IMPORTANT NOTICE

EA 04-013094 11/29/04

This **BCDC** permit is currently being amended and shall be used as reference only. All information necessary for bidding purpose is contained in the Plan and the Special Provisions. Please note the working window stated in this permit has been changed. Please see the Special Provision for the revised working window.

PETE WILSON, Governor

STATE OF CALIFORNIA

SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION

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SAN FRANCISCO BAY CONSERVATION
& DEVELOPMENT COMMISSION

BCDC Original

PERMIT NO. 18-98
November 20, 1998

California Department of Transportation
P. O. Box 23660
Oakland, California 94623-0660

ATTENTION: Dennis Mulligan
District Division Chief

AND

East Bay Regional Park District
P. O. Box 5381
Oakland, CA 94605-0381

ATTENTION: Lloyd Wagstaff
Land Acquisition Manager

Ladies and Gentlemen:

On November 19, 1998, the San Francisco Bay Conservation and Development Commission, by a vote of 18 affirmative, 0 negative, and 0 abstentions, approved the resolution pursuant to which this permit is hereby issued:

I. Authorization

A. Subject to the conditions stated below, the permittees, the California Department of Transportation and the East Bay Regional Park District (as a partial co-applicant) are granted permission to do the following:

1. **In the Bay:**

   a. Remove the 1927 Carquinez Bridge including approximately 134,000 square feet of suspended fill of the bridge deck and approximately 190 cubic yards of solid fill covering approximately 2,530 square feet of the transition pier footing, approximately 2,750 cubic yards of solid fill covering approximately 1,820 square feet of the southern pier footing, and approximately 1,115 cubic yards of solid fill covering approximately 3,010 square feet of Bay surface area of the southern pier ship protection, and dispose of the material outside the Commission's jurisdiction;

   b. Retain the north and center pier footings of the 1927 bridge and use for ship protection for the new suspension bridge;

c. Dredge approximately 14,000 cubic yards of material over an approximately 6,460-square-foot area to construct the new bridge, tower foundations and the fender piles and dispose of the material at an approved upland location outside the Commission's jurisdiction;

d. Construct up to four temporary coffer dams covering approximately 14,400 square feet of Bay surface area for construction of the new suspension bridge tower foundations and remove the coffer dams when the tower foundations are complete;

e. Construct and use a new suspension bridge including approximately 336,000 square feet of suspended fill for the bridge deck and approximately 8,810 cubic yards of solid fill covering approximately 22,170 square feet of Bay surface area for the two tower foundations, and approximately 80 cubic yards of solid fill covering approximately 1,830 square feet of Bay surface area for the transition pier, and use approximately 40,920 square feet for a twelve-foot-wide pedestrian and bicycle lane, approximately 122,760 square feet for three mixed-flow traffic lanes and approximately 40,920 square feet for a carpool lane;

f. Install and use approximately 4,670 cubic yards of pile-supported fill covering approximately 15,460 square feet of Bay surface area for ship protection dolphins and fender piles including approximately 3,000 cubic yards of fill covering approximately 8,520 square feet of Bay surface area for the north pier and approximately 1,670 cubic yards of fill covering approximately 6,940 square feet of Bay surface area for the southern pier;

g. On the southern shoreline construct and use approximately 140 cubic yards of pile-supported fill covering approximately 17,100 square feet of Bay surface area for an access trestle to build the south tower of the new suspension bridge and remove the trestle when the bridge is completed and dispose of the material outside the Commission's jurisdiction;

h. On the northern shoreline, construct and use approximately 420 cubic yards of pile-supported fill covering approximately 11,000 square feet of Bay surface area for an access trestle to build the north tower of the new suspension bridge and remove the trestle when the bridge is completed and dispose of the material outside the Commission's jurisdiction;

i. On the southern shoreline, remove approximately 660 cubic yards of dilapidated pier structures covering approximately 8,935 square feet of Bay surface area and dispose of the material outside the Commission's jurisdiction;

j. At the Martinez Regional Shoreline, create up to 17 acres of tidally-influenced, shallow water habitat for project mitigation, and repair and replace existing culverts or install new culverts;

k. At the Martinez Regional Shoreline, repair, replace and reconstruct, as needed, existing public access improvements, including pedestrian and bicycle bridges and boardwalks; and

l. Repair, replace and maintain, on an in-kind basis only, all improvements authorized within the Bay to the specifications approved by or on behalf of the Commission.

2. **Within the 100-foot shoreline band:**

   a. On the southern shoreline, remove approximately 185 cubic yards of the 1927 transition pier covering approximately 5,030 square feet of the shoreline and dispose of the material outside of the Commission's jurisdiction;

   b. On the southern shoreline, construct and use approximately 600 square feet of the transition pier for the new suspension bridge;

   c. On the southern shoreline, construct and use approximately 10,000 square feet of the approach structures and use approximately 1,200 square feet for a twelve-foot-wide pedestrian and bicycle lane;

   d. On the southern shoreline, construct and use an approximately 33,000-square-foot temporary access road to construct the south tower of the new suspension bridge;

   e. On the northern shoreline, construct and use an approximately 24,000-square-foot temporary access road to construct the north tower of the new suspension bridge, and retain for public access;

   f. As needed, use areas of the northern and southern shoreline for project mobilization and staging areas;

   g. At the Martinez Regional Shoreline, create up to 17 acres of tidally-influenced, shallow water habitat for project mitigation, and repair and replace existing culverts or install new culverts;

   h. At the Martinez Regional Shoreline, repair, replace and reconstruct, as needed, existing public access improvements, including pedestrian and bicycle bridges and boardwalks; and

   i. Repair, replace and maintain, on an in-kind basis only, all improvements authorized within the shoreline band to the specifications approved by or on behalf of the Commission.

B. This authority is generally pursuant to and limited by the permittees' application received September 28, 1998, but subject to the modifications required by the conditions herein.

C. The work authorized by this permit must commence by December 31, 2000, and must be diligently pursued to completion and must be completed by December 31, 2005, unless the terms of this authorization are changed by amendment of this permit.

D. The project authorized herein will result in a net increase of approximately 5.2 acres of new Bay fill, of which approximately 4.64 acres is high level, suspended fill that will not have any adverse impacts on Bay resources. The net increase in solid and pile-supported fill will be approximately 0.54 acres and there will be 0.14 acres of impacts to shallow water habitat. The solid and pile-supported fill will be mitigated by the creation of 1.3 acres of shallow water habitat at the Martinez Regional Shoreline. In addition, the project will provide approximately four acres of improved public access including a twelve-foot-wide pedestrian and bicycle lane across the strait and two vista points, one on each side of the Strait.

II. Special Conditions

The authorization made herein shall be subject to the following special conditions, in addition to the standard conditions in Part IV:

A. Specific Plans and Plan Review

1. **Plan Review.** Caltrans shall not commence any work whatsoever pursuant to this authorization until final precise grading, drainage, mobilization, staging, site, engineering, architectural, landscaping and public access plans and any other relevant criteria, specifications, and plan information for that portion of the work have been submitted to, reviewed, and approved in writing by or on behalf of the Commission. The specific drawings and information required will be determined by the staff. To save time, preliminary drawings should be submitted and approved prior to final drawings. No changes to the design of the project shall be made without the prior written approval by or on behalf of the Commission.

   a. **Site, Architectural, Landscaping and Public Access Plans.** Site, architectural, landscaping and public access plans shall include and clearly label the mean high tide line or in areas with wetlands the +5.0 foot contour line mean sea level, the line 100 feet inland of the mean high tide line or the +5.0 foot contour line, property lines, the boundaries of all areas to be reserved for public access purposes and open space, grading, details showing the location, types, dimensions, and materials to be used for all structures, irrigation, landscaping, drainage, seating, parking, signs, lighting, fences, paths, trash containers, utilities and other improvements.

   b. **Engineering Plans.** Caltrans shall ensure that engineering plans include a complete set of contract drawings and specifications and design criteria. The design criteria shall be appropriate to the nature of the project, the use of any structures, soil and foundation conditions at the site, and potential earthquake-induced forces. Final plans shall be signed by the professionals of record and be accompanied by:

      (1) Evidence that the design complies with all applicable codes; and

      (2) Evidence that a thorough and independent review of the design details, calculations, and construction drawings has been made.

2. **Plan Requirements.** Caltrans shall submit plans accompanied by a letter requesting plan approval, identifying the type of plans submitted, the portion of the project involved, and indicating whether the plans are final or preliminary. Approval or disapproval shall be based upon:

   a. Completeness and accuracy of the plans in showing the features required above, particularly the mean high tide line or the +5.0 foot contour line mean sea level, property lines, and the line 100 feet inland of the mean high tide line or the +5.0 contour line mean sea level, and any other criteria required by this authorization;

   b. Consistency of the plans with the terms and conditions of this authorization;

c. The provision of the amount and quality of public access to and along the shoreline and in and through the project to the shoreline required by this authorization;

d. Consistency with legal instruments reserving public access and open space areas;

e. Assuring that any fill in the Bay does not exceed this authorization and will consist of appropriate shoreline protection materials as determined by or on behalf of the Commission;

f. Consistency of the plans with the recommendations of the Design Review Board;

g. Consistency of the plans with the recommendations of the Engineering Criteria Review Board; and

h. Assuring that appropriate provisions have been incorporated for safety in case of seismic event.

Plan review shall be completed by or on behalf of the Commission within 45 days after receipt of the plans to be reviewed.

3. **Conformity with Final Approved Plans.** Caltrans shall ensure that all work, improvements, and uses conform to the final approved plans. Prior to any use of the facilities authorized herein, the appropriate design professional(s) of record shall certify in writing that, through personal knowledge, the work covered by the authorization has been performed in accordance with the approved design criteria and in substantial conformance with the approved plans. No noticeable changes shall be made thereafter to any final plans or to the exterior of any constructed structure, outside fixture, lighting, landscaping, signage, parking area, public access amenities, or shoreline protection work without first obtaining written approval of the change(s) by or on behalf of the Commission.

4. **Discrepancies between Approved Plans and Special Conditions.** In case of any discrepancy between final approved plans and Special Conditions of this authorization or legal instruments approved pursuant to this authorization, the Special Condition or the legal instrument shall prevail. Caltrans is responsible for assuring that all plans accurately and fully reflect the Special Conditions of this authorization and any legal instruments submitted pursuant to this authorization.

B. **Public Access**

1. **Design Review Board.** Caltrans shall submit for review by the Commission's Design Review Board the final design details for the bridge railing, the traffic barrier, bridge towers, vista points and other public access improvements upon which the Board has not yet reached consensus. The review shall not include structural elements, except as it may pertain to the bridge railings. Caltrans shall ensure that the Design Review Board's recommendations are incorporated, to the extent feasible as determined by or on behalf of the Commission, into the final design and included in the plans required under Special Condition II-A.

2. **Area.** Caltrans shall make the approximately four-acre area as generally shown on Exhibits "A" through "D" available to the public for public access such as walking, bicycling, sitting, viewing, fishing, picnicking, and related purposes. If Caltrans wishes to use the public access area for other than public access purposes or emergency and maintenance purposes as specified below, it must obtain prior written approval by or on behalf of the Commission. Caltrans may use the public access path on the replacement bridge during emergency circumstances or for repairs and maintenance of the bridge, such as, but not limited to, sanding and painting, that cannot otherwise be reasonably completed from non-public access areas. Such repairs must be carried out in manner that minimizes the closure of the public access path and, to the maximum extent feasible, ensures that the public has continuous access across the bridge. Caltrans must obtain prior written approval by or on behalf of the Commission for complete closures of the public access path that last longer than 24 hours and that prevent continuous public access across the bridge. Prior to the closure of the public access areas, Caltrans shall place signs at the entrance of the public access path at Maritime Academy Drive and San Pablo Avenue notifying the public that the path will be temporarily closed and identifying when the path will be reopened.

3. **Public Access Guarantee.** Prior to the use of the replacement bridge, Caltrans shall, by instrument or instruments acceptable to counsel for the Commission, dedicate to a public agency or otherwise guarantee for so long as the Commission determines such rights for the public to the new approximately four-acre public access areas. The public access guarantee does not apply to Carquinez Park and the gap closure area (path) which are both owned by the City of Vallejo. The instrument(s) shall create rights in favor of the public which shall commence no later than after completion of construction of any public access improvements required by this authorization and prior to the use of the replacement bridge authorized herein. Such instrument(s) shall be in a form that meets recordation requirements of either Solano or Contra Costa County and shall include a legal description of the property being restricted and a map that clearly shows and labels the mean high tide line or the +5.0 foot contour line mean sea level, the property being restricted for public access, the legal description of the property and of the area being restricted for public access, and other appropriate landmarks and topographic features of the site, such as the location and elevation of the top of bank of any levees, any significant elevation changes, and the location of the nearest public street and adjacent public access areas. Approval or disapproval of the instrument(s) shall occur within 30 days after submittal for approval and shall be based on the following:

   a. Sufficiency of the instrument(s) to create legally enforceable rights and duties to provide the public access area required by this authorization;

   b. Inclusion of an exhibit to the instrument(s) that clearly shows the area to be reserved with a legally sufficient description of the boundaries of such area; and

   c. Sufficiency of the instrument(s) to create legal rights in favor of the public for public access that will run with the land and be binding on any subsequent purchasers, licensees, and users.

4. **Recordation of the Instrument(s).** Within 30 days after approval of the instrument(s), Caltrans shall record the instrument(s) in each relevant County and shall provide evidence of recording to the Commission. No changes shall be made to the instrument(s) after approval without the express written consent by or on behalf of the Commission.

5. **Improvements Within the Total Public Access Area.** Prior to the use of the new Crockett interchange, but no later than December 31, 2004, whichever is earlier, Caltrans shall install the following improvements:

   a. On the replacement bridge, a twelve-foot-wide and approximately 3,410-foot-long, paved and separated, pedestrian and bicycle pathway;

   b. On the northern shoreline, a twelve-foot-wide and approximately 3,670-foot-long paved and separated, pedestrian and bicycle pathway along the north approach roadway from the replacement bridge to Maritime Academy. Any retaining walls shall be properly screened with vines or other appropriate landscaping;

   c. On the northern shoreline along Maritime Academy Drive, a twelve-foot-wide and approximately 430-foot-long, all weather pathway to close the gap between Maritime Academy Drive and Carquinez Park, an eight-foot-wide and approximately 575-foot-long, all weather, connector path within Carquinez Park to Sonoma Boulevard, and staging improvements at Carquinez Park. The pathway surfacing shall be suitable for bicycles, pedestrians and wheelchairs. To the extent it is physically feasible, the pathway shall be twelve feet wide.

   d. On the southern shoreline, a twelve-foot-wide and approximately 1,805-foot-long, paved and separated, pedestrian and bicycle pathway on the westbound offramp from the replacement bridge to San Pablo Avenue;

   e. On the northern shoreline, an approximately 18,934-square-foot vista point that is accessible by pedestrian and bicyclists, that is designed consistent with the natural landscape, and that includes a plaza with benches, garbage receptacles, interpretive signs explaining the history of the Carquinez Bridge and the Strait, and native drought tolerant landscaping;

   f. On the southern shoreline, an approximately 35,248-square-foot vista point that is accessible by pedestrian, bicyclists, and automobiles, that is designed consistent with the natural landscape and that includes a plaza with benches, garbage receptacles, interpretive signs explaining the history of the Carquinez Bridge and the Strait, native drought tolerant landscaping, and parking for eight vehicles (one handicapped, three bus and four automobiles); and

   g. An integrated public access and Bay Trail sign program that is designed to maximize public recognition, use and enjoyment of the public access areas and vista points required herein.

Such improvements shall be consistent with the plans approved pursuant to Special Condition II.A of this authorization and shall substantially conform to the recommendations of the Design Review Board.

6. **Maintenance.** Caltrans shall ensure that the areas and improvements within the approximately four-acre public access areas are permanently maintained. Such maintenance shall include, but is not limited to, repairs to all path surfaces; replacement of any trees or other plant materials that die or become unkempt; repairs or replacement as needed of any public access amenities such as signs, benches, drinking fountains, trash containers and lights; periodic cleanup of litter and other materials deposited within the access areas; removal of any encroachments into the access areas; removal of graffiti; and assuring that the public access and Bay Trail signs remain in place and visible. Within 30 days after notification by staff, Caltrans shall correct any maintenance deficiency noted in a staff inspection of the site.

7. **Assignment.** Caltrans may transfer maintenance responsibility to a public agency or another party acceptable to the Commission at such time as the property transfers to a new party in interest but only provided that the transferee agrees in writing, acceptable to counsel for the Commission, to be bound by all terms and conditions of this permit.

8. **Reasonable Rules and Restrictions.** Caltrans may impose reasonable rules and restrictions for the use of the public access areas required under Special Condition II-B-2 to correct particular problems that may arise. Such limitations, rules, and restrictions shall have first been approved by or on behalf of the Commission upon a finding that the proposed rules would not significantly affect the public nature of the area, would not unduly interfere with reasonable public use of the public access areas, and would tend to correct a specific problem that Caltrans has both identified and substantiated. Rules may include restricting hours of use and delineating appropriate behavior. Such rules and restrictions that are specified by the requirements of the Vehicle Code or the Streets and Highway Code are deemed reasonable and do not require approval by or on behalf of the Commission. However, Caltrans shall notify the Commission 14 days prior to implementing such rules and restrictions.

C. **Mitigation for Fill Impacts.** Caltrans shall provide the following mitigation to minimize Bay fill and offset the adverse impacts to Bay-related resources and endangered species:

1. **Removal of 1927 Bridge.** By December 31, 2005, Caltrans shall remove approximately 134,000 square feet of high-level suspended fill for the bridge deck, approximately 190 cubic yards of solid fill covering approximately 2,530 square feet of the footing for the transition pier, approximately 2,750 cubic yards of solid fill covering approximately 1,820 square feet of the footing for the southern pier, and approximately 1,115 cubic yards of pile-supported fill covering approximately 3,010 square feet for the pier protection, and shall dispose of the materials outside the Commission's jurisdiction. Caltrans shall remove the transition pier and footing to two feet below the original or existing ground, shall remove the southern pier footing and ship protection below the mudline and shall restore the affected areas to the original or existing contours and soil composition. Caltrans may retain the central and northern pier footings and use them for ship protection. Prior to removal of the 1927 Bridge, Caltrans shall prepare and

submit a removal plan to be approved by or on behalf of the Commission to ensure that the removal does not adversely impact Bay-related resources, endangered species, navigation and public health and safety. Should the 1958 bridge ever be replaced by Caltrans, Caltrans shall remove the central and northern pier footings of the 1927 bridge and all associated ship protection below the mudline and shall dispose of all material outside of the Commission's jurisdiction, unless Caltrans can affirmatively demonstrate to the Commission and the Commission agrees that: (1) the pier footings and ship protection are essential to protect the replacement bridges from collisions by waterborne vessels and that other ship protection measures would not provide a comparable or sufficient level of protection to prevent catastrophic failures; (2) the removal of the 1927 pier footings and ship protection and their replacement by new ship protection would result in a greater volume of Bay fill that covers more of the Bay surface area; or (3) the removal of the pier footings and ship protection would result in greater environmental impacts to Bay-related resources and endangered species than leaving them in place.

2. **Removal of Temporary Structures.** By December 31, 2005, Caltrans shall remove approximately 140 cubic yards of pile-supported fill covering approximately 17,100 square feet of Bay surface area for the temporary access trestle on the southern shoreline, and approximately 420 cubic yards of pile-supported fill covering approximately 11,000 square feet of Bay surface area for the temporary access trestle on the northern shoreline, and shall dispose of all materials outside the Commission's jurisdiction. Caltrans shall completely remove all pilings to ensure navigational safety.

3. **Creosote Treated Structures.** Prior to the construction of the transition pier for the replacement bridge, Caltrans shall remove approximately 660 cubic yards of solid fill covering approximately 8,935 square feet of Bay surface area of dilapidated, creosote covered piers and shall dispose of all material outside the Commission's jurisdiction. Caltrans shall remove all pilings below the mudline.

4. **Revegetation of Disturbed Lands.** After construction of the replacement bridge, but no later than December 31, 2005, Caltrans shall revegetate any areas impacted by the project that fall within the Commission's jurisdiction. Caltrans shall design all landscape plans in cooperation with local city and county agencies and any community groups that have an interest in the project and shall strive to use native, drought tolerant landscaping that is appropriate to the micro-climatic conditions of the Carquinez Strait. Caltrans shall also work with Contra Costa County and the Carquinez Bridge Community Advisory Committee to develop a plan for the treatment of excess land. The plans for revegetation of disturbed areas within the Commission's jurisdiction shall be approved by or on behalf of the Commission pursuant to Special Condition II-A. The revegetation of areas outside of the Commission's jurisdiction shall be done in conjunction with Contra Costa County and shall include the use of Best Management Practices as specified by Special Condition II-I to prevent erosion and construction and to prevent stormwater runoff from being discharged into the Bay.

5. **Shallow Water Habitat.** Prior to the use of the replacement bridge, but no later than December 31, 2003, Caltrans shall create a minimum of 1.3 acres of tidally-influenced, shallow water habitat at the Martinez Regional Shoreline. The mitigation plan shall be

developed consistent with Special Condition II-D below and shall substantially conform to the mitigation plan entitled "Martinez Regional Shoreline Salt Marsh Enhancement Conceptual Plan Elements", dated September 8, 1998, and prepared by Philip Williams Associates, LTD. The mitigation work shall not adversely impact existing public access to and along the Bay shoreline and shall include, as needed, the installation, restoration or replacement of any public access improvements to ensure the maximum feasible public access at the Martinez Regional Shoreline consistent with the project and the requirements of the East Bay Regional Park District, and as approved pursuant to Special Condition II-A herein. Although the East Bay Regional Park District owns the Martinez Regional Shoreline, Caltrans shall be solely responsible to fund all costs to provide 1.3 acres of mitigation, prepare the plans, specifications and estimates, construct the mitigation, monitor and provide corrective measures as deemed necessary by state and federal resource agencies, and maintain any public access improvements installed, restored or replaced because of the mitigation project as approved pursuant to Special Condition II-A herein.

6. **Construction Limitations.** Any work, placement of fill, or dredging in areas designated by state and federal resource agencies as shallow water habitat shall occur only between December 1 and March 31 or from trestles or within coffer dams.

7. **Mitigation Assurance.** Caltrans shall permanently provide the mitigation required under Special Condition II-C. Should any portion of the Bay that Caltrans uncovers by the removal of the 1927 Bridge, the removal of the temporary access trestles and/or the removal of creosote covered structures be filled or covered for another project or use, such as the construction of a rail bridge, then an equivalent amount and kind of replacement mitigation shall be provided at or near the project site. Should any portion of the required mitigation that Caltrans provides at the Martinez Regional Shoreline be pre-emptied or replaced by another project or use, then an equivalent amount and kind of replacement mitigation shall be provided at or near the project site.

D. **Mitigation Work and Plans.** Prior to carrying out any mitigation work for the tidally-influenced, shallow water habitat at the Martinez Regional Shoreline, as required under Special Condition II-C-5 above, Caltrans shall provide a mitigation plan and program that complies with the following:

1. **Mitigation Plan.** Prior to June 30, 1999, Caltrans shall submit a final mitigation plan and program, to be approved by or on behalf of the Commission, for the creation of a minimum of 1.3 acres of tidally-influenced, shallow water habitat at the Martinez Regional Shoreline. The plan and program shall contain the following:

   a. **Site Conditions and Modifications.** A topographic map of the site in one-foot contours showing the existing site conditions and a topographic map showing the proposed modifications. All elevations shall be relative to National Geodetic Vertical Datum (NGVD). The map shall include typical cross-sections showing proposed elevation of marsh plain, any channels, and any high spots. The map shall show figures for the ratios of typical horizontal to vertical slopes for existing and proposed levees, channels, and sloughs. The map shall show proposed plant species along the cross-sections according to their expected zone of growth. The

topographic map or a separate map shall show the site context or vicinity including storm drains, the elevation of adjacent surrounding properties, and the limit of the 100-year flood. The vicinity map shall include figures for the estimated tidal range related to Mean Higher High Water, Mean High Water, Mean Lower Low Water, Mean Sea Level, the maximum predicted tide, and the 100-year tide;

b. **Levee Breaches.** For any levee breaches the plan and program shall show calculations for determining the size of any levee breach or pipe to be installed, including any tide control structure to be installed to control the amount of water entering at various tidal stages. The program shall indicate the amount of any cut and fill activities, the amount of material to be placed to strengthen the levee, and the expected tidal exchange. The expected tidal range shall indicate predicted expectations both inside and outside the levee breach. If plants will be used to protect the levee from erosion or undercutting, the program shall specify the type of plants to be used. If plants will not be used, the program shall describe how the breach will be protected from erosion and undercutting. If any inlet-outlet structures are to be used, the program shall include detailed drawings of such structure(s), their location at the site, with a schedule of operation, inspection and maintenance;

c. **Soil and Water Information.** The plan and program shall include a report identifying the type of soils found at the site and the soil type of any fill to be imported to the site. Information shall be provided on the quantitative soil measurements of salinity, pH, organic content, and bulk density. Information shall also be provided on the water, including water analysis of salinity, pH, biochemical oxygen demand (BOD), dissolved oxygen (DO), and, if appropriate, heavy metals. The plan and program shall indicate where and how any excavated soils, creosote pilings and/or debris will be disposed and whether such materials need to be remediated;

d. **Public Access Improvements.** The plan and program shall identify all existing public access improvements at the project site including informal and formal pathways, pathway connections to the nearest public right-of-way, pedestrian and bicycle bridges and boardwalks, benches, signs and other public access amenities. The plan and program shall ensure that the restoration work does not adversely impact existing public access and shall include, as needed, the installation, restoration and/or replacement of any public access improvements to provide the maximum feasible public access at the Martinez Regional Shoreline consistent with the project and the requirements of the East Bay Regional Park District, and as approved pursuant to Special Condition II-A herein;

e. **MOA/MOU.** The plan and program shall include all executed MOAs/MOUs and cost agreements that establish the responsibilities between Caltrans, the East Bay Regional Park, and the City of Martinez for funding, designing, constructing and monitoring any mitigation work and public access improvements at the Martinez Regional Shoreline;

f. **Schedule and Phasing.** In recognition that the Commission authorizes Caltrans and/or the East Bay Regional Park District to create up to 17 acres of tidally-influenced, shallow water habitat at the Martinez Regional Shoreline, but requires Caltrans to provide only 1.3 acres to mitigate the impacts of the Carquinez Bridge Replacement and Retrofit Project, Caltrans and/or the East Bay Regional Park District may phase the 17-acre restoration project. However, Caltrans must provide a minimum of 1.3 acres of tidally-influenced, shallow water habitat in the first phase. The mitigation plan and program shall include a schedule and the phasing of the mitigation indicating when fill, dredging or grading will occur, the time to be allowed for settlement, the time when levee breaches or inlet structures will begin to function and the time when planting will occur. The program shall include an estimate of the extent of expected sedimentation over a ten-year period; and

g. **Monitoring.** Caltrans shall be responsible for monitoring the 1.3-acre mitigation site for ten years after it has completed the mitigation and restoration project. Such monitoring shall include measuring the water quality, soil characteristics, plant survival and plant growth rates, and shall be substantially consistent with the monitoring requirements identified in the restoration report entitled "Martinez Regional Shoreline Salt Marsh Enhancement: Conceptual Plan Elements", dated September 8, 1998, and prepared by Philip Williams and Associates, LTD. At the end of ten years, the Commission reserves the right to evaluate and determine whether Caltrans shall continue to monitor the 1.3-acre mitigation site up to an additional five years. Should the Commission or other state and federal resource agencies identify adverse conditions, Caltrans shall take corrective action as specified by or on behalf of the Commission or in consultation with other state and federal resource agencies.

2. **Hold Harmless Agreement.** Caltrans shall ensure that the restoration plan meets the requirements of the Martinez Public Works Director who has jurisdiction over the site and the surrounding area. Caltrans shall provide a letter to the Commission indicating that the City of Martinez has reviewed and approved the restoration plan and program. Caltrans agrees to indemnify, defend and save harmless the Commission and its employees from any and all claims, demands, losses or judgments accruing or resulting to any person, firm, corporation or entity who may be injured or damaged by work performed in accordance with the terms and conditions of this permit.

3. **Mitigation Work.** Prior to December 31, 2003, Caltrans shall undertake grading, introduction of tidal action, planting of marsh plants if needed, and monitoring, all in accordance with the mitigation plan for the 1.3-acre mitigation site submitted to, reviewed, and approved by or on behalf of the Commission.

4. **East Bay Regional Park District Involvement.** If the East Bay Regional Park District wishes to complete any portion of the remaining 15.7 acres of wetland restoration in a subsequent phase, it shall be subject to the requirements of Special Conditions II.D.1.a through II.D.1.g herein and must submit a restoration plan and program for its portion of the work to be approved by or on behalf of the Commission prior to commencing restoration work.

E. **Horizontal Control Points.** As shown on plans required by Special Condition II-A, Caltrans shall install a minimum of four permanent horizontal control points of a type and at specific locations at the Carquinez Bridge site approved by or on behalf of the Commission. Caltrans shall place these control points under the supervision of a registered civil engineer or land surveyor, and shall be accurately located and mapped in relation to each other, to the closest known existing control point or other acceptable fixed point in the project area, and to the limits of any proposed fill in the Bay. Caltrans shall locate these control points to facilitate field checking, with simple equipment, of the limits of the fill authorized pursuant to this authorization. Such fill limits shall be dimensioned from these control points, or, if the scale of the drawing is adequate, it shall carry a note stating that field dimensions may be scaled from the drawing and the accuracy of such scaling, e.g., "Field dimensions to an accuracy of ± may be scaled from the drawing." Caltrans shall clearly show these control point locations on all plans submitted pursuant to Special Condition II-A.

F. **Dredging**

1. **Water Quality.** At least 20 days prior to the commencement of any dredging or disposal episode authorized herein, Caltrans shall submit to the Executive Director water quality certification or waiver of water quality certification from the California Regional Water Quality Control Board, San Francisco Bay Region, for that episode. Failure to obtain such certification or waiver of certification prior to the commencement of the dredging episode shall terminate the Commission's authorization for that dredging episode.

2. **60-Month Permit for Dredging.** Caltrans shall complete the approximately 14,000 cubic yards or less of new dredging and dispose of the material at an upland location outside the Commission's jurisdiction, as authorized by this permit, within 60 months of the date of issuance. No further dredging or in Bay disposal is authorized by this permit.

3. **Barge Overflow Sampling and Testing.** Results of any effluent water quality or other testing required by the San Francisco Bay Regional Water Quality Control Board shall be submitted in writing by Caltrans to the Commission's office at the same time that such testing is submitted to the Regional Board.

G. **Marsh Protection.** Caltrans shall perform the work authorized by this permit in a manner that will prevent any significant adverse impact on any tidal marsh or other sensitive wetland resources, unless already provided for as part of the project mitigation required under Special Condition II-C. If any unforeseen adverse impacts occur to any such areas not accounted for under Special Condition II-C as a result of the work authorized herein, Caltrans shall restore the area to its previous condition, including returning the disturbed area to its original elevation and soil composition and, if the area does not revegetate to its former condition within one year, Caltrans shall seed all disturbed areas with appropriate marsh vegetation.

H. **Hazardous Materials Removal and Remediation.** Caltrans shall ensure that it performs any removal, remediation, encapsulation or disposal of hazardous or toxic materials, such as lead-based paint, consistent with the requirements of the U.S. Environmental Protection Agency and any other applicable local, state and federal laws.

I. **Non-Point Source Pollution Control.** Caltrans shall implement all appropriate and necessary best management practices (BMPs) to minimize the discharge of nonpoint source pollutants to the Bay during and after construction. The BMPs shall be consistent with applicable local, state and

federal laws and any required NPDES permits and stormwater pollution prevention plans. The final post construction BMPs and the conceptual construction BMPs shall be shown on the plans required under Special Condition II-A. The final construction BMPs may be developed by the contractor and shall be approved by or on behalf of the Commission prior to the onset of the rainy season.

J. **Debris Removal.** Caltrans shall ensure that it removes all construction debris to a location outside the jurisdiction of the Commission. In the event that any such material is placed in any area within the Commission's jurisdiction, Caltrans shall remove such material, at its expense, within ten days after it has been notified by the Executive Director of such placement.

K. **Construction Operations.** Caltrans shall ensure that it performs all construction and repair operations to prevent construction materials from falling into the Bay. In the event that such material escapes or is placed in an area subject to tidal action of the Bay, Caltrans shall immediately retrieve and remove such material at its expense.

L. **Creosote Treated Wood.** Caltrans shall not use any new pilings or other new wood structures that have been pressure treated with creosote in any area subject to tidal action in the Bay or within the Commission's jurisdiction as part of the project authorized herein.

M. **Commission Jurisdiction Over Fill Area.** Notice is hereby given that, under the McAteer-Petris Act, the area of the approved project that is within the Commission's jurisdiction under Section 66610(a) remains within that jurisdiction even after fill or a substantial change in use, authorized by the Commission, may have changed the character of the area; so that Caltrans will require further action by or on behalf of the Commission prior to any future change of use or work within areas filled pursuant to this authorization.

N. **Abandonment.** If, at any time, the Commission determines that Caltrans has abandoned the improvements in the Bay authorized herein for a period of two years or more, or have deteriorated to the point that public health, safety or welfare is adversely affected, the Commission may require that Caltrans, its assigns or successors in interest remove the improvements within 90 days or such other reasonable time as the Commission may direct.

O. **Disabled Access.** To the maximum extent feasible, Caltrans shall design and construct all uses and improvements authorized herein to provide disabled access consistent with the local, state and federal disability laws, including the Americans with Disabilities Act.

P. **Recording.** Caltrans shall record this document or a notice specifically referring to this document with Solano or Contra Costa County within 30 days after execution of the permit issued pursuant to this authorization and shall, within 30 days after recordation, provide evidence of recordation to the Commission.

III. Findings and Declarations

This permit is issued based on the Commission's findings and declaration that the authorized work is consistent with the McAteer-Petris Act, and the San Francisco Bay Plan, the California Environmental Quality Act, and the Commission's amended management program for the San Francisco Bay segment of the California coastal zone for the following reasons:

A. **Use.** The *San Francisco Bay Plan* Map No. Two designates portions of the southern shoreline, east of the 1958 bridge, as a water-related industrial priority use area, and portions of the northern shoreline, east of the 1958 bridge, as a park priority use area. Bay Plan Map No. Two designates the Carquinez Bridge and the I-80 approaches on both sides of the Carquinez Strait as

scenic drives. The proposed project will not encroach within either of these priority use areas. Bay Plan Map No. Two also designates the Martinez Regional Shoreline as a park priority use area. Caltrans will create tidally-influenced, shallow water habitat at the Martinez Regional Shoreline. The mitigation will not have an impact on existing public access and will enhance the park experience. Therefore, the Commission finds that the mitigation work is consistent with the park priority use designation.

B. **Fill.** Section 66605 of the McAteer Petris Act states that further filling of San Francisco Bay should be authorized only when public benefits from fill clearly exceed public detriment from the loss of water areas and should be limited to water-oriented uses, including bridges. In addition, the Commission should authorize fill only when no alternative upland location is available, the fill is the minimum amount necessary, and the nature, location and extent of fill minimizes the harmful effects to the Bay.

Caltrans will place a total of approximately 8,890 cubic yards of solid fill covering approximately 24,000 square feet of Bay surface area, approximately 5,230 cubic yards of pile-supported fill covering approximately 43,560 square feet of Bay surface area and approximately 336,000 square feet of suspended fill. Because Caltrans will remove the 1927 span, including the footings for the transition pier, the southern pier and the ship protection, will remove the construction trestles, and will remove some dilapidated creosote pier structures, the net increase in Bay fill at the project site will be approximately 5,290 cubic yards of solid fill covering approximately 10,715 square feet of Bay surface area, 3,555 cubic yards of pile-supported fill covering approximately 12,450 square feet of Bay surface area and approximately 202,000 square feet of suspended fill.

The Carquinez Bridge Replacement project will have several significant public benefits including: (a) improving public safety by replacing the 1927 span with a new span that meets current seismic design and traffic safety standards; (b) injecting approximately $300 million into the local and state economy; (c) providing approximately four acres of public access including a critical pedestrian and bicycle link across the Carquinez Strait and two improved vista points on each side of the Strait; (d) creating approximately 1.3 acres of tidally-influenced, shallow water habitat for project mitigation; and (e) encouraging the use of carpools and alternative modes of transportation. The McAteer-Petris Act and the *San Francisco Bay Plan* identify bridges as water-oriented uses. There is no practical alternative upland location for the replacement bridge as it provides a vital east-west link across the Carquinez Strait. The amounts and purpose of fill are as follows:

1. **Permanent Fill To Remain.** Caltrans will place approximately 8,890 cubic yards of solid fill covering approximately 24,000 square feet of Bay surface area for the main pier and tower foundations and the south end, transition pier foundation. Caltrans will also place approximately 4,670 cubic yards of pile-supported fill covering approximately 15,460 square feet of Bay surface area for the fender systems to protect the main bridge piers. Approximately 336,000 square feet of high-level suspended fill will be required for the replacement bridge deck which will sit approximately 150 feet above the water.

2. **Temporary Fill To be Removed.** On the southern shoreline, Caltrans will use a temporary access roadway from the existing grade crossing near the Crockett Striped Bass Club and the Nantucket Restaurant. Caltrans will extend this roadway along the shoreline and over the UPRR tracks from the construction staging area near the Crockett-Valona treatment plant to approximately 1,000 feet east of the 1927 bridge. Caltrans

will need approximately 140 cubic yards of pile-supported fill covering approximately 17,100 square feet to extend the construction access trestle into the Strait from the new bridge transition pier to the south main tower foundation area. On the northern shoreline, Caltrans will construct an access roadway from the California Maritime Academy parking lot on Maritime Academy Drive to the new bridge alignment within the 100-foot shoreline band. Caltrans will need approximately 420 cubic yards of pile-supported fill covering approximately 11,000 square feet of Bay surface area to extend the access trestle into the Strait to the north main tower foundation area.

Both access trestles will be in place for an extended period of time. However, Caltrans will completely remove both of these structures following construction. Caltrans is exploring opportunities for a local jurisdiction to assume maintenance responsibility for that portion of the northern construction access roadway that falls within the 100-foot shoreline band and leave it in place for public access.

3. **Removal of Existing Fill.** Caltrans will remove the existing 1927 bridge. This will include removal of approximately 134,000 square feet of high-level suspended fill for the bridge deck, removal of approximately 190 cubic yards of solid fill covering approximately 2,530 square feet of the footing for the transition pier, removal of 2,750 cubic yards of solid fill covering approximately 1,820 square feet of the footing for the southern pier, and removal of approximately 1,115 cubic yards of pile-supported fill covering approximately 3,010 square feet of the pier protection. The transition pier will be removed to approximately two feet below original ground and the southern pier will be removed below the mudline. Caltrans proposes to develop the removal method and present it to the Commission for its concurrence after issuance of a permit. Caltrans will retain and use the northern and center pier footings of the 1927 bridge as part of a combined bridge fender system to provide ship impact and pier protection for the replacement bridge and the 1958 bridge. If Caltrans were to remove and replace the center and northern footings and install new ship protection, rather than retain the 1927 footings as ship protection, it would cost an additional $35.7 million. Removal of the 1927 footings will increase the Bay surface area by only 3,290 square feet, but will actually result in a decrease in the volume of the Bay by 24,777 cubic yards.

   Along the southern shoreline, Caltrans will also remove approximately 660 cubic yards of solid fill in the form of rotten, creosote pier debris covering approximately 8,935 square feet of Bay surface area. The pier debris will be removed to approximately two feet below original ground.

   Special Conditions II-A, II-C, II-E, and II-G through II-Q are necessary to ensure that the Bay fill will not adversely impact Bay-related resources and endangered species. Therefore, as conditioned, the Commission finds that the public benefits of the fill outweigh the public detriment and that the fill is consistent with Section 66605 of the McAteer-Petris Act.

C. **Mitigation.** In part, the Bay Plan policies on mitigation state that mitigation for the unavoidable adverse environmental impacts of any Bay fill should be considered by the Commission in determining whether the public benefits of a fill project outweigh the public detriment from the loss of water areas due to the fill. Whenever mitigation is necessary the mitigation program should

assure: (a) that the benefits from the mitigation would be commensurate with the adverse impacts on Bay resources; (b) that the mitigation would be at the project site or as close as possible; (c) that the mitigation measures would be carefully planned, reviewed and approved by or on behalf of the Commission, and subject to reasonable controls to ensure success, permanence and long-term maintenance; and (d) that the mitigation would, to the extent possible, be provided concurrently with those parts of the project causing adverse impacts.

After removal of the 1927 bridge and other shoreline structures, the Carquinez Bridge Replacement project will result in a net increase of approximately 8,845 cubic yards of Bay fill covering approximately 225,165 square feet of Bay surface area. This will include approximately 5,290 cubic yards of solid fill covering approximately 10,715 square feet of Bay surface area, 3,555 cubic yards of pile-supported fill covering approximately 12,450 square feet of Bay surface area and 202,000 square feet of suspended fill.

Generally, the adverse impacts of fill for the construction of a bridge and the construction of access trestles include: (a) the disruption and displacement of existing benthic communities; (b) the creation of shade, which can affect water and soil temperature and influence an area's plant and animal communities; (c) the dampening of wave energy and the creation of eddies which can alter water circulation and increase the rate of sedimentation; and (d) the disruption of animal use of an area and animal movement between areas.

More specifically, the project fill will impact approximately 0.14 acres of shallow water habitat which are less than 10 feet in depth. State and federal resource agencies have designated shallow water areas as critical habitat for the federally and state-listed threatened Delta smelt and federally-listed endangered winter-run chinook salmon, and as sensitive habitat for the federally-proposed endangered Central Valley steelhead and Sacramento splittail, a State species of special concern. In addition, there will be approximately 920 square feet of encroachment into the engineered drainage channel near the southern bridge abutments outside of the Commission's jurisdiction. The suspended fill will not result in any significant impacts to Bay-related resources as it will be approximately 150 feet above the Bay and will not cast any substantial shadows. As a result, the Bay fill impacts will be approximately 0.56 acres, in addition to the impacts to 0.14 acres of shallow water habitat.

For the majority of bridge projects, the Commission has required mitigation including: (a) enhancing habitat values in existing degraded tidal marshes by excavating channels and improving tidal circulation. Such enhancements projects always involve improvements to significantly larger areas than that covered by a bridge; (b) contributing funds on a pro-rata basis to a mitigation bank where the amount of the contribution is directly related to the cost of acquiring, restoring, monitoring and maintaining an area as tidal wetland habitat; and (c) excavating an adjoining upland to create a tidal marsh equal or greater in size to the area of the Bay covered by the proposed bridge.

Caltrans will mitigate the fill impacts consistent with the requirements of the United States and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), the United States Army Corps of Engineers (USACE) and the California Department of Fish and Game (CDF&G). Caltrans will provide on-site mitigation at a 2:1 ratio for impacts to the engineered drainage under the southern bridge approach. Impacts to juvenile fish habitat will be mitigated at 3:1 and the impacts of Bay fill will be mitigated at 1:1 to ensure no net loss.

Caltrans will provide mitigation at the Martinez Regional Shoreline Park in the City of Martinez between the UPRR tracks and Industrial Way. The EBRPD owns the site and jointly operates it with the City of Martinez. Caltrans and the City of Martinez will widen and deepen Alhambra Creek and provide flood terraces as part of a City storm drainage capacity enhancement project. In addition, Phillip Williams and Associates, LTD., Caltrans' consultant, has developed a grading plan for the area to the west of the Creek to remove artificial fill that has historically been sidecast in various locations to create a tidal slough channel system that will support a tidal marsh wetland. The network of slough channels will be designed to be self-scouring. Salt marsh vegetation will be provided along the margins of the channels and over the restored marsh plain. At full buildout, the mitigation plan for the Martinez Regional Shoreline will provide up to 17 acres of shallow water habitat and will be phased. The first phase, which focuses on widening Alhambra Creek, will provide approximately nine acres of shallow water habitat and provide for juvenile fish nursery or rearing areas. Of the nine acres, Caltrans will provide 1.3 acres to satisfy the resource agencies' mitigation requirements for the Bay fill impacts and shallow water habitat impacts of the Carquinez Bridge Replacement and Retrofit Project. Funding and agreements are in place between Caltrans, EBRPD and the City of Martinez to complete the initial phase of the wetland restoration by December 31, 2003. Caltrans would like to use the remaining acreage of habitat creation to satisfy potential mitigation requirements for other projects such as the Benicia-Martinez Bridge Project. The USFWS, NMFS, USACE and CDFG have reviewed and have conceptually approved the Administrative Draft Final Mitigation Plan for the Martinez Regional Shoreline. The Commission may consider allowing Caltrans to use the excess mitigation as credit towards other projects that result in the placement of Bay fill such as the Benicia-Martinez Bridge Project. However, Commission authorization to create 17 acres of tidally-influenced, shallow water habitat at the Martinez Regional Shoreline in no way indicates or otherwise grants approval of mitigation for other projects. Such projects must be evaluated on and individual, case by case basis and the mitigation requirements determined after a thorough analysis of the project impacts.

Because EBRPD is the owner of the proposed mitigation site, it has agreed to become a partial co-applicant to Caltrans' permit application for the Carquinez Bridge Replacement Project. However, EBRPD is doing so only for the mitigation work at the Martinez Regional Shoreline. The Park District will not have any responsibility or liability for the Carquinez Bridge Replacement Project. Pursuant to a Memorandum of Agreement between the EBRPD, Caltrans and the City of Martinez, Caltrans will be responsible to fund all costs of the 1.3-acre mitigation requirement, prepare the plans, specifications and estimates, construct the mitigation, and monitor and provide corrective measures as deemed necessary by state and federal resource agencies.

In addition to the mitigation at the Martinez Regional Shoreline, Caltrans will revegetate all areas disturbed by construction in accordance with the mitigation measures in the Final EIS. Caltrans will design all landscape plans for the project in cooperation with local city and county agencies and any community groups who have an interest in the project. Caltrans will also work with Contra Costa County and the Carquinez Bridge Community Advisory Committee to develop a plan for the treatment of excess lands following construction.

Special Conditions II-C and II-D are necessary to ensure that the project will provide 1.3 acres of mitigation in perpetuity to offset the project impacts to Bay-related resources and endangered species and that the creation of shallow water habitat will be adequately designed and monitored to ensure long-term success. Therefore, as conditioned, the Commission finds that the amount and kind of mitigation is sufficient to offset the fill impacts of the Carquinez Bridge Replacement Project.

D. **Public Access.** Section 66602 of the McAteer-Petris Act states that existing public access to the shoreline and waters of the San Francisco Bay is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided. In part, the Bay Plan policies on public access state that whenever public access to the Bay is provided as a condition of development, on fill or on the shoreline, the access should be permanently guaranteed, should be consistent with the project and the physical environment, and should provide for the public's safety and convenience. In addition, public access should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, should permit barrier free access for the physically handicapped to the maximum feasible extent, should include an ongoing maintenance program and should be identified with appropriate signs.

In the project vicinity there is limited physical access to the Carquinez Strait. Access along the southern shoreline is limited by the UPRR right-of-way that runs along the shoreline, the C&H Sugar Refinery and the Crockett-Valona Sanitary District treatment plant. Limited point access is available from the Crockett Striped Bass Club and the Nantucket Restaurant, which are both private commercial establishments. On the north side of the bridges, the steep shoreline makes access to the Strait extremely difficult, although point access is available at the California Maritime Academy. Views up and down the Carquinez Strait from the shoreline are available from the Glen Cove development, California Maritime Academy, and Benicia State Recreation Area on the north, and from the community of Crockett and the Carquinez Strait Regional Shoreline Park on the south.

In considering whether a project provides the maximum feasible public access, the Commission should consider physical and visual access to the Bay shoreline, as well as the appearance and design of shoreline structures. To address the Commission's requirements for public access, Caltrans will construct approximately four acres of new public access including a bicycle and pedestrian lane on the new bridge, bicycle and pedestrian access facilities at each end of the bridge, two new vista points and additional vehicle staging and access facilities for the north vista point (see Exhibits M, N, O and P). All of the public access improvements will be disabled accessible. Caltrans or local park districts own all of the required public access areas and Caltrans will guarantee the availability of the public access areas. The specific public access amenities are as follows:

1. **Physical Access.** While the existing Carquinez Bridges offer no physical access for bicycles and pedestrians, the replacement bridge will provide a connection for both commuters and recreational users between the proposed Ridge and Bay Trails on the north shore and the proposed Carquinez Strait Regional Trail on the south. A new, twelve-foot-wide, bicycle and pedestrian lane will run the length of the replacement bridge, with access from San Pablo Avenue along the westbound off-ramp on the south end of the bridge and at-grade from Maritime Academy Drive and then along I-80 to the bridge on the north end. A retaining wall will be constructed to enable widening of I-80 to accommodate and support the bicycle and pedestrian lane in this segment.

   Within Carquinez Park, Caltrans will improve the existing paving for motor vehicle parking and provide picnic benches. Caltrans will also participate with the Greater Vallejo Recreation District in developing a trail head that will define the relationship of the Carquinez Park and the bicycle and pedestrian path to the existing and proposed Bay Trail system.

2. **Visual Access.** Caltrans proposes to provide visual access with two new vista points at both the north and south ends of the bridges. One vista point will be on the northern shoreline just west of the Carquinez Bridges in the approximate location designated on Bay Plan Map No. Two. The vista point will provide pedestrians and bicyclists with new view opportunities of the Carquinez Bridge and Crockett to the south, of San Pablo Bay to the west, and of the Carquinez Strait to the west and east. The other vista point will provide access for motor vehicles, bicycles and pedestrians, and will offer views of San Pablo Bay to the west, Mare Island to the north, and the Carquinez Strait and the Carquinez Bridge to the north and east.

   The two proposed vista points will provide an additional 1.24 acres of new public access. The northern vista point, which will be located near the PG&E transmission towers on the hillside overlooking the Carquinez Strait, will be accessible only by pedestrians and bicyclists because of the steep terrain. Caltrans has worked with the Greater Vallejo Recreation District to develop vehicular staging and improved recreational trail access to this vista point outside of the Commission's jurisdiction. Caltrans will construct a new all weather path that will close the gap between Carquinez Park on Sonoma Boulevard in the City of Vallejo and the new I-80 and Carquinez Bridge bicycle and pedestrian lane terminus at Maritime Academy Drive.

   The southern vista point will be on the southern shoreline in a location that serves local and regional trail planning. It will enhance the East Bay Regional Park District's trail that is planned to start at San Pablo Avenue near the vista point and continue to and along the UPRR tracks on the southern shore. ABAG's Bay Trail Plan proposes regional bicycle and pedestrian trails along San Pablo Avenue, the UPRR (formerly SP) right-of-way, and Carquinez Scenic Drive along the southern shoreline, and across the Strait continuing up State Route 29 to the north. Also, Contra Costa County is designing a restriping project for a Class II bike path that will run along San Pablo Avenue from Crockett to Rodeo. This southern vista point will provide parking for eight vehicles, including one handicapped vehicle space, three bus spaces, and spaces for four automobiles.

   In additional to the vista points, Caltrans has worked closely with the Commission's Design Review Board in developing the aesthetic design treatments for the bridge railing and the traffic barrier to ensure the maximum transparency and views for motorists, bicyclists and pedestrians. For continuity of design, the traffic barrier will run continuously from the bridge deck to the end of the bicycle and pedestrian lane at both ends of the project.

3. **Appearance and Design.** As a result of the Carquinez Bridge Replacement project, there will be several significant visual changes along the Carquinez Strait. Within the Strait, the project will introduce a new suspension bridge approximately 96 feet west of the existing 1927 bridge, and will remove the 1927 superstructure and towers following construction. The concrete pedestals of the existing northern and center pier foundations will remain at the height of the existing fender system, approximately twelve feet above the water line and will be incorporated into the ship protection systems. The north main tower associated with the new suspension bridge will not align with the towers and piers of the existing bridges, but will be off-set approximately 44.6 feet

closer to the shoreline. Caltrans has incorporated the recommendations of the Commission's Design Review Board to achieve design consistency between the superstructure and the approach structures, to bring the design details of the towers down to the railings and other bridge elements and to maximize motorist and pedestrian views from the bridge.

On the northern end of the bridges there will be visual changes from the removal of the Caltrans maintenance facility west of I-80 and the construction of a retaining wall up to 20 feet in height and 500 feet in length on the west side of I-80. On the southern end, visual changes will include the rebuilding of the on and off-ramps immediately south of the existing bridges, but in a somewhat different configuration than exists today. The eastbound onramp will be retrofitted. Other visual changes will include the addition of a pedestrian and bicycle ramp, and the removal of nearby housing.

Negative visual changes from the project will occur mainly in foreground views from residences in very close proximity. The project will make positive visual changes and substantially increase visual access to the Strait by introducing two new vista points, one on the north shoreline and one on the south, by removing the Caltrans maintenance facility and removing dilapidated pier structures along the shoreline.

The new bicycle and pedestrian facilities and vista points, in concert with regional trail planning, will enhance and increase the public's use of the Carquinez shoreline. The additional vehicle staging and bicycle and pedestrian access facilities that Caltrans will provide in conjunction with improvements at the Greater Vallejo Recreation District's Carquinez Park are expected to further increase usage of the northern vista point and the park. While the Design Review Board found that the project provides the maximum feasible public access consistent with the project, it has requested that Caltrans return for another review after project authorization so that it may evaluate the final design details for the bridge railing, the traffic barrier, bridge towers, the vista points and other public access improvements upon which the Board has not yet reached consensus. The review will not include structural elements, except as it may pertain to the bridge railings.

Special Conditions II-A, II-B and II-P are necessary to ensure that the project provides approximately four acres of new public access, including a vital pedestrian and bicycle link across the Carquinez Strait, and that the access is dedicated, maintained, ADA compliant, and designed consistent with the recommendations of the Commission's Design Review Board. Therefore, as conditioned, the Commission finds that the project provides the maximum feasible public access consistent with the project.

E. **Transportation.** In part, the Bay Plan policies on transportation state that if a route must be located across a waterway, the following provisions should apply: (a) the crossing should be placed on a bridge or in a tunnel, not solid fill; (b) structures should provide adequate clearance for commercial ships, Navy ships, and pleasure boats to have uninterrupted passage at all times; (c) toll plazas, service yards, or other ancillary features should not be located on new fill; (d) to provide maximum ultimate capacity on any new route that is allowed over or under a waterway

(and thus to minimize the number that have to be allowed in the Bay), the design of the route should, if feasible, accommodate future mass transit facilities and subsequent installation of automatic power and guidance elements for vehicles.

The replacement crossing of the 1927 span will be a suspension bridge. The only solid fill Caltrans will need is the approximately 8,890 cubic yards of fill covering approximately 24,000 square feet of Bay surface area for the pier foundations. In addition, Caltrans will need approximately 4,670 cubic yards of pile-supported fill covering approximately 15,460 square feet of Bay surface area to construct the ship protection structures around each pier footing. The United States Coast Guard has determined that the replacement bridge will not impact marine traffic. The existing toll plaza, which is located outside of the Commission's jurisdiction, will not be affected by the replacement project. The existing Caltrans service yard, which is also located outside of the Commission's jurisdiction, will be relocated to an inland area in the City of Vallejo. No other ancillary features will be located within the Commission's jurisdiction.

With the cooperation of local and regional transportation agencies, Caltrans evaluated the opportunities and constraints for providing light and heavy rail transit as part of the Carquinez Bridge Replacement Project. As a result, Caltrans included accommodations for future light rail transit (LRT) on the replacement bridge, which will be constructed to provide adequate structural capability as well as necessary grounding for stray electrical current (see Exhibit Q). Caltrans also estimated the cost and other requirements of accommodating rail transit across the Carquinez Strait in both light rail and heavy rail configurations.

To meet the requirements of Regional Measure One and respond to requests from local officials and BCDC staff, Caltrans studied the potential to accommodate future rail transit. A 1997 Solano Transportation Authority report concluded that the potential exists to connect Napa and Vallejo to the Capital Corridor and BART by light rail transit service via the new Carquinez Bridge. The Solano and Contra Costa County Transportation Authorities, the Congestion Management Agencies (Joint CMA) and the City of Vallejo requested that Caltrans determine: (a) whether providing stronger foundations and a superstructure on a new highway bridge for future rail transit warrants an incremental investment now to avoid an expected higher cost in the future; and (b) where best to secure funding for the incremental cost to accommodate future rail transit.

A rail connection across the Carquinez Bridge is not identified in the Metropolitan Transportation Commission's (MTC's) Regional Transportation Plan. Accommodation of future rail transit across the Carquinez Strait must be viewed in the context of future employment and population growth, future freeway congestion, and potential future ridership. MTC recently considered these issues in a study of the I-80 Corridor. The MTC study analyzed a number of highway and transit alternatives in the future year 2010 and concluded that a rail transit connection at the Carquinez Bridge was not the most desirable strategy within that time frame. Instead, the I-80 Corridor Study recommended increasing intercity rail service on the Capitol Corridor route, completion of the carpool lanes planned between the Bay Bridge and the Carquinez Bridge, and the enhancement of existing express bus services.

Caltrans conducted a 2025 patronage forecast to determine ridership if BART service were extended to Vallejo via a Carquinez Bridge connection. In contrast to the MTC transit ridership projections provided in the I-80 Corridor Study, Caltrans used an update of the incremental computer model that BART used for its 1992 Extension Service Plan Study. The results indicated that if BART were extended to two stations in Vallejo, there will be over 17,700 daily and 2,700

peak hour trips over the Carquinez Strait on Bart in 2025. Adjusted for growth between 1995 and 2025, these daily volumes are about 85 percent of the daily on and offs at the El Cerrito del Norte station in 1995. In addition to forecasting future rail ridership, Caltrans worked with the local agencies, Solano Transportation Authority, Contra Costa Transportation Authority, and MTC in developing the economic studies to determine the feasibility of accommodating future rail across the Carquinez Strait.

1. **Light Rail on the Replacement Bridge.** The replacement bridge will include three mixed-flow traffic lanes in the westbound direction, a carpool lane, two standard shoulders, and a pedestrian and bicyclist lane. Accommodation for future light rail transit on a replacement bridge within the proposed bridge width of 82 feet will require an additional investment at the time of bridge construction and modifications to the replacement bridge when future rail service is initiated. Since LRT structural design requirements for the Carquinez Bridge Project are similar to those for highway use, the only additional expense required now to accommodate future light rail will be to ground the structural steel to avoid stray electrical current in the bridge. According to Caltrans, the incremental cost to provide this modification will be approximately $250,000. In light of this finding, the Solano Transportation Authority adopted a resolution supporting this improvement to accommodate future LRT on the replacement Carquinez Bridge. Caltrans has now included this provision for LRT in the replacement bridge. The resolution also requested that MTC and the California Transportation Commission (CTC) support this approach. At such time that LRT is placed on the bridge, there would be additional costs to install the rails and associated facilities.

   It is important to note that adding rail to accommodate LRT on the replacement bridge would take space away from other traffic uses. Standard width lanes and shoulders would have to be narrowed to add one rail track. To add two rail tracks, standard width lanes and shoulders would have to be narrowed and a travel lane would have to be eliminated. At this time, Caltrans cannot assure future approval of such roadway reductions. It is possible that transportation agencies would request the elimination of the pedestrian and bicycle lane to accommodate LRT.

2. **Rail on the Existing 1927 Span.** Caltrans determined that accommodating future rail transit on the existing 1927 bridge is infeasible for a number of reasons. First, the seismic design and deflection criteria for heavy rail are extremely stringent and would be difficult to meet. Second, costs to accommodate a single heavy rail track would probably add an additional $25 million or more to the $120-million cost of preserving and retrofitting the bridge. Caltrans believes that strengthening the bridge to accommodate two rail tracks would be physically infeasible. Further, BART and other transit operators are unlikely to find a 70-year old bridge acceptable for a new rail line, and are likely to seek a newer bridge for that purpose. A major consideration is that retrofit of the 1927 bridge will not prevent a major seismic event from causing substantial damage requiring extended or even permanent bridge closure. Even without a major earthquake, the retrofit strategy will extend the bridge's service life by only about 30 years, at which point the bridge will have to be replaced or retrofitted again.

3. **Heavy Rail on a New Span.** The replacement bridge on the proposed western alignment will not preclude the addition of a separate heavy rail transit bridge on the site of the existing 1927 bridge when needed. Following removal of the 1927 bridge superstructure and towers, adequate space will be left for BART to build a separate heavy rail bridge between the 1958 bridge and the new suspension bridge. Caltrans estimates the cost of a heavy rail transit bridge to be approximately $134 million in 1996 dollars (about $37 million for the foundation alone). Heavy rail on a separate new bridge is consistent with the desires of BART and the conclusions of the I-80 Corridor Study by MTC that call for rail to run in the median of I-80. Given that it will be quite some time before potential heavy rail patronage warrants extension of BART across the Carquinez Strait and given the very substantial costs involved in extending BART that far, Caltrans believes that accommodating LRT on the replacement bridge and providing opportunities for heavy rail on a separate new bridge is the most prudent long-term strategy.

   Caltrans and other transit agencies have not identified any project funding to accommodate a future rail transit connection across a replacement bridge other than the LRT provisions included in the Carquinez Bridge Project. The decision to implement any other rail accommodation option will be based on funding and on the time required to accomplish the necessary design and construction activities.

   Because the bridge design will minimize fill in the Bay, will provide adequate clearance for waterborne vessels, will not impact navigational safety, will include improvements to accommodate light rail transit on the replacement bridge, and will reserve an area between the replacement bridge and the 1958 bridge for a future heavy rail bridge, the Commission finds that the project is consistent with Bay Plan policies on Transportation.

F. **Dredging.** In part, the Bay Plan policies on dredging state that dredging should be authorized when the Commission can find that: (a) the applicant has demonstrated that the dredging is needed to serve a water-oriented use or other public purpose; (b) the materials to be dredged meet the water quality requirements of the San Francisco Regional Water Quality Control Board; and (c) important fisheries and Bay natural resources will be protected. In addition, the disposal of dredged materials should be encouraged in non-tidal areas where the materials can be used beneficially, or in the ocean.

Caltrans proposes to dredge a total of 14,000 cubic yards of material over an approximately 6,460-square-foot area to construct the new bridge tower foundations and install the fender piles. The replacement bridge, which is a water-oriented use under the McAteer-Petris Act and the *San Francisco Bay Plan*, is necessary to meet current seismic and traffic safety requirements. No dredging will be required for the access trestles. Caltrans performed testing and analysis of the dredge sediments under the requirements of the Dredge Materials Management Office. Caltrans completed the Investigation Report in December, 1996. Although the report concludes that the materials will be appropriate for disposal at the approved, Carquinez Strait aquatic disposal site, Caltrans will dispose of the materials at an approved upland site consistent with the Regional Water Quality Control Board's 401 permit. Caltrans received its 401 permit from the RWQCB on April 20, 1998. Caltrans may retain some excavated material for reuse as backfill.

The USACE is currently processing Caltrans' Section 404 (Clean Water Act) permit. Caltrans has concluded its formal consultation with the USFWS and the NMFS under Section 7 of the Endangered Species Act and has agreed to construct in shallow water habitat only between December 1 through March 31 to minimize impacts to the Delta smelt, the Sacramento splittail, the winter-run chinook salmon and the Central valley steelhead. The dredging will occur as follows:

1. **Transition Pier.** Placement of the south side transition pier foundation will be accomplished within a sheet pile coffer dam. Excavation of soil and rock from within the sheet pile will be performed by back hoe or clam shell. A concrete seal slab will be laid at the bottom of the excavation prior to placing the foundation reinforcement and concrete. Caltrans will dredge approximately 2,400 cubic yards of soil and rock from an approximately 2,150-square-foot area for the transition pier.

2. **Main Tower Foundations.** The foundations for each of the two main towers will be placed using a pre-cast concrete footing form that contains a template for the placement of the footing piles. The form will be floated out to the location of each pier foundation and twelve, ten-foot-diameter hollow steel shell piles per tower footing will be pushed through the template and Bay mud to the rock below. Two, nine-foot rock sockets will be drilled past the tip of the steel casings. The concrete footing form will serve as a stationary floating work platform. Caltrans will then extract the soil and rock from the hollow piles with a drill rig, rotary augers, and/or full face rotary bit drill or similar equipment. Any soil, rock or concrete that spills during extraction operations will be caught and contained in the floating footing form for collection and removal. At the south tower only, it will be necessary to excavate about seven feet down to enable the footing form to be floated into position. Excavation will be performed by clam shell or other similar equipment. Combined, Caltrans will dredge approximately 10,100 cubic yards of soil and rock from an approximately 3,230-square-foot area for both main tower foundations.

3. **Fenders.** Placement of approximately 210 piles for the main pier fender systems will require dredging. Caltrans will place approximately 30 piles for the north side fender and approximately 180 piles for the south side. Approximately four of these will be five-foot-diameter hollow steel shell piles and about 32 will be 2-1/2-foot-diameter hollow steel shell piles, and 174 will be 1.3-foot, closed-ended pipe piles. Dredged materials will be extracted from the hollow piles using rotary augers and/or full face rotary bit drill or similar equipment. Caltrans will dredge approximately 1,500 cubic yards of material from an approximately 1,080-square-foot area for the north and south fenders.

   Special Condition II-F is necessary to ensure that the dredging does not adversely impact Bay-related resources and endangered species and that the dredge material is disposed of at an approved upland location. Therefore, as conditioned, the Commission finds that the project is consistent with the Bay Plan policies on dredging.

G. **Review Boards.** Both the Commission's Engineering Criteria Review Board and its Design Review Board evaluated the project on several occasions.

1. **Engineering Criteria Review Board.** The Commission's Engineering Criteria Review Board (ECRB) evaluated the proposed engineering criteria for the project on March 12, 1997 and June 11, 1998 and concluded that Caltrans' design criteria for seismic safety were adequate.

2. **Design Review Board.** The Commission's Design Review Board evaluated the proposed project on four occasions. The Board's review focused on the physical and visual access that the project would provide. Although the Board found that the project provides the maximum feasible public access consistent with the project, it requested that, after the Commission approves the project, Caltrans return to the Board so that it could review the final design details for the bridge railing, traffic barriers, towers, view points and other public access improvements upon which the Board has not yet reached consensus. The review will not include structural elements, except as it may pertain to the bridge railings.

   Special Condition II-B-1 is necessary to ensure that Caltrans returns to the Board for final design review.

H. **Environmental Review.** Pursuant to the California Streets and Highways Code Section 180.2 and the California Environmental Quality Act (CEQA) Section 21080, the Carquinez Bridge replacement project is statutorily exempt from the requirement to prepare an environmental impact report. CEQA Section 21080, subdivision (b) sets forth the types of activities that are excluded from CEQA and paragraph (4) of this subdivision specifically includes actions necessary to prevent or mitigate an emergency. According to the California Streets and Highways Code, as amended, the structural modification of an existing highway structure or toll bridge (Section 180.2(a)); and the replacement of a highway structure or toll bridge within, or immediately adjacent to, an existing right-of-way (Section 180.2(b)) shall be considered to be activities under subdivision (b), paragraph (4) of CEQA. Caltrans has concluded that the Carquinez Bridge Replacement Project meets the definition of Section 180.2(b)--that it is a "specific action necessary to prevent or mitigate an emergency"--and, therefore, does not require any environmental review under CEQA.

Nevertheless, pursuant to the National Environmental Protection Act and federal permitting requirements, Caltrans prepared an Environmental Impact Statement (EIS) for the proposed project. The United States Department of Transportation, Federal Highway Administration, and Caltrans, in cooperation with the United States Coast Guard, published the Final EIS in January of 1998, and the approved the Record of Decision in March of 1998. The Final EIS identified several project impacts including the displacement of residential units, the loss of wetlands, new Bay fill, noise, use of historic structures and visual effects. The EIS also imposed several mitigation measures including habitat creation, historic recordation, and aesthetic design of the new bridge and roadway structures.

I. **Public Trust.** The approximately 5.2 acres of suspended, solid and pile-supported fill for the bridge is for a water-oriented use and to improve public access as defined by Section 66605 of the McAteer-Petris Act. Fill for water-oriented uses and public access is consistent with the public trust. Thus, the Commission finds that the fill is consistent with the public trust.

J. **Conclusion.** For all of the above reasons, the benefits of the proposed project clearly exceed the detriment of the loss of water areas and the project will provide the maximum feasible public access to the Bay and its shoreline. Therefore, the project is consistent with the *San*

Francisco Bay Plan, the McAteer-Petris Act, the Commission's Regulations, and the Commission's amended management program for the San Francisco Bay segment of the California coastal zone.

IV. Standard Conditions

A. All required permissions from governmental bodies must be obtained before the commencement of work; these bodies include, but are not limited to, the U. S. Army Corps of Engineers, the State Lands Commission, the Regional Water Quality Control Board, and the city and/or county in which the work is to be performed, whenever any of these may be required. This permit does not relieve the permittees of any obligations imposed by State or Federal law, either statutory or otherwise.

B. The attached Notice of Completion shall be returned to the Commission within 30 days following completion of the work.

C. Work must be performed in the precise manner and at the precise locations indicated in your applications as such may have been modified by the terms of the permit and any plans approved in writing by or on behalf of the Commission.

D. Work must be performed in a manner so as to minimize muddying of waters, and if diking is involved, dikes shall be waterproof. If any seepage returns to the Bay, the permittees will be subject to the regulations of the Regional Water Quality Control Board in that region.

E. The rights derived from this permit are assignable as provided herein. An assignment shall not be effective until the assignee shall have executed and the Commission shall have received an acknowledgment that the assignee has read and understood the applications for this permit and the permit itself and agrees to be bound by the terms and conditions of the permit, and the assignee is accepted by the Executive Director as being reasonably capable of complying with the terms of the permit.

F. Unless otherwise provided in this permit, all the terms and conditions of this permit shall remain effective for so long as the permit remains in effect or for so long as any use or construction authorized by this permit exists, whichever is longer.

G. Unless otherwise provided in this permit, the terms and conditions of this permit shall bind all future owners and future possessors of any legal interest in the land and shall run with the land.

H. Unless otherwise provided in this permit, any work authorized herein shall be completed within the time limits specified in this permit, or if no time limits are specified in the permit, within six years. If the work is not completed by the date specified in the permit, or if no date is specified, within three years from the date of the permit, the permit shall become null and void. If a permit becomes null and void for a failure to comply with these time limitations, any fill placed in reliance on this permit shall be removed by the permittees or its assignee upon receiving written notification by or on behalf of the Commission to remove the fill.

I. Except as otherwise noted, violation of any of the terms of this permit shall be grounds for revocation. The Commission may revoke any permit for such violation after a public hearing held on reasonable notice to Caltrans or its assignee if the permit has been effectively assigned. If the permit is revoked, the Commission may determine, if it deems appropriate, that all or part of any fill or structure placed pursuant to this permit shall be removed by Caltrans or its assignee if the permit has been assigned.

J. This permit shall not take effect unless the permittees execute the original of this permit and return it to the Commission within ten days after the date of the issuance of the permit. No work shall be done until the acknowledgment is duly executed and returned to the Commission.

K. Any area subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission under either the McAteer-Petris Act or the Suisun Marsh Preservation Act at the time the permit is granted or thereafter shall remain subject to that jurisdiction notwithstanding the placement of any fill or the implementation of any substantial change in use authorized by this permit.

L. Any area not subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission that becomes, as a result of any work or project authorized in this permit, subject to tidal action shall become subject to the Commission's "bay" jurisdiction up to the mean high tide line.

M. Unless the Commission directs otherwise, this permit shall become null and void if any term, standard condition, of special condition of this permit shall be found illegal or unenforceable through the application of statute, administrative ruling, or court determination. If this permit becomes null and void, any fill or structures placed in reliance on this permit shall be subject to removal by Caltrans or its assignee if the permit has been assigned to the extent that the Commission determines that such removal is appropriate. Any uses authorized shall be terminated to the extent that the Commission determines that such uses should be terminated.

Executed at San Francisco, California, on behalf of the San Francisco Bay Conservation and Development Commission on the date first above written.

WILL TRAVIS
Executive Director
San Francisco Bay Conservation and
Development Commission

WT/JGJ/ra
cc: U. S. Army Corps of Engineers, Attn.: Regulatory Functions Branch
San Francisco Bay Regional Water Quality Control Board,
Attn.: Certification Section
Environmental Protection Agency, Attn.: Mike Monroe-W-3-3

* *

Receipt acknowledged, contents understood and agreed to:

Executed at Oakland, CA

Caltrans
Applicant

On Nov. 23, 1998

By: Denis Mulligan
District Division Chief
Title

* *

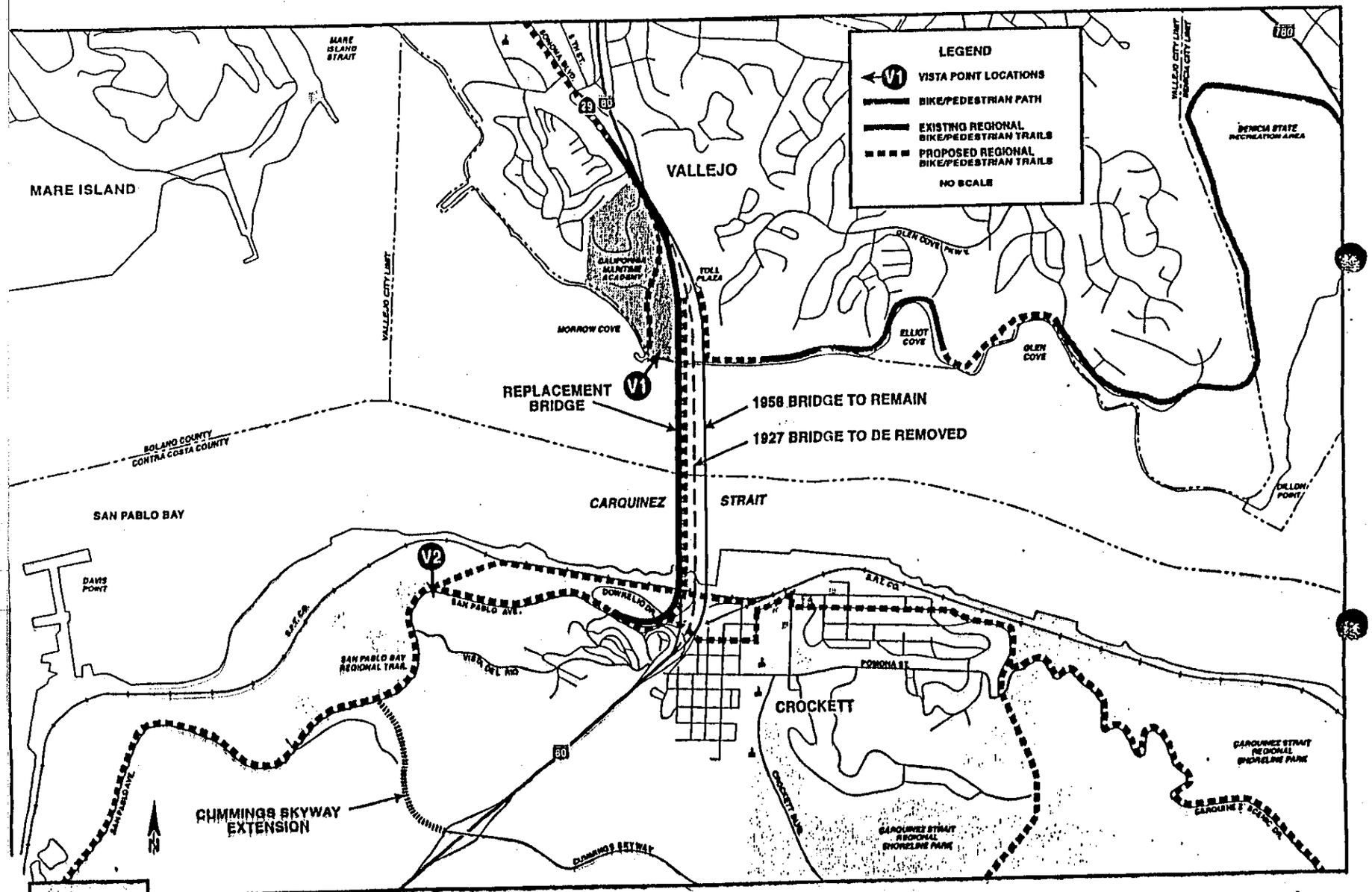
Receipt acknowledged, contents understood and agreed to:

Executed at OAKLAND, CA

East Bay Regional Park Dist.
Applicant

On Dec. 1, 1998

By: Pat O'Brien
General Manager
Title



CALTRANS

CARQUINEZ BRIDGE PROJECT

Public Access Plan and Vista Point Locations

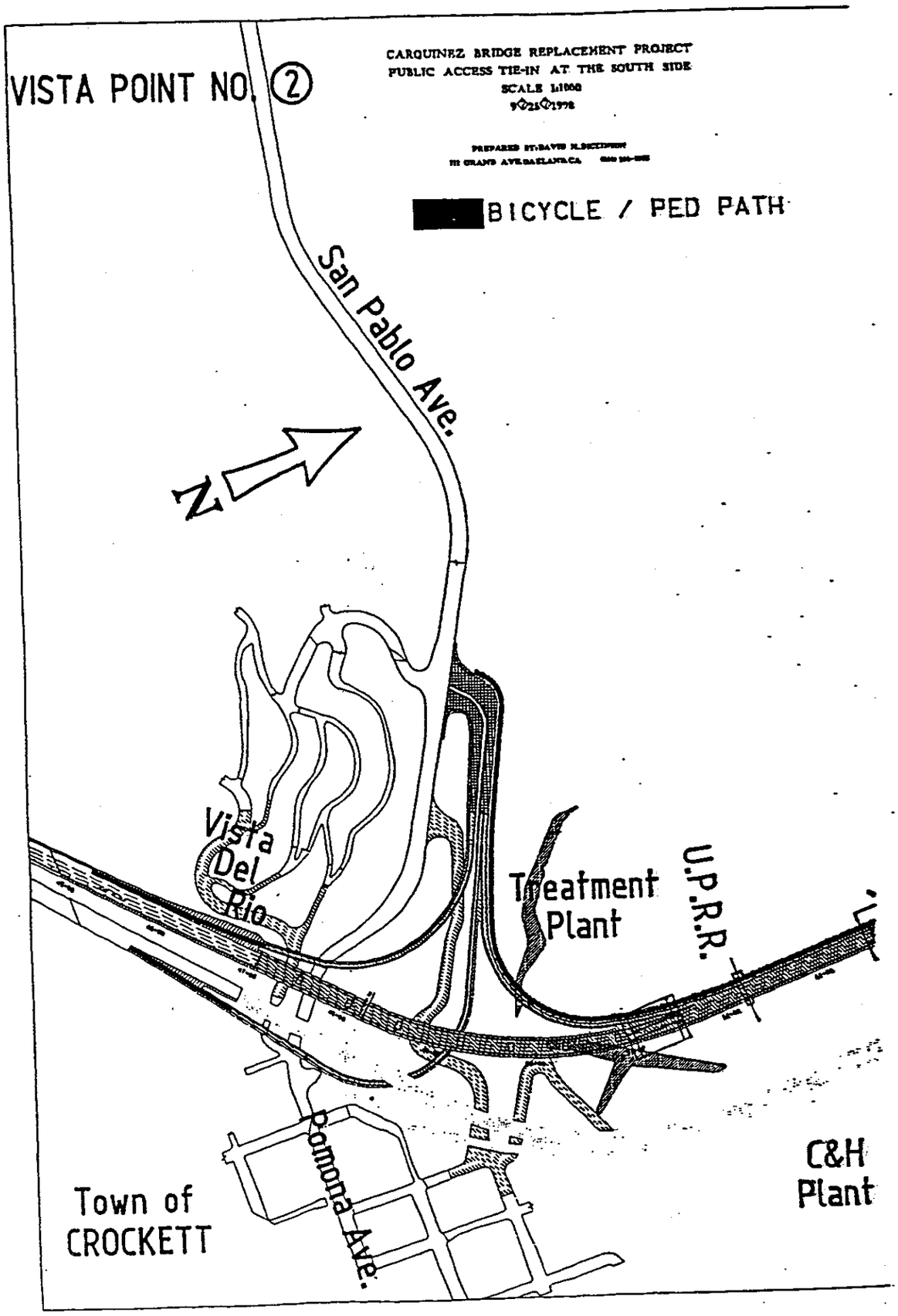

VISTA POINT NO. 2
CARQUINEZ BRIDGE REPLACEMENT PROJECT
PUBLIC ACCESS TIE-IN AT THE SOUTH SIDE
SCALE 1:1000
BICYCLE / PED PATH
San Pablo Ave.
N
Vista Del Rio
Treatment Plant
U.P.R.R.
C&H Plant
Town of CROCKETT
Pomona Ave.

EXHIBIT B

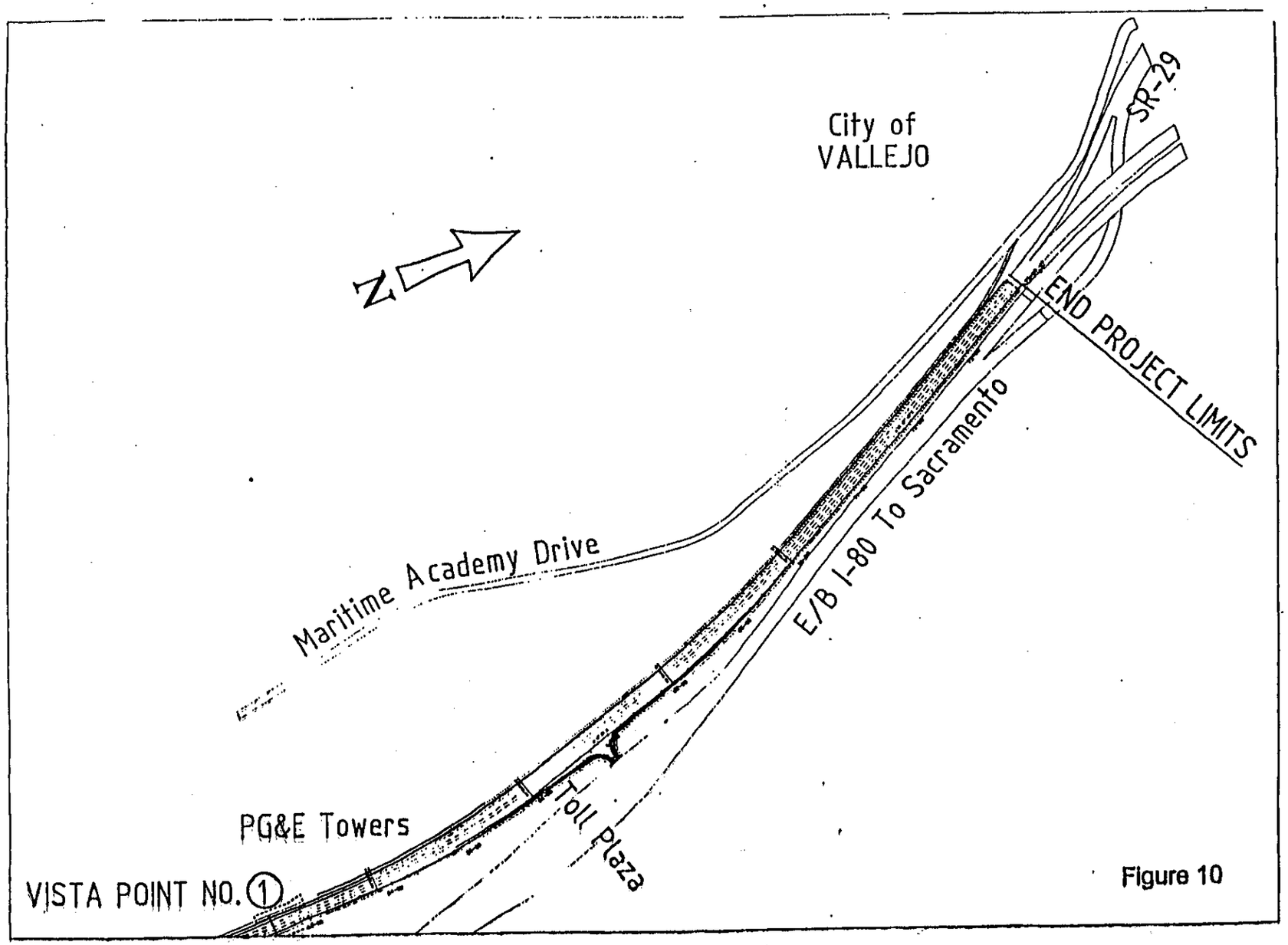
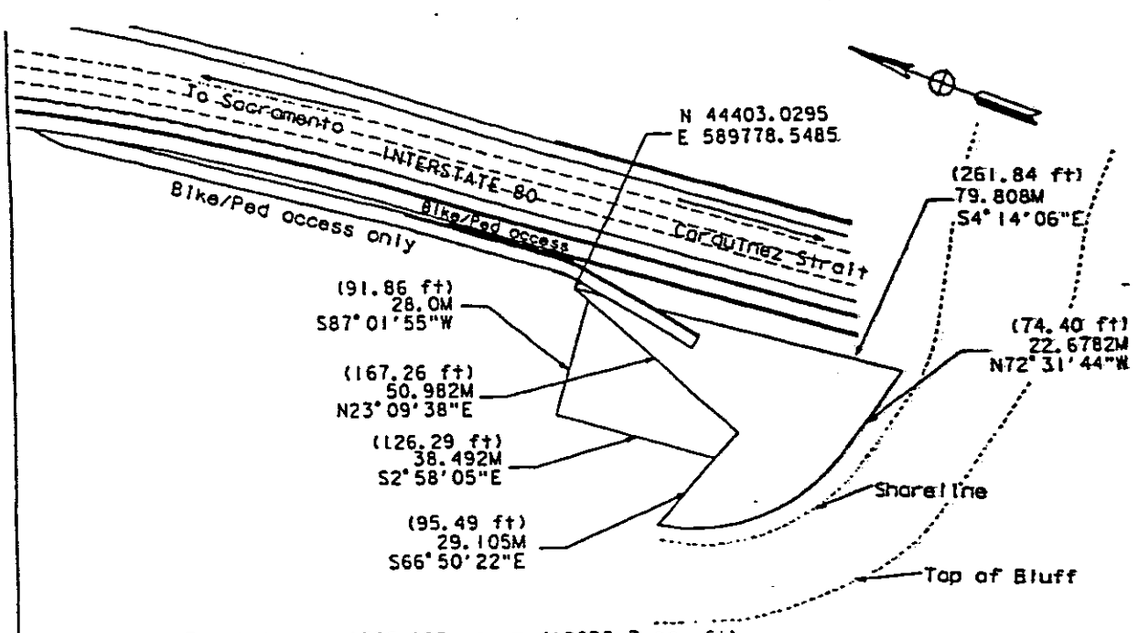

City of
VALLEJO
SR-29
N
END PROJECT LIMITS
E/B I-80 To Sacramento
Maritime Academy Drive
Toll Plaza
PG&E Towers
VISTA POINT NO. 1

Figure 10

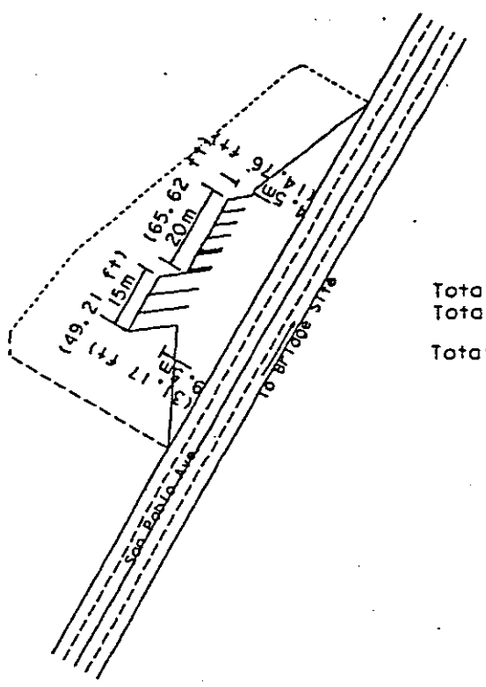


Total Area = 1758.995 sq. m (18933.7 sq. ft)
Total Area for Parking = 0 sq. m (0 sq. ft)

NORTH VISTA POINT DETAIL, V1

*Steep terrain will allow Bike/Ped access only

NO SCALE



Total Area = 3274.680 sq m (35248.4 sq. ft)
Total Paved Area = 1068.053 sq. m
(11496.4 sq. ft)
Total Number of Parking Spaces = 8

SOUTH VISTA POINT
DETAIL, V2

NO SCALE

CARQUINEZ BRIDGE
REPLACEMENT PROJECT

LOCATION OF VISTA POINTS

NO SCALE

9/25/98

Figure

Prepared by David M. Dickinson, 111 Grand Ave, Oakland, CA (510)286-5823