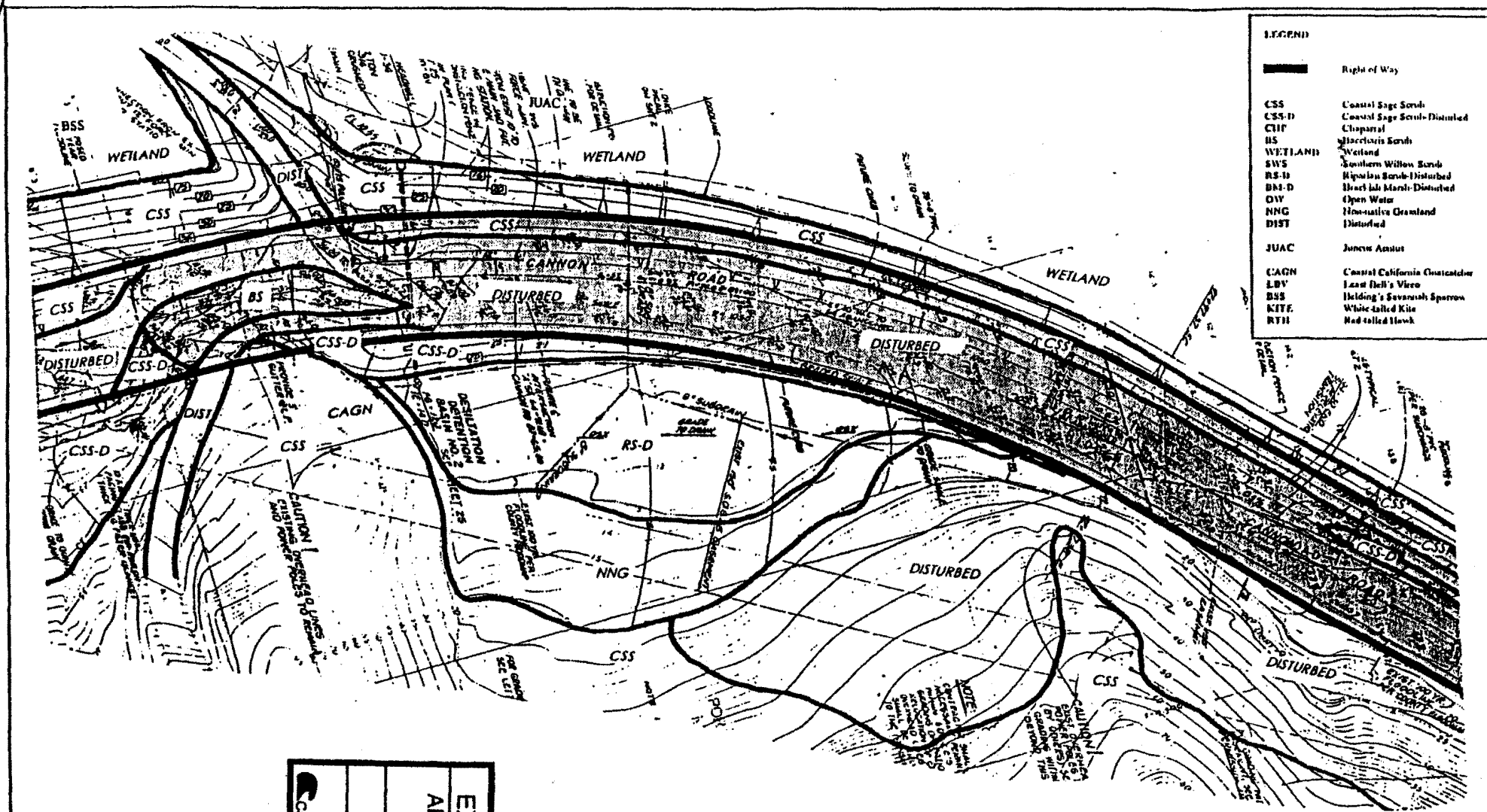


No Scale

Figure 2







LEGEND	
	Right of Way
CSS	Coastal Sage Scrub
CSS-D	Coastal Sage Scrub-Disturbed
CTIF	Chaparral
BS	Black-tailed San Diego
WETLAND	Wetland
SWS	Southern Willow Scrub
RS-D	Riparian Scrub-Disturbed
BN-D	Black-belt Marsh-Disturbed
OIV	Open Water
NNG	Non-native Grassland
DIST	Disturbed
JUAC	Juncus Annuus
CAGN	Central California Gnatcatcher
LDV	Least Shell's Vireo
BSS	Indigo's Savannah Sparrow
KITE	White-tailed Kite
RTII	Red-tailed Hawk

Source: Robertson Environmental Consulting

TETRA TECH INC.

0 100'

California Coastal Commission

EXHIBIT NO. 2b

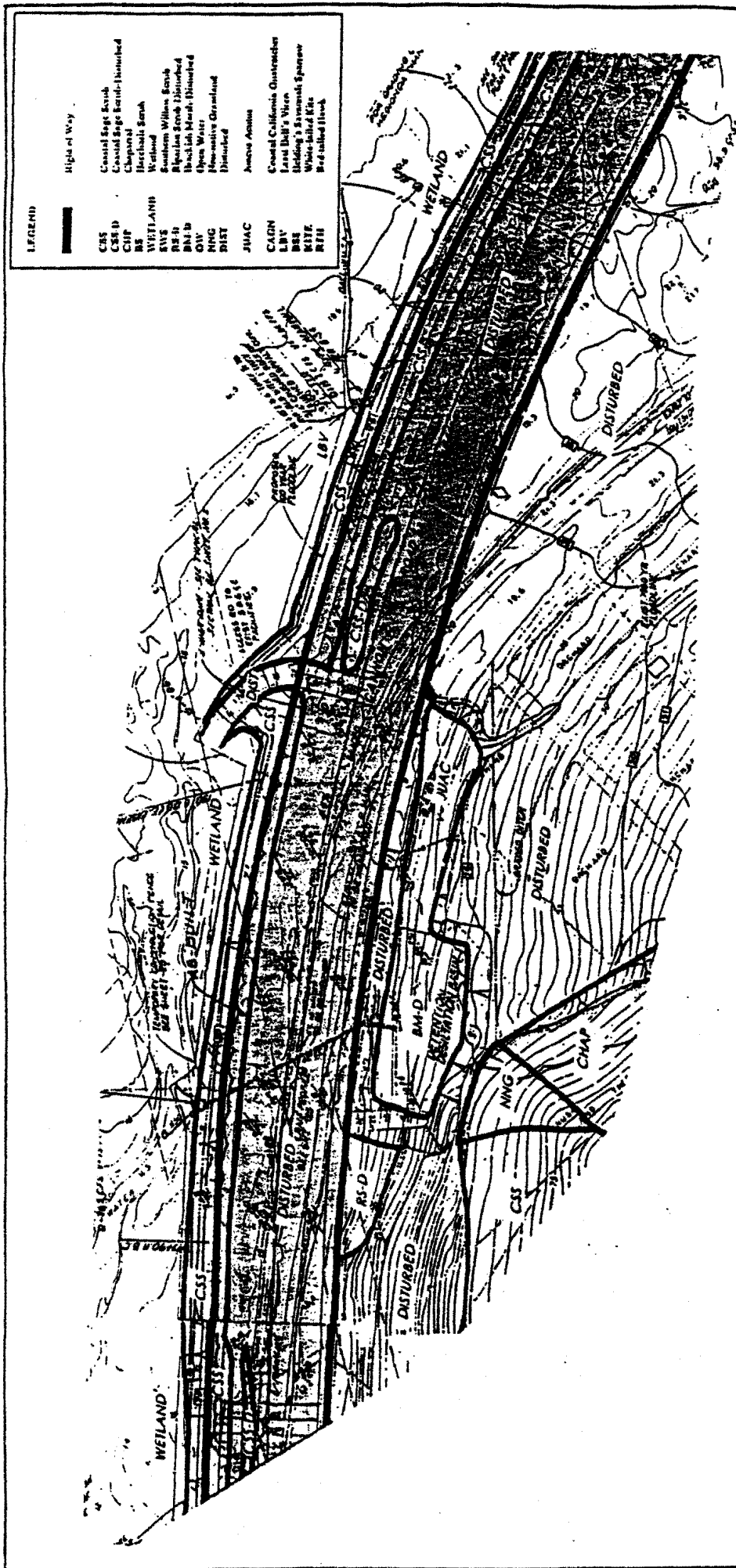
APPLICATION NO.

6-97-11

Alignment

BIOLOGICAL RESOURCES FOR CANNON ROAD REACH 2

FIGURE 3B



BIOLOGICAL RESOURCES FOR CANNON ROAD  
REACH 2

FIGURE 3C

EXHIBIT NO. 2c

APPLICATION NO.

6-97-11

Alignment

4

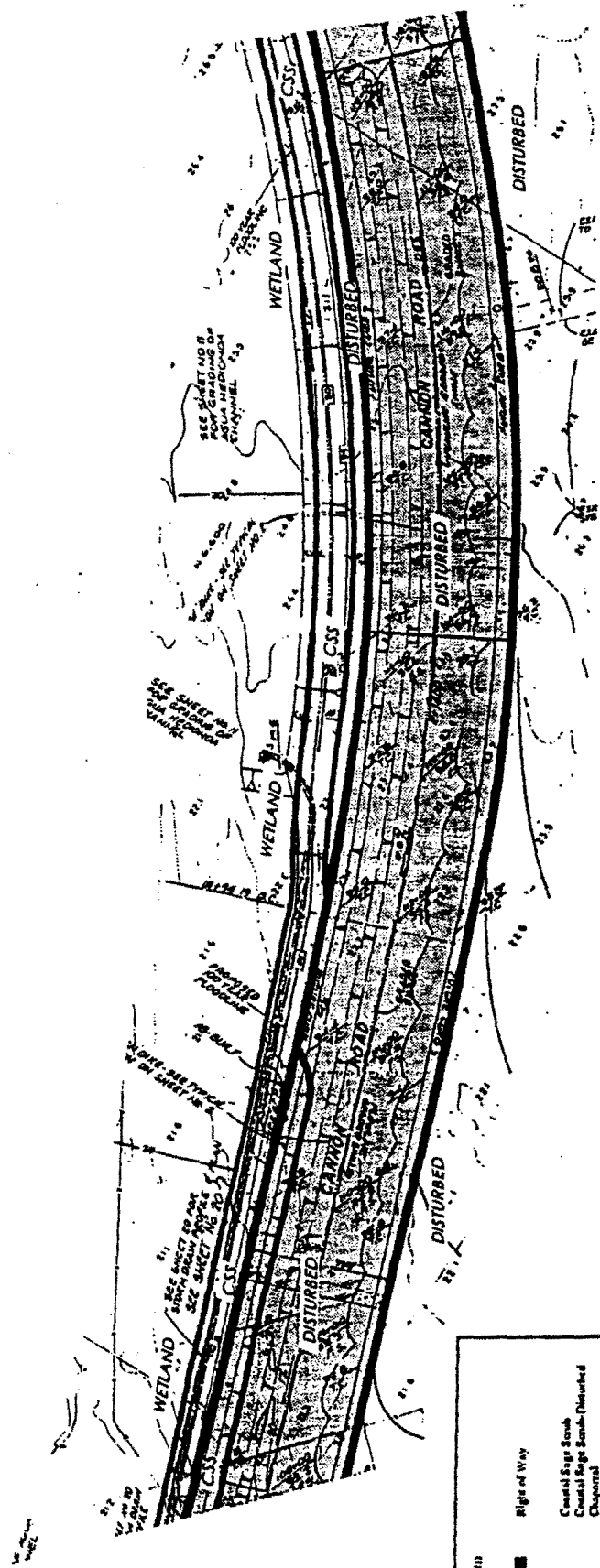
California Coastal Commission

Source: Robertson Environmental Consulting



TEC TECH INC.





**LEGEND**

**Right of Way**

CSH Coastal Sage Scrub  
 CSN Coastal Sage Scrub-Disturbed  
 CUP Chaparral  
 BS Bureaucrat Scrub  
 WETLAND Wetland  
 SWS Southern Willow Scrub  
 RS-B Riparian Scrub-Disturbed  
 BML-B Blackish Marsh-Disturbed  
 OW Open Water  
 NNG Non-native Grassland  
 DIST Disturbed  
 JUAC Juvenile Aquatic  
 CAGN Coastal California Gnatcatcher  
 LBY Least Bell's Vireo  
 BBS Belding's Sparrow  
 NTF White-tailed Nite  
 RTH Red-tailed Hawk

**BIOLOGICAL RESOURCES FOR CANNON ROAD  
REACH 2**

**FIGURE 3D**

**EXHIBIT NO. 2d  
APPLICATION NO.  
6-97-11  
Alignment**

California Coastal Commission

Source: Robertson Environmental Consulting

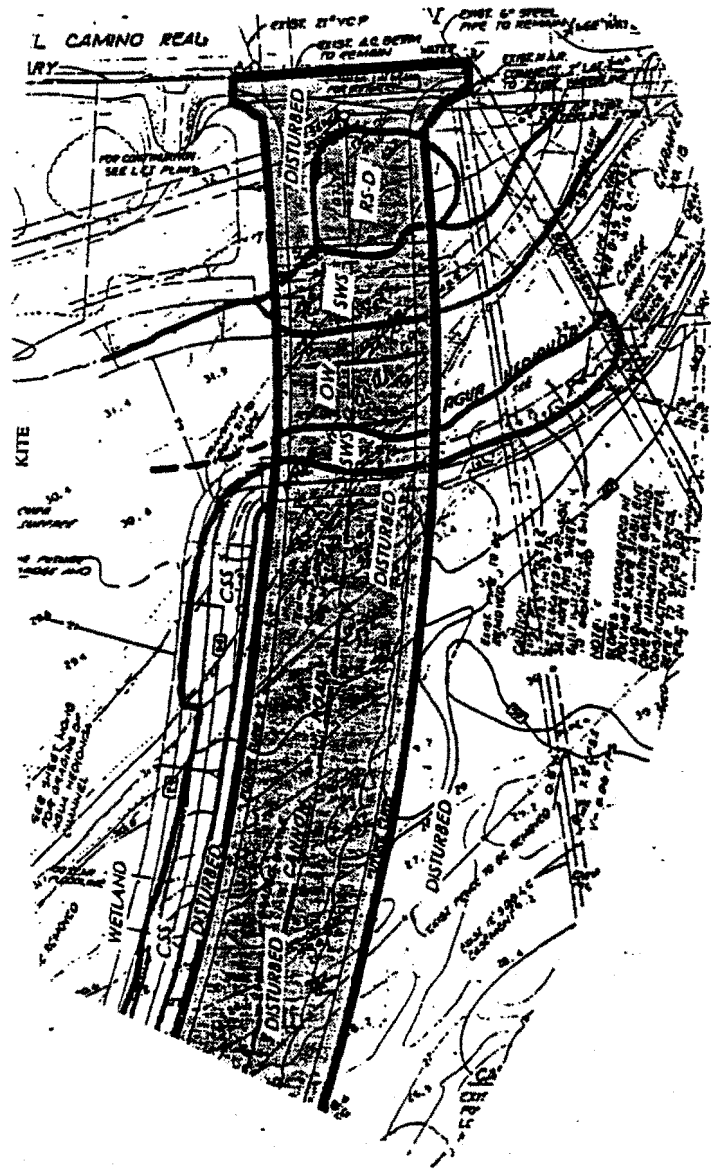
**Tt** **TETRA TECH INC.**

0 30'

**LEGEND**

Right of Way

- CSS Coastal Sage Scrub
- CSS-D Coastal Sage Scrub-Disturbed
- CLIP Chaparral
- BS Backhoof Scrub
- WETLAND Wetland
- SWR Southern Willow Scrub
- BS-D Riparian Scrub-Disturbed
- BA-D Backhoof Scrub-Disturbed
- OW Open Water
- NRG Non-riparian Wetland
- DIST Disturbed
- JUAC Juvenile Anoles
- CAGN Coastal California Gnatcatcher
- LAV Least Bell's Vireo
- BSB Belding's Sparrow
- KITE White-tailed Kite
- RTN Red-tailed Hawk

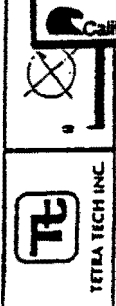


**BIOLOGICAL RESOURCES FOR CANNON ROAD  
REACH 2**

**FIGURE 3E**

**EXHIBIT NO. 2e  
APPLICATION NO.  
6-9711  
Alignment**

Source: Robertson Environmental Consulting



California Coastal Commission

# Memorandum

To : Mr. Bill Ponder  
California Coastal Commission  
3111 Camino del Rio North, Suite 200  
San Diego, California 92108-1725

Date : December 19, 1997

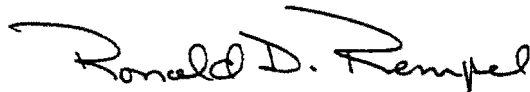
From : Department of Fish and Game

Subject : Application number 6-84-617; Kelly Ranch; Kaufman & Broad Mitigation

Ms. Sheri Howard of the City of Carlsbad has requested that we provide you with a summary of the Department's determination on mitigation success for impacts to wetlands incurred in 1985-1986 due to the subject.


We are satisfied with the results of the wetland restoration projects listed under Section III., Special Conditions. 7. a-f. Those areas have been largely successful, are functioning as wetlands, and are providing habitat for wildlife. The desiltation basin identified in Condition 8 has been unsuccessful; but considering the high quality habitat growing in the former basin which is now supporting the Federally and State Listed Endangered least Bell's vireo, the Department believes that efforts to control sedimentation upstream would be a preferred alternative to reestablishing the desiltation basin at El Camino Real and Cannon Road.

Thank you for the opportunity to comment on this project. Any questions regarding this matter should be addressed to Mr. Tim Dillingham, Associate Wildlife Biologist, at (619) 467-4204.

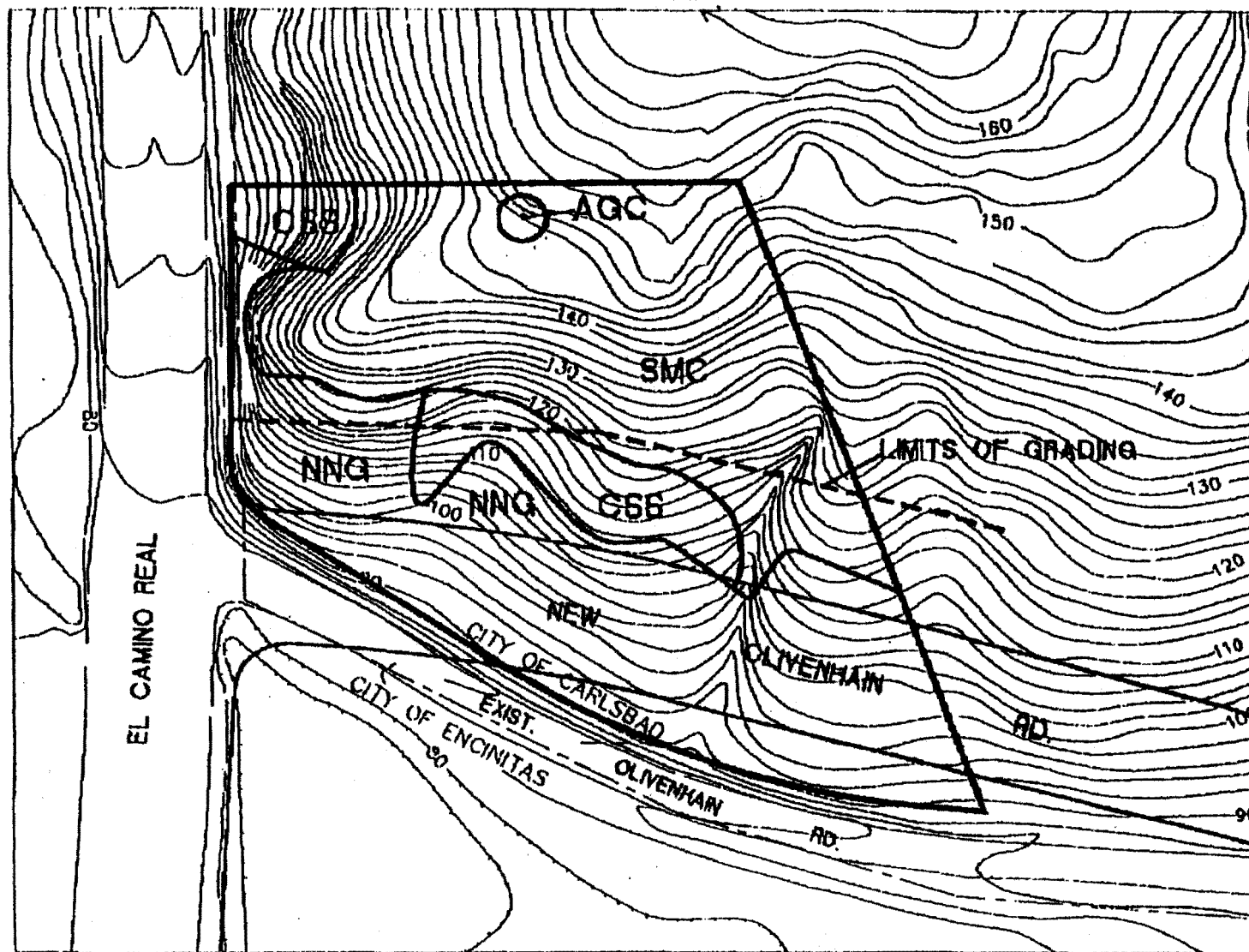


Ronald D. Rempel  
Regional Manager

cc: See attached list

EXHIBIT NO. 3
APPLICATION NO. 6-97-11
DFG letter
 California Coastal Commission

NORTHWESTERN PACIFIC RAILROAD  
APN 255-023-01



ACREAGE

CSS

.127 ac.

.375 ac.

NNG (TOTAL)

2.10 ac.

NNG (MINUS NEW OLIVENHAIN RD.)

.943 ac.

SMC

2.05 ac.

SMC (OUTSIDE LIMITS OF GRADING)

1.83 ac.

AGC

.025 ac.

Exhibit #4  
(44 acres)  
C-97-11  
Second Mitigation Site

**RECEIVED**

FEB. 02 1998

CALIFORNIA  
COASTAL COMMISSION  
SAN DIEGO COAST DISTRICT**M e m o r a n d u m**

To : Mr. Bill Ponder  
California Coastal Commission  
3111 Camino del Rio North, Suite 200  
San Diego, California 92108-1725

Date: January 29, 1998

From : Department of Fish and Game - Region 5

Subject: Cannon Road Bridge Mitigation Proposal (CDP# 6-97-11)

The Department of Fish and Game has been working with the City of Carlsbad (City), U.S. Fish and Wildlife Service (FWS), and Kelly Ranch Properties to develop a mitigation plan which will assist the Department in accomplishing our goals in Agua Hedionda Lagoon (Lagoon). The Department has first option on an Irrevocable Offer to Dedicate (IOD) over 180 acres of the Lagoon, but we are unable to accept the land without locating substantial funds to manage the lands. We are attempting to create an endowment account which will provide the necessary funding source.

The City of Carlsbad and Kelly Ranch Properties are proposing to complete Cannon Road adjacent to the IOD parcel and will already be placing \$120,000 in an account to provide for cowbird trapping, which will benefit the State and Federally-listed Endangered least Bell's vireo (vireo) by lowering the nest parasitism of the cowbird on the vireo. This was required by the FWS as part of their Endangered Species Act, Section 7 consultation for indirect impacts to the vireo. As part of the road construction, the City and Kelly Ranch Properties will be constructing bridges over Mercario Canyon, and Agua Hedionda Creek by El Camino Real. In an earlier agreement, the mitigation for these impacts was to be in advance of construction, with certain criteria to be met before impacts could occur. This practice allows for the lowering of mitigation ratios as the temporal habitat loss is avoided, and therefore the wildlife has new habitat before the old habitat is lost.

However, the City and Kelly Ranch Properties would like to move forward sooner that they had originally planned and have asked to do mitigation concurrent with their impacts. Because of this, the Department, FWS, City, and Kelly Ranch Properties have agreed that a ratio of 3:1 of creation of habitat for loss of habitat is appropriate, which will require a total of 5.19 acres of creation (1.73 acres of impact at 3:1 ratio). Unfortunately, there is not available space within the Lagoon IOD area to perform all the mitigation, nor is there suitable area within the remainder of the lagoon to create this type of habitat. The City and Kelly Ranch Properties could go elsewhere in the

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watershed, but this would likely end with fragmented and not extremely useful habitat being created. It certainly would not be likely to benefit the vireo within the Lagoon. Another possibility would be to perform 3:1 enhancement for each acre of creation required under the concurrent mitigation proposal (a total of 9:1 for each acre impacted). Again, there is no available location within the lagoon to fulfill all of this needed mitigation. Also, this mitigation will have a five-year maintenance and monitoring requirement (standard for this type of mitigation), after which the habitat is on its own again.

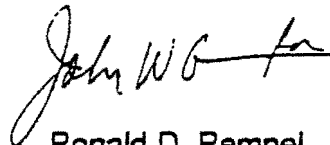
The three agencies and Kelly Ranch have developed a third proposal which would provide for a substantial portion of long term management funding needs of the Lagoon IOD area, and likely allow the Department to accept the property. The City would place an additional \$345,548 (\$114,420 per acre for 3.02 acres of required mitigation unable to be created in Lagoon IOD area) in an endowment account, which would provide for the removal of exotic plants in perpetuity (not just five years as is normal), exotic animal control and illegal human activity control, all of which will protect the vireo, the primary purpose of the Section 7 consultation. The remaining 2.17 acres of required mitigation will be created within Mercario Canyon (1.73 acres) and by removing a section of Old Cannon Road which will no longer be needed once the new road is completed and creating wetlands (.44 acres). This will fulfill the "No Net Loss" of wetlands policy of both the Department and the U.S. Army Corps of Engineers and will also connect an isolated patch of wetlands created as mitigation for another project (Shea Homes).

If the Commission decides not to allow this mitigation strategy, which is a new idea for all of us, the consequences could be that the Department cannot accept the Lagoon IOD property. In discussions with other agencies which could also accept the property under the IOD, all have expressed reluctance because there is no operational money to provide for needed management activities. The IOD is for 21 years, after which the property reverts to the current landowner, Kelly Ranch Properties, to do with as they will. They do not wish to wait the remaining nine years for the IOD to expire, nor does the Department want to allow this important habitat to be degraded through the ongoing impacts caused by invasive vegetation, exotic animals and destructive human activities when it is possible to prevent that through this innovative approach to habitat/species protection.



Mr. Bill Ponder  
January 29, 1998  
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Thank you for the opportunity to comment on this project. Any questions regarding this letter may be addressed to Mr. Tim Dillingham, Coastal Lagoon Manager in our San Diego office, at (619) 581-3507.



Ronald D. Rempel  
Regional Manager

cc: Mr. Tim Dillingham  
Department of Fish and Game  
San Diego, California

Mr. John Anderson  
Department of Fish and Game  
Long Beach

Ms. Julie Vanderwier  
U.S. Fish and Wildlife Service  
Carlsbad, California

Mr. David Zoutendyk  
U.S. Army Corps of Engineers  
Rancho Bernardo

404 permit application for Cannon Road Reach 2, dated February 13, 1997. Mitigation measures were also discussed and agreed upon during the June 24, 1997 and July 8, 1997 meetings between the Service and the City and Corps. A summary of these measures are listed below, and will be implemented as part of the proposed action in order to avoid or otherwise minimize potential adverse effects of the action on listed species:

1. Impacts to 3.31 acres of wetlands, represented by 2.48 acres of southern willow riparian and 0.10 acre of brackish marsh wetland (total of 2.58 acres) associated with Reach 1 and 0.59 acres of southern willow riparian and 0.14 acre of open water (total of 0.73 acre) associated with Reach 2, will be mitigated at a 1:1 ratio offsite. The offsite wetland mitigation will consist of excavating existing agricultural lands adjacent to existing wetlands within Macario Canyon, upstream of the Macario Canyon bridge site, for the purpose of restoring wetland hydrology and creating riparian habitat (Attachment 2). Success criteria is intended to be met within one year of initiating creation, and includes structural, composition, and density of plant species, as described in the *Conceptual Wetlands Mitigation Plan for Reaches 1 and 2 of the Cannon Road Extension Project*, dated January 1997 and other documents and meetings referenced above.
2. The riparian mitigation site will be maintained and monitored for a five year period to commence at the end of the initial planting effort. Maintenance and monitoring of the restoration site would be performed four times during the first year, two times during the second year, and once per year for three subsequent years. A detailed description is provided in the *Conceptual Wetlands Mitigation Plan for Reaches 1 and 2 of the Cannon Road Extension Project*, dated January 1997.
3. The riparian mitigation site will receive irrigation for at least one year. As agreed upon by the City and the Service during the July 8, 1997 meeting, after one year, the need to continue irrigation will be evaluated based on the overall survival and vigor of the planted material. This measure is discussed within the *Conceptual Wetlands Mitigation Plan for Reaches 1 and 2 of the Cannon Road Extension Project*, dated January 1997.
4. The riparian mitigation site will include a 100 foot wide band of upland habitat buffering the riparian and wetland habitats in perpetuity. During the June 24, 1997 meeting between representatives from the Service and the City, the City agreed to limit active park uses inside the upland buffer.
5. Temporary impacts to riparian and brackish marsh vegetation resulting from construction of haul roads, stockpile and staging areas, work areas extending 150 feet from the outside edge of the Reach 1, Macario Canyon bridge, and construction and fill activities adjacent to riparian vegetation and wetlands located 1,200 feet southwest of the Reach 1 bridge will be mitigated by revegetating and restoring the impact area to the original condition before disturbance. Revegetation will include remedial work such as decompaction and surface treatment of the ground and restoration of natural contours. The revegetation area would be monitored for a period of three years. This measure is further discussed on pages 28-30A of the Final Environmental Impact Report for Reach 1 of Cannon Road in the City of Carlsbad (EIR 87-2), dated March 21, 1989.

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Mitigation Measures

6. Impacts to occupied least Bell's vireo habitat north of and parallel to Reach 2 would be reduced by the application of a "tire-noise reducing" close-grade asphalt during the construction and maintenance of the road surface. This mitigation measure was mutually agreed to by the City and the Service at the July 8, 1997 meeting on the project.
7. Indirect impacts to least Bell's vireo and southwestern willow flycatcher from vehicle noise and light levels along 2,000 feet of Cannon Road adjacent to Agua Hedionda Creek will be compensated for by contributing \$150,000 (12.4% of a total \$1.2 million endowment) referenced in the Property Analysis Record (P.A.R.) (Attachment 3) and prepared by the Center for Natural Lands Management. The City would also fund any outstanding start-up costs described in the P.A.R. that have not been funded by the time of commencement of the construction of the proposed Cannon Road, Reaches 1 and 2. The P.A.R. determined the type and cost of wildlife management practices (including brown-headed cowbird trapping, non-native plant control, human and equestrian access restrictions, and trash cleanup) in perpetuity in 186 acres riparian habitat located in the Agua Hedionda Creek floodplain, on the Kelly Ranch property, and immediately adjacent to the project. This 186-acre site was part of a mitigation package approved under the original Corps permit and has a 22-year irrevocable offer to the Department in fee title. This compensation measure is further discussed in the letter from the Center for Natural Lands Management to the City, dated August 4, 1997 and the letter from the City, dated September 11, 1997.
8. Impacts to least Bell's vireo habitat, resulting from night-time street light levels will be reduced by placing shields on light fixtures and directing them away from riparian habitat to prevent illumination or "spillover" onto riparian habitat. This compensation measure was mutually agreed to by the City and the Service in a June 24, 1997 meeting on the project.
9. In an effort to reduce vehicle noise in adjacent riparian habitat in Macario Canyon and its unnamed creek, a solid three foot high sound barrier would be constructed on the north side of the bridge and a solid four foot high sound barrier would be constructed on the south side of the bridge. This mitigation measure was proposed by the City during consultation with the Service for the original Cannon Road Reach 1 project, and was described in measure number 3 in the section titled "Project Description" on page 3 of the previous Biological Opinion (1-6-92-F034), dated April 7, 1992.
10. Impacts to least Bell's vireo and southwestern willow flycatcher occupied riparian habitat in Macario Canyon resulting from edge effects would be mitigated by enhancing riparian habitat through the removal of pampas grass within 28 acres of wetlands in Macario Canyon. The first removal effort would be initiated within 12 months after the commencement of the project referenced above. All pampas grass shall be removed within Macario Canyon within 24 months after commencement of the project, and continue for a period of five years. This measure is in addition to the measure associated with the P.A.R., and is further discussed in the *Conceptual Wetlands Mitigation Plan for Reaches 1 and 2 of the Cannon Road Extension Project*, dated January 1997. This time frame for pampas grass removal was mutually agreed to by the City and the Service in a June 24, 1997 meeting on the project.

11. Impacts to least Bell's vireo and southwestern willow flycatcher occupied riparian habitat in Macario Canyon resulting from edge effects would be mitigated by conducting brown-headed cowbird trapping program. The program will result in the placement of five brown-headed cowbird traps within and adjacent to the riparian vegetation. Trapping will take place during the least Bell's vireo breeding season (March 15 through September 15). The first trapping effort would begin during the first breeding season after the commencement of the project referenced above, and continue for a period of five years. This measure is in addition to the measure associated with the P.A.R., and is further discussed in the *Conceptual Wetlands Mitigation Plan for Reaches 1 and 2 of the Cannon Road Extension Project*, dated January 1997.
12. Indirect impacts to Agua Hedionda Lagoon and its adjacent wetlands will be reduced by implementing a sediment and erosion control program. These measures are further discussed in the *FEIR* (EIR 87-2), dated March 21, 1989.
13. Indirect impacts to riparian and wetland habitat would be reduced by fencing the right-of-way with a drift fence to prevent erosion and sedimentation. This measure is further discussed in the *FEIR* (EIR 87-2), dated March 21, 1989 and *Appendix A in the Corps 404 permit application for Cannon Road Reach 2*, dated February 13, 1997.
14. Construction will only occur from September 15 through March 15, if the least Bell's vireo occupies riparian habitats within the project area. This mitigation measure was proposed by the City during the June 24, 1997 meeting between the Service and the City and during consultation with the Service for the original Cannon Road Reach 1 project, and was described in measure number 3 in the section titled "Project Description" on page 3 of the previous Biological Opinion (1-6-92-F-34), dated April 7, 1992.
15. Impacts to 3.1 acres of southern maritime chaparral and indirect impacts to Del Mar manzanita will be mitigated through off-site preservation of 6.2 acres of southern maritime chaparral supporting Del Mar manzanita. The acquisition of this mitigation land will be finalized within 6 months of the date of this Biological Opinion. This mitigation measure was agreed to in a July 23, 1997 telephone conversation between Ellen Berryman of the Service and Betty Dehoney, the City's consultant. Ms. Dehoney indicated that the City agreed to this mitigation measure, and the Service concurred in a letter to the City, dated July 23, 1997.
16. Indirect impacts to Del Mar manzanita will be reduced by placing temporary fencing, barriers, and signage at the construction boundary in the vicinity of this species' occurrence, to remain during construction activities. This mitigation measure was agreed to in a July 23, 1997 telephone conversation between Ellen Berryman of the Service and Betty Dehoney, the City's consultant, and further described in the letter from the City, dated August 12, 1997 regarding the *Draft Biological Opinion on the Cannon Road (Reaches 1 and 2) Permit Application No 97-20130-TCD and 97-20131-TCD*, City of Carlsbad California (1-6-97-F-51).

portions of road surface spanning the entire 1.54 mile length of Cannon Road, Reaches 1 and 2.

- 1.4 Authorize the Service to visit the habitat areas on-site to ensure compliance with permit and special permit conditions and the terms and conditions of any applicable biological/conference opinion. The Service will contact and coordinate with the landowner(s) in this regard for all site visits.
2. In order to implement Reasonable and Prudent Measure number two, the Corps and the City shall:
  - 2.1 Ensure that 3.31 acres of least Bell's vireo and southwestern willow flycatcher habitats (2.63 acres for permanent impacts plus 0.68 acre for temporary impacts) are created in Macario Canyon prior to commencement of the above referenced project. The creation site shall be located at the site referenced in Attachment 2 of this Biological Opinion prior to commencement of the above referenced project. This creation effort shall be in accordance with the grading, planting, irrigation, maintenance, and monitoring plan that is described in the Conceptual Wetlands Mitigation Plan for Reaches I and 2 of the Cannon Road Extension Project, dated January 1997, and the table titled Container plant species for wetland creation for Cannon Road West Reaches I and 2, provided to the Service on June 24, 1997 (Attachment 7).
  - 2.2 Ensure that a 100-foot wide biological upland buffer is established on the easterly side of the riparian mitigation site prior to commencement of the project referenced above. Lights within the park shall be designed and placed in such a manner as to ensure no spillage of light within the mitigation site or 100-foot wide biological, upland buffer.
  - 2.3 Provide for permanent protection of the riparian mitigation area and its biological upland buffer in Macario Canyon as natural wildlife habitat through the establishment of a perpetual conservation easement. The language of the conservation easement shall be approved by the Corps and the Service, and be signed by all parties prior to commencement of the referenced project. The language shall include the adequate protection of the riparian mitigation site from vehicle traffic and active park uses, including golf and sports-related activities, hiking and bicycling trails, equestrian trails and facilities, and other human-related activities. The conservation easement shall include a statement indicating that the Corps and Service would consider the future, proposed golf cart path, referenced in the section titled "Cumulative effects analysis" in this B.O., if it is determined to be the least damaging practicable alternative under the b(1) guidelines alternatives analysis as part of the future Clean Water Act permit action. It shall also be stated in the conservation easement that if the future golf cart path is approved by the Service and Corps, compensatory mitigation would be required under section 404 of the Clean Water Act and Section 7 of the Endangered Species Act.
  - 2.4 Ensure that the riparian mitigation site achieves the intended success criteria prior to commencement of the above referenced project. Success is anticipated to be achieved within 12 months from the initiation of site preparation at the riparian mitigation site, as

stated in the Conceptual Wetlands Mitigation Plan for Reaches 1 and 2 of the Cannon Road Extension Project, dated January 1997. Success criteria shall be based on results from quantifying species density and composition and the horizontal and vertical vegetation structure along ten fixed, linear sampling transects (sampling transects) spanning the width of the riparian mitigation site on the east-west axis and evenly distributed across the riparian mitigation site along the northwest-southeast axis. The ten fixed, sampling transects shall be located on a map, and a copy of the map shall be provided to the Service prior to on-the-ground preparation of the riparian mitigation site. Species density and composition shall be quantified by counting all individuals of each shrub and tree species within 10 feet from the fixed sampling transects and calculating the density of each species for each transect. Vertical vegetation (height) success criteria (as described in Table 3-1 of the Conceptual Wetlands Mitigation Plan for Reaches 1 and 2 of the Cannon Road Extension Project, dated January 1997) shall be evaluated by measuring the height of all trees within 10 feet of either side of each transect, and calculating the mean separately for each transect. Horizontal vegetation structure (canopy) success criteria for tree and shrub species (as described in Table 3-1 of the Conceptual Wetlands Mitigation Plan for Reaches 1 and 2 of the Cannon Road Extension Project, dated January 1997) shall be evaluated by performing the "line-intercept" method described by Mueller-Dombois and Ellenberg (1974) along the ten fixed, sampling transects. The percent canopy cover shall be calculated separately for each transect. The survival of trees and shrubs shall be determined by counting the number of individual dead plantings throughout the entire site and calculating the percent of the originally planted material that is dead. Monitoring results shall be provided to the Service prior to commencement of the project referenced above and in accordance with the additional time periods described in the Conceptual Wetlands Mitigation Plan for Reaches 1 and 2 of the Cannon Road Extension Project, dated January 1997. Photographs from permanently fixed photo-documentation sites of the mitigation site shall be included in all monitoring reports.

- 2.5 Ensure that all monitoring reports identify any necessary remedial measures for those portions of the riparian mitigation site that do not meet the success criteria specified in Term and Condition 2.5 of this Biological Opinion and in the Conceptual Wetlands Mitigation Plan for Reaches 1 and 2 of the Cannon Road Extension Project, dated January 1997.
3. In order to implement Reasonable and Prudent Measure number three, the Corps and the City shall:
  - 3.1 Ensure that limits of construction, personnel, and equipment are clearly defined. These clearly defined limits shall include areas identified for construction, staging, and storage; locations intended for delivering, preparing, and dispersing petroleum products (i.e. gas, oil, asphalt), concrete, and other substances hazardous to aquatic life; and places selected for maintenance and refueling of construction equipment and vehicles. These limits of construction, personnel, and equipment shall be identified on a legible map, and provided to the Service and Corps prior to commencement of the referenced project. Construction activity-zones and storage-areas shall be clearly demarcated on

site with safety fencing or its equivalent to prevent inadvertent disturbance of sensitive habitats including all riparian, coastal sage scrub, fresh and brackish water marsh habitats. Safety fencing shall be placed prior to construction, and shall not be removed until completion of the project. Safety fencing shall be placed and removed during the non-breeding season of least Bell's vireo and southwestern willow flycatcher (September 15 through March 15).

- 3.2 Ensure that a drift fence is placed between construction zones and wetland, riparian, and other sensitive habitats to prevent sediments from entering these habitats during construction. Drift fencing shall be placed prior to construction, and shall be removed within 12 months following completion of construction. Drift fencing shall be placed and removed during the non-breeding seasons for the referenced species (September 15 through March 15).



3.3 Limit all direct disturbance of potential/occupied least Bell's vireo, southwestern willow flycatcher, and/or coastal California gnatcatcher habitats associated with the project to those areas stipulated in the description of the action. Clearing of riparian vegetation for construction or operations shall not occur from March 15 to September 15 of any calendar given year. Any riparian, other wetland habitat, or coastal sage scrub vegetation accidentally, temporarily destroyed in the project area, or vicinity of the project area, shall be revegetated within 12 months of the temporary impact. Any riparian or other wetland habitat accidentally permanently destroyed in the project area or vicinity of the project area shall be immediately replaced at a ratio of one acre replaced (through wetland creation) for each acre disturbed or destroyed based on a plan approved by the Service.

- 3.4 Ensure that all riparian and other wetland restoration sites resulting from temporary impacts are irrigated in accordance with the measure proposed by the City and described in project measure number three in the section titled "Description of the Proposed Action" in this Biological Opinion. Planting specifications, maintenance, monitoring, success, and reporting shall be in accordance with that described in the Conceptual Wetlands Mitigation Plan for Reaches 1 and 2 of the Cannon Road Extension Project, dated January 1997.

- 3.5 Remove/eradicate/control invasive weeds from all riparian areas directly disturbed by construction or operations for not less than five years from initiation of construction. The following possible weeds shall be controlled at least twice annually (before seed set, as appropriate) so that the total aggregate extent of weed cover does not constitute more than 5 percent of the total area disturbed: Eucalyptus, Arundo, Acacia, Ricinus, Rumex, Carpobrotus, Myoporum, Cortaderia, Schinus, Cynodon, Nicotiana, Vinca, Ailanthus, Salsola, Cirsium, Cystisus, Foeniculum, Tamarix, Cynara, Marrubium, Pennisetum, and Centaurea. The goal of weeding efforts shall be to eradicate Eucalyptus, Arundo, Ricinus, Cortaderia, Foeniculum, and Tamarix on-site. Weeding efforts shall not impede or preclude native plant revegetation (passive or active) of the area.

- 3.6 Ensure that areas subject to contact with wet concrete shall be de-watered or have surface flows diverted until all concrete is fully set. Catalyzing agents in wet concrete are very alkaline (Sweet 1993) and can easily cause extreme harm to aquatic organisms when in contact with receiving waters.
- 3.7 Ensure that no night-time lighting will be used as part of construction or operations in areas of the project that are within 500 feet from least Bell's vireo and southwestern willow flycatcher habitat.
- 3.8 Ensure that all employees/agents of the applicant with responsibilities that affect the action area shall be: 1) informed of the sensitivity of the habitat areas and the presence of the listed and protected species accommodated therein; and 2) instructed as to the content of the Corps permit, this Biological Opinion, and the special permit conditions and terms and conditions delineated herein.
- 3.9 Ensure that all construction haul roads shall utilize existing paved and dirt roads. No widening of the existing dirt roads shall be allowed if impacts to native vegetation will occur.
4. In order to implement Reasonable and Prudent Measure number four, the Corps and the City shall:
  - 4.1 Ensure a contribution of \$150,000 (12.4%) and payment for any outstanding start-up costs towards the total \$1.2 million endowment for wildlife management practices on the 186-acre site described in the P.A.R. prepared by the Center for Natural Lands Management. These funds shall be placed into an interest bearing account prior to commencement of construction activities for the Cannon Road Reaches 1 and 2 project. Documentation of any outstanding start-up costs shall be provided to the Service and Corps, and funding for these outstanding costs shall be placed into the interest bearing account with the wildlife management funds. Documentation of establishing the non-wasting, interest bearing account shall be provided to the Service prior to commencement of the construction activities for Cannon Road Reaches 1 and 2.
  - 4.2 Work with the Service, Corps, Department of Fish and Game, and any other interested persons or organizations in obtaining funding for the remainder of the \$1.2 million cost for wildlife management practices intended for the 186-acre area.
  - 4.3 Remove pampas grass within 28 acres of wetlands in Macario Canyon for a five year period. The first removal effort shall be initiated outside of the breeding season of the least Bell's vireo and southwestern willow flycatcher (September 15 through March 15) within 12 months after the commencement of the project referenced above. All pampas grass shall be removed within Macario Canyon within 24 months after commencement of the project. Any newly established or resprouted pampas grass within Macario Canyon shall be removed in years 3, 4, and 5.



- 4.4 Conduct a cowbird trapping program within the Macario Canyon area. This cowbird trapping program shall consist of five traps located in five accessible areas where cowbirds occur. Traps shall be monitored from March to September, and checked once every day. Trapping methodology shall be in general conformance with techniques described in Salata 1983. A scientific collecting permit from the California Department of Fish and Game shall be obtained. Any other bird species caught shall be released. An annual monitoring report on the trapping effort shall be submitted to the Service by November 15th of each year.
5. In order to implement Reasonable and Prudent Measure number five, the Corps and the City shall:
- 5.1 If the City fails to comply with any of the measures incorporated into the project to minimize the impacts to federally listed species and their habitats, Reasonable and Prudent Measures, or Terms and Conditions of this Biological Opinion, the Corps shall suspend the 404 Clean Water Act permit until such time as the City is in compliance with the Terms and Conditions of this Biological Opinion. The Corps shall notify the City in a written letter of the City's non-compliance with the Terms and Conditions of this Biological Opinion.

#### Disposition of Sick, Injured, or Dead Individuals

[1] Upon locating a dead, injured, or sick endangered or threatened species specimen, initial notification must be made to the nearest Service Law Enforcement Office [e.g. Torrance (310) 984-0062]. Care should be taken in handling sick or injured specimens to ensure effective treatment and care in handling dead specimens to preserve biological material in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered species or preservation of biological materials from a dead animal, the finder has the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

[2] The Service's Carlsbad Office is to be notified within three working days should any threatened or endangered species be found dead or injured during this project. Notification must include the date, time, and location of the carcass, and any other pertinent information. Dead animals may be marked in an appropriate manner, photographed, and left on-site. Injured animals should be transported to a qualified veterinarian. Should any treated animals survive, the Service should be contacted regarding the final disposition of the animals. The Service contact person is Jeff Manning and may be contacted at the letterhead address or at (760) 431-9440.

#### Conservation Recommendations

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. The term "conservation recommendations" has been defined as suggestions of the Service regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information.

### Concurrent Mitigation Option

The permittee (City of Carlsbad) shall provide concurrent mitigation for direct impacts to 1.0 acre and 0.73 acre of riparian vegetation in Cannon Road Reaches 1 and 2, respectively, as follows:

1. Mitigation which is to occur concurrent with project impacts shall be performed at a 3:1 ratio. As such, the permittee shall provide 5.19 acres of mitigation for 1.73 acres of concurrent impact.
2. A total of 2.17 acres of the required mitigation shall be in form of the creation of vireo-quality habitat and will occur as follows: 1.73 acres in Macario Canyon, upstream from the Cannon Road bridge crossing, and 0.44 acre at the existing Kelly Ranch dirt road at El Camino Real (Figure 1). The habitat creation and monitoring plans (to include at least five years of monitoring, as well as success criteria and contingency measures) must be reviewed and approved by the United States Fish and Wildlife Service (Service) and California Department of Fish and Game.
3. The remaining 3.02 acres of the required mitigation shall be in the form of restoration of riparian vegetation (establishment of vireo-quality habitat, including a minimum of five years of monitoring, as well as success criteria and contingency plans) within the 186-acre Agua Hedionda Preserve (as described in the P.A.R. prepared by the Center for Natural Lands Management), or other area approved by the Service and California Department of Fish and Game.
4. The restoration may occur prior to or concurrent with project impacts, or \$114,420\* per acre (\$345,548 total) may be paid to an endowment fund for the required restoration of 3.02 acres. Under the latter circumstance, the full amount of these funds shall be placed in an interest-bearing account for the identified restoration efforts. The habitat restoration and monitoring plans (to include at least five years of monitoring, and success criteria and contingency measures) must be reviewed and approved by the Service. Documentation to demonstrate the establishment of this account shall be provided to the Service and California Department of Fish and Game.
5. If, after three years, a suitable owner/manager for the Agua Hedionda preserve has not been identified, the Service shall provide notice to the permittee that they have 90 days in which to proceed with the creation program in another area approved by the Service and California Department of Fish and Game. At this time, the \$345,548 would be transferred to the permittee to be utilized for this purpose.

\* City of Carlsbad estimate of per acre cost of wetland creation including grading, installation, irrigation, 5-year mitigation monitoring, and 5-year least Bell's vireo monitoring.

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Exhibit 6