DEPARTMENT OF TRANSPORTATION
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April 20, 2004

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Addendum No. 21

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in SAN FRANCISCO COUNTY IN SAN FRANCISCO FROM 0.6 KM TO 1.3 KM EAST OF THE YERBA BUENA TUNNEL EAST PORTAL.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on May 26, 2004.

This addendum is being issued to revise the Project Plans, the Notice to Contractors and Special Provisions, and the Proposal and Contract.

Project Plan Sheets 12, 13A, 19, 30, 46, 47, 48, 50, 51, 53, 54, 55, 58, 59, 62, 64, 65, 69, 70, 72, 74, 75, 75A, 75B, 77, 82, 87, 88, 92, 93, 119, 122, 123, 124, 125, 126, 127, 142, 152, 160, 161, 162, 163, 166, 167, 169, 170, 190, 199, 203, 207, 210A, 211, 212, 213, 216, 217, 219, 220, 226, 238, 243, 247, 250, 260, 269, 270, 307, 308, 309, 310, 312, 313, 314, 319, 320, 355, 357, 358, 359, 376, 378, 409, 410, 414, 437, 472, 502, 526, 529, 534, 539, 541, 554, 556, 557, 558, 581, 584, 585, 622, 634, 638, 639, 641, 643, 650, 651, 654, 655, 687, 690, 721, 723, 724, 731, 738, 739, 740, 741, 742, 750, 751, 766, 770, 785, 786, 790, 791, 792, 793, 801, 805, 806, 807, 810, 812, 814, 816, 817, 838, 856, 857, 858, 860, 861, 863, 868, 871, 874, 880, 881, 883, 885, 888, 892, 895, 921, 923, 925, 929, 930, 933, 934, 935, 936, 939, 951, 1024, 1025, 1026, 1046, 1047, 1048, 1096, and 1097 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheets 13C, 75C, 75D, 75E, 75F, 75G, 75H, 75I, 247A, 380C, and 936A are added. Half-sized copies of the added sheets are attached for addition to the project plans.

Project Plan Sheet 20 is deleted.

In the Special Provisions, Section 2-1.03, "PRE-AWARD INFORMATION/QUESTIONNAIRE," the following paragraph is added after the first paragraph:

> "For the following items, bidders shall submit a MFSQA of each facility considered for use by the Contractor or any subcontractor, supplier, or fabricator, including those of all lower subcontracted tiers, to prepare materials for incorporation into the project for which a Department audit is required, with the bid. The MFSQA shall comply with the requirements of "Audits," of these special provisions. Manufacturers and suppliers sufficient to perform the work shall be identified prior to bid opening.
>
> FURNISH STRUCTURAL STEEL (BRIDGE) (TOWER)
> FURNISH STRUCTURAL STEEL (BRIDGE) (ORTHOTROPIC BOX GIRDER)

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FURNISH STRUCTURAL STEEL (BRIDGE) (SADDLE)
FURNISH SUSPENDER SYSTEM
FURNISH PWS CABLE SYSTEM
FURNISH AND INSTALL SHEAR KEY (PIER E2)
CLEAN AND PAINT STRUCTURAL STEEL (TOWER)
CLEAN AND PAINT STRUCTURAL STEEL (ORTHOTROPIC BOX GIRDER)"

In the Special Provisions, Section 4, "BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES," is revised as attached.

In the Special Provisions, Section 5-1.17, "COST REDUCTION INCENTIVE PROPOSALS," is revised as attached.

In the Special Provisions, Section 5-1.20, "AREAS FOR CONTRACTOR'S USE," is revised as attached.

In the Special Provisions, Section 5-1.27, "PAYMENTS," the last three paragraphs are revised as follows:

"Materials furnished but not incorporated into the work in fenced areas with locked gates or in locked warehouses will be eligible for partial payment if the Contractor furnishes evidence satisfactory to the Engineer that its storage is subject to or under the control of the Department and that it has been designated or fabricated specifically for this project and is of such character that it is not adaptable to any other use. Such materials are not required to be stored within the State of California.

For the purpose of making partial payments for materials furnished but not incorporated in the work pursuant to these special provisions and Section 9-1.06, "Partial Payments," of the Standard Specifications, the total amount of 25% of the executed contract price for each monthly pay estimate shall be deemed to be the maximum value which will be recognized for progress payment purposes.

To be eligible for these payments, the Contractor shall furnish an advance payment bond, first demand bank guarantee, or combination of no more than two thereof to secure the value of potential partial payments for material furnished but not incorporated in the work pursuant to these special provisions and Section 9-1.06, "Partial Payments," of the Standard Specifications. The advance payment bond or first demand bank guarantee shall be in a sum not less than the amount requested for payment by the Contractor , and shall, at a minimum, match the terms of the sample advance payment bond or first demand bank guarantee forms identified in "Project Information" in these special provisions. The value of the advance payment bond or first demand bank guarantee shall not be adjusted more than once per year. The Contractor shall certify in writing to the Engineer that the proposed bonding company or bank complies with these special provisions. The bonding company shall be licensed to do business in the State of California, and shall be certified to write a bond equal to 30% of the executed contract price by the United States Department of the Treasury. The bank shall have United States operations with a minimum rating of "A-" by either AM Best or Standard & Poor. All alterations, extensions of time, extra and additional work, and other changes authorized by these special provisions or any part of the contract may be made without securing the consent of the surety of the bond or the bank."

In the Special Provisions, Section 5-1.31, "ENVIRONMENTALLY SENSITIVE AREAS (GENERAL)," is revised as attached.

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In the Special Provisions, Section 8-4.01, "AUDITS," the second paragraph is revised as follows:

"The Contractor shall submit a MFSQA of each facility considered for use by the Contractor or any subcontractor, supplier, or fabricator, including those of all lower subcontracted tiers, to prepare materials for incorporation into the project for which a Department audit is required. Minor component materials and tools supplied which are incidental to the work will not require a MFSQA or be subject to a Department audit, as approved by the Engineer. A copy of the MFSQA form is included as a Material Information Handout in "Project Information," of the special provisions. The form is also available at the following website:

http://www.dot.ca.gov/hq/esc/Translab/smbpubs.htm"

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," is revised as attached.

In the Special Provisions, Section 10-1.11, "PROGRESS SCHEDULE (CRITICAL PATH METHOD)," subsection "BASELINE SCHEDULE," the fourth paragraph is revised as follows:

"State owned float shall be considered a resource for the exclusive use of the State. The Engineer may accrue State owned float by the early completion of review of any type of required submittal when it saves time on the critical path. The Engineer will document State owned float by directing the Contractor to update the State owned float activity on the next schedule update. The Contractor shall include a log of the action on the State owned float activity and include a discussion of the actions in the narrative report. The Engineer may use State owned float to mitigate past or future State delays by offsetting potential time extensions."

In the Special Provisions, Section 10-1.16, "WORKING DRAWING SUBMITTAL SCHEDULE," the sixth paragraph is revised as follows:

"No compensation will be allowed for any costs incurred or for delay in completing the work resulting from rejected working drawing submittal. Pursuant to Item 'H,' above, of the working drawing submittal schedule, should the Contractor submit several related working drawing submittals with review times on the controlling/critical path, or an additional working drawing submittal for review before the review of a previous submittal has been completed, the time to be provided for the review of any submittal in the sequence shall be not less than the review time specified for that submittal, plus 7 days for each submittal of higher priority which is still under review, unless specified otherwise in these special provisions."

In the Special Provisions, Section 10-1.36, "TEMPORARY TOWERS," subsection "SCHEDULE OF VALUES," is added after the subsection "GENERAL":

"**SCHEDULE OF VALUES**

The Contractor shall submit, for approval by the Engineer, a schedule of values detailing the cost breakdown of the contract lump sum item for furnish and remove temporary towers. The schedule of values shall reflect the items, work, quantities and costs required to furnish, erect, and remove temporary towers. The Contractor shall be responsible for the accuracy of the quantities and cost used in the schedule of values.

The sum of the costs for the items of work listed in the schedule of values shall equal the contract lump sum price for furnish and remove temporary towers.

No adjustment in compensation will be made in the contract lump sum price paid for furnish and remove temporary towers due to differences between the quantities shown in the schedule of values furnished by the Contractor and the quantities required to complete the work as shown on the plans and specified in these special provisions.

The schedule of values shall be submitted to the Engineer within the time required for submittal of the Interim Baseline Schedule, as specified in "Progress Schedule (Critical Path)," of these special provisions. When approved in writing by the Engineer, the schedule of values will be used to determine progress payments for furnish and remove temporary towers during the progress of the work. No progress payment for furnish and remove temporary towers will be made until the schedule of values are approved in writing by the Engineer.

The schedule of values shall categorize the work by tower location and shall quantify the values into the following progress payment milestones:

A. Completion of approved temporary tower working drawings
B. Furnish temporary tower material
C. Erect temporary tower
D. Remove temporary tower

The Contractor may propose additional milestones for progress payment subject to approval by the Engineer."

In the Special Provisions, Section 10-1.36, "TEMPORARY TOWERS," subsection "TEMPORARY TOWER DESIGN," the following paragraph is added after the first paragraph:

"The temporary towers shall be classified as "building and other structures designated as essential facilities," per ANSI ASCE 7-95."

In the Special Provisions, Section 10-1.36, "TEMPORARY TOWERS," subsection "TEMPORARY TOWER DESIGN," subsection "Seismic Design Loads," is revised as follows:

"**Seismic Design Loads**

Temporary towers shall be designed to resist horizontal seismic loads as defined below in combination with the appropriate vertical loads covering all significant construction stages. The seismic analyses shall consider the interactions of the temporary towers with the bridge superstructure at all appropriate stages. Seismic design loads need not be considered during lifting operations. The seismic performance of the temporary towers shall be such that the bridge superstructure is undamaged and not stressed excessively. The temporary towers shall remain serviceable and capable of carrying the design loads. Tower vertical load carrying members and connections shall remain elastic. Structural steel of the bracing members may yield. Extreme fibers of the structural steel piles may yield to a maximum of 2% strain.

Analysis and design calculations shall correctly incorporate all contributing mass, stiffness, loading and energy dissipation characteristics of the temporary towers including geotechnical and structural components and hydrodynamic added mass. P-delta effects shall be considered in the analyses.

Modal spectral analysis with sufficient number of modes to capture at least 90% of the mass of the structure shall be used to establish the peak seismic displacements. Longitudinal and transverse static push-over analyses shall be used to verify that temporary towers capacities exceed the demands corresponding to 1.50 times the peak seismic displacements. Pushover analyses of the temporary towers shall be carried out based upon displaced shapes defined, at a minimum, as the primary transverse and longitudinal mode shapes. The mode shapes shall be determined from modal analyses of the temporary towers and the supported bridge superstructure.

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Seismic demands shall be determined for two independent horizontal loading conditions in perpendicular directions. The directions are defined to be in the longitudinal axis of the bridge and the transverse axis of the bridge. In order to account for directional uncertainty of earthquake motions, the demands resulting from analyses of the two perpendicular seismic loading directions shall be combined into two load cases as follows:

EQ load case 1 1.0 longitudinal and 0.3 transverse
EQ load case 2 0.3 longitudinal and 1.0 transverse

Acceleration levels applied to the temporary towers shall be generated using the Acceleration Response Spectrum shown on plan sheet "Construction Sequence 1A." For the purpose of practicality, the response spectrum can be used for all locations along the length of the self-anchored suspension bridge as input motion. These lateral loadings supersede the 0.02 g lateral load requirement in the California Department of Transportation Falsework Manual.

These Seismic Design Loads are the minimum required during construction. The Contractor may elect to design and construct the temporary towers for a greater level of loading. No additional compensation will be allowed nor extension of time will be granted due to the Contractor's use of loading that exceeds the required minimum.

Within 90 days of contract award, the Contractor shall hold a meeting between the Engineer, the Contractor and the Contractor's designer of the temporary towers. The Contractor shall present to the Engineer preliminary temporary tower design and details and methods of analyses he proposes to use."

In the Special Provisions, Section 10-1.36, "TEMPORARY TOWERS," subsection "MEASUREMENT AND PAYMENT," the second paragraph is revised as follows:

"The contract lump sum price paid for furnish and remove temporary towers, shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in furnishing and removing temporary towers, including designing, constructing, maintaining, and removing temporary towers, furnishing and installing temporary tower foundations, temporary tower foundation installation submittals, monitoring and redriving piles, necessary grade adjustment and displacement monitoring, as shown on the plans, and all work involved with slope restoration, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer."

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "WORKING DRAWINGS," the following paragraph is added after the first paragraph:

"Attention is directed to subsection "FABRICATION," subsection "Fabrication/Erection Procedure and Mock-Ups," of this section. Approval of working drawings for components where mock-ups are required will be contingent on successful completion of the mock-up and approval of the fabrication and erection procedure and nondestructive examination procedure. The Contractor shall revise and resubmit to the Engineer for approval working drawings affected by changes resulting from successful completion of the mock-ups, unless otherwise approved by the Engineer."

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In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "SEA TRANSPORTATION," is revised as follows:

"**SEA TRANSPORTATION**

Steel segments for the tower, box girder, crossbeams and bikepath shall be adequately supported, fastened and braced during transportation to prevent damage and fatigue.

At least sixty days prior to loading the segments for shipment, the Contractor shall submit to the Engineer a transportation plan for the steel segments. The transportation plan shall include details of the support and tie down system, analysis and design calculations for the segments, the interaction between the vessel and the segments and the assumed sea conditions used to develop the transportation plan. At a minimum, sea conditions shall include wave height, speed, frequency and direction, wind speed and direction and the route to be taken by the transport vessel. In addition, the transportation plan submittal shall include a letter of certification signed by the fabricator of the steel segments certifying that he has reviewed and concurs with the transportation plan. The calculations shall show that the segment stresses are within the allowable stresses during construction as specified in Section 2.8 of the San Francisco-Oakland Bay Bridge Design Criteria in the Information Handout and the fatigue stress levels are within the constant-amplitude fatigue threshold per AASHTO Bridge Design Code. The transportation plan shall be signed by a licensed Naval Architect or a certified Naval Architect with a graduate degree in Naval Architecture and minimum 5 years of qualifying professional experience practicing Naval Architecture.

Upon arrival at the project site, the Contractor shall submit to the Engineer a daily log of actual sea conditions corresponding to those used in developing the transportation plan for the route taken by the transport ship as published by the National Oceanic and Atmospheric Administration. In addition, the submittal shall include the route taken by the transport ship and shall also state whether or not the actual sea conditions exceeded the assumed sea conditions used in the transportation plan.

After arrival at the project site, the Contractor's welding Quality Control Manager (QCM) shall perform a visual inspection of the steel segments for loose bolts, cracks or other damage. The QCM shall provide a verbal inspection report to the Engineer after completing inspection of each segment and shall submit a written inspection report prior to erection of the steel segments or within 14 days of the inspection, whichever comes first.

The Engineer will perform a visual inspection of the steel segments. The Contractor shall notify the Engineer at least 5 days before the segments are ready for inspection. The Contractor's inspection of each segment shall be complete prior to the Engineer's inspection. The Contractor shall provide all necessary and safe access for the Engineer's inspection including removal of bracing and fastening members. The Engineer will perform a visual inspection of the steel segments for loose bolts, cracks or other damage. If cracks are discovered, the Engineer will have the discretion of verifying the cracks using magnetic particle (MT) or liquid penetrant (PT) testing. The Contractor shall allow 3 days for the Engineer’s inspection for each shipment of steel segments.

If cracks are discovered, the damaged segments will be rejected and the Contractor shall submit to the Engineer a repair plan to repair the damage. The repair plan shall include the cause of the cracks, a log identifying each crack by marking and location, an analysis of the extent of the damage in the segments and a repair plan for all damaged segments documenting the proposed method for repair. The Contractor shall allow 14 days for the Engineer’s review and approval of the repair plan. All repair work shall be completed on each segment prior to erection. The Contractor shall also submit a mitigation plan to the Engineer for approval. The mitigation plan shall include measures to be taken by the Contractor to prevent damage from occurring in the remaining segments. The Contractor shall allow 21 days for the Engineer’s review and approval of the mitigation plan.

Should actual sea conditions be more severe than those used in the transportation plan analysis, the steel segments will be rejected unless the Contractor can demonstrate through submittal of a revised transportation plan that stresses are within the allowable stresses during construction as specified in Section 2.8 of the San Francisco-Oakland Bay Bridge Design Criteria and the fatigue stress levels are within the constant-amplitude fatigue threshold per AASHTO Bridge Design Code. The Contractor shall allow 30 days for the Engineer's review and approval of the revised transportation plan. Should the Engineer approve the Contractor's revised transportation plan, the Engineer will perform a visual inspection of the steel segments as stated above.

The Engineer's approval of the mitigation plan and revised transportation plan in no way relieves the Contractor of his responsibility to transport the steel segments without damage and without exceeding the fatigue stress levels as specified herein.

Full compensation for transportation of the steel segments without damage, including transportation plan, mitigation plan, repair of rejected segments and providing access for the Engineer's inspection shall be considered as included in the contract prices paid for the items of work involved and no additional compensation will be allowed therefor."

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "ERECTION PLAN," the fifth paragraph is revised as follows:

"The Engineer will provide the reactions required at the milestone specified in the approved preliminary erection plan and the approved Progress Schedule in the event that these reactions cannot be measured. Reactions provided by the Engineer shall be used by the Contractor for the purposes of fabrication and erection until the reactions at Hinge A can be measured by the Contractor and the measured reaction at Hinge K can be furnished by the Engineer."

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "ERECTION PLAN," Item J of the thirteenth paragraph is revised as follows:

"J. Methods for measuring the reactions at Hinge A (Contract No. 04-012024). If the measured reactions per box girder exceed 2.25 MN at Hinge A , the Contractor shall immediately notify the Engineer in writing. The Engineer may direct the Contractor to make modifications to the erection plan based on the measured reactions. Modifications to the erection plan will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications."

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "FABRICATION," the following subsection "Mill to Bear" is added:

"**Mill to Bear**

Where mill to bear surfaces are specified on the plans or in these special provisions, the surfaces shall conform to the requirements of AWS D1.5, Section 3.5.1.9."

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "FABRICATION," subsection "Shop Size" is revised as follows:

"The shop or yard shall be of sufficient size and shall have adequate facilities to permit checking and controlling of the alignment of the box girder and tower lifts before they are shipped to the site. Shop or yard size shall be sufficient to join any three contiguous segments or any two adjacent lifts, whichever is larger."

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In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "FABRICATION," subsection "Bolted Connections," the second paragraph is revised as follows:

"The provisions of Section 8-1.01 "SUBSTITUTION OF NON-METRIC MATERIALS AND PRODUCTS," will not be permitted for high-strength fastener assemblies, unless noted otherwise on the plans."

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "FABRICATION," subsection "Bolted Connections," the fifth paragraph is revised as follows:

"Alignment and contact for the tower shaft bolted splice shall conform to the requirements of AWS D1.5, Section 3.5.1.14, except that filler plates will not be permitted between the exterior face of the skin plates and the exterior splice plates. At the option of the Contractor, tower lift ends may be milled to bear or shimmed. Shimming of up to 5 mm thickness will be permitted in increments of 1 mm or tapered. At any given location, the shim shall be a single thickness of steel. Gaps between shims and skin plates shall be filled with silicone caulk prior to installation of the exterior splice plates. The Contractor shall prepare a work plan that describes the procedure for meeting these requirements and that shall be approved by the Engineer before use. The work plan shall be demonstrated on the mock-up required above. The mating segments of each lift shall be mated at the fabrication site, and the required fit demonstrated, before moving each lift to the final assembly site."

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "FABRICATION," subsection "Bolted Connections," the seventh paragraph is revised as follows:

"Where the DTI method is used, the DTI shall be collapsed to 0.075mm (3 mils), and the gap in the DTI shall be caulked after acceptance by the Engineer. The method of bolt tightening shall be as specified below:

LOCATION	BOLT TYPE	COATING	TIGHTENING METHOD
Tower	A325	Mechanical galvanizing	Turn-of-Nut or Direct Tension Indicator (DTI) collapsed to 3mils (0.075mm
Box Girder	A325	Mechanical galvanizing	Turn-of-Nut, TC or DTI collapsed to 3mils (0.075mm)
All Locations	A490	Dacromet 320 P	Turn-of-Nut or DTI collapsed to 3mils (0.075mm)
All Locations	A307	Hot Dip Galvanized	Snug-Tight plus 1/4 turn
All Locations	A449	Hot Dip Galvanized	Snug-Tight plus 1/4 turn with a lock nut"

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "FABRICATION," subsection "Bolted Connections," the following paragraphs are added after the ninth paragraph:

"After installation, all exposed areas of galvanized bolts shall be cleaned in accordance with the requirements of SSPC-SP 2, and coated with two applications of unthinned organic zinc-rich primer that is compatible with the polysiloxane finish coats within 96 hours of installation. Where polysiloxane finish coats are to be applied within 96 hours, this requirement need not apply.

After installation, all accessible exposed areas of bolts coated with Dacromet, as determined by the Engineer shall be coated with a primer recommended by the manufacturer of the polysiloxane finish coat. Surface preparation shall be as recommended by the manufacturer of the primer or finish coat. Where polysiloxane finish coats will be applied within 6 months, this requirement need not apply."

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In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "ASSEMBLY," the first paragraph is revised as follows:

"The method of erection of the suspended structure and tower shall be determined by the Contractor to meet the seismic design load criteria and ensure control of box girder and tower deflections due to wind induced oscillations."

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "ASSEMBLY," the following paragraphs are added after the third paragraph:

"Wind design loads may be reduced during lifting operations.

Seismic loading during erection shall conform to the seismic loading requirements specified in "TEMPORARY TOWERS," subsection "TEMPORARY TOWER DESIGN," subsection "Seismic Design Loads," of these special provisions."

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "ASSEMBLY," subsection "Tower Lift Sections," is replaced with subsection "Tower" as follows:

"**Tower**

Tower lifts shall be in lengths as indicated on the plans. Exterior plates of the tower shafts shall be fabricated with direction of rolling aligned along the vertical direction of the tower. Within each lift, the number of transverse splices of the plates shall be minimized. Tower skin plate vertical seams shall be located a minimum of 100 mm away from longitudinal stiffeners unless otherwise shown on the plans"

The ends of each lift shall meet the dimensional requirements given under "Shop Welding," subsection "Design Details" of these special provisions. Each end shall be in a horizontal plane. When standing on its lower end, the top corners of each lift shall remain within specified limits in both horizontal directions. To limit cumulative displacements, ends of the higher lift shall be shimmed or milled to compensate for the actual elevation of the lower lift, if the cumulative displacements are not within specified limits.

The fillet reinforcement required by Note 6 of Figures 2.4 and 2.5 of AWS D1.5 will not be required for PJP welds in the tower.

The tower interior corner splice plates shall be beveled 6 mm to clear weld beads on inside joint of tower corner skin plates subject to approval of the Engineer.

The ends of adjacent lifts shall be abutted together in the shop to ensure proper fit.

Shear stresses shall not be induced in the tower struts at any time during the tower erection. At the option of the Contractor, cross bracing and shear links may be used to obtain the required tolerances between shafts provided the axial loads in the cross bracing or shear links, after complete erection of tower, do not exceed 1 MN per member and the locked-in stresses along the entire length of each shaft does not exceed 5% of yield stress. The Contractor shall estimate the force and stresses in these members, including the locked-in stresses in each shaft after complete erection of tower, based on the approved erection plan and submit the calculations to the Engineer for review and approval. Bolt holes for the shear link connection plates may be field drilled subject to review and approval by the Engineer. The pin holes for the cross bracing may be bored in the shop to match field measurements subject to review and approval by the Engineer. The layout of the bolt holes shall be submitted to the Engineer for approval."

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "SHOP WELDING," subsection "Design Details," Item G "Dimensional Tolerances," is revised as follows:

"G. Dimensional Tolerances

Dimensional control shall be performed in accordance with a written procedure that is approved by the Engineer before use. The dimensional control procedure shall describe how the required tolerances will be checked and achieved during fabrication and erection, including the sizing and use of dimensional control templates. Calculations shall be included to provide the basis for acceptance of interim dimensions of structures erected under temporary loading conditions, such as the box sections before installing the bikepath.

Approval of the dimensional control procedure will in no way relieve the Contractor of full responsibility for dimensional control.

1. Dimensional tolerances shall conform to AWS D1.5 as modified on the plans and in these special provisions.
2. Where a discontinuous member provides a continuous load path on either side of a through member, the method of marking and ensuring alignment shall be described in the dimensional control procedure. Misalignment between discontinuous members shall not exceed 10% of the thickness of the thinner member or 3 mm, whichever is less.
3. Dimensional tolerances for the box girder, including the crossbeam, shall conform to the tolerances in AWS D1.5, AASHTO Standard Specification For Highway Bridges, Sixteenth Edition 1996, Division II – Construction, Section 11.4.13 – "Orthotropic Deck Superstructures," and the following:

    a. The tolerance on the depth of the box girder and crossbeam shall conform to AWS D1.5, Section 3.5.1.8.
    b. Component walls of box girder shall be straight within 1:1000, measured in the direction of the axis of the girder or crossbeam, where the girder axis is defined to be in the longitudinal direction of the bridge and the crossbeam axis is defined to be along the transverse axis of the bridge. Local panel flatness between stiffeners shall conform to the requirements in AASHTO Standard Specifications For Highway Bridges, Sixteenth Edition 1996, Division II – Construction, Section 11.4.13.2.
    c. The vertical web plates, transverse diaphragms and floor beam webs shall be within the plumbness and straightness tolerance in AWS D1.5 at any point along the member in the as-installed condition.
    d. The maximum offset of members restrained against bending shall be as specified in AWS D1.5, Section 3.3.3.
    e. At the floorbeam locations the box girder ribs shall be within 4 mm of their theoretical locations. At the end of each box girder segment, corresponding ribs shall align within 4 mm and surfaces to be in contact shall have an offset no greater than 2 mm after shimming. The alignment of shell plates, ribs, and other matching plates of each box girder segment or lift to the adjacent segment or lift shall be checked during fabrication using a rigid steel template or other equally positive method, as approved by the Engineer. In addition, the tolerance of the shell plates and ribs at each floor beam shall be checked using the floor beam or other rigid steel template, as approved by the Engineer.
    f. Rib sweep in the plane of the shell plate shall not exceed 1:480 of the floorbeam or bulkhead spacing.

4. The dimensional tolerances for the fabrication, assembly, and erection of the tower, measured prior to cable erection, shall conform to the tolerances in AWS D1.5 and the following:

    a. The centerline of the tower shall be plumb to within 1 mm in 2500 mm in any direction. The plumbness shall be verified at the strut elevations and at the top of the tower saddle grillage. For a given elevation, the location of the centerline of the tower shall be determined as the average of the surveyed locations of corner AE of the four shafts at that elevation. In addition, the out-of-plumbness of each tower lift, measured at corner AE, shall not exceed 1 mm in 1000 mm. The rotation relative to the theoretical orientation of each tower shaft about a vertical axis at corner AE, measured at the top of each lift and at the tower saddle grillage, shall not exceed 0.01 radian.
    b. The tolerance for longitudinal, transverse and diagonal distances between any two tower shaft corners AE shall not exceed the greater of 1 mm in 250 mm or 10mm. This tolerance shall be measured at elevation 28.0 m, at all tower cross bracing elevations, and at the tower saddle grillage elevation. The tolerance for distances between opposing faces A and opposing faces E of tower shafts measured at all strut locations shall not exceed the greater of 1 mm in 250 mm or 10 mm.
    c. The cross-sectional fabrication tolerance on the length of any chord connecting any two corners of a tower shaft shall not exceed the greater of 1:500 or 5 mm. This tolerance shall apply to the ends of fabricated segments. Shaft corners at elevation 3.125 m shall be fabricated to within 5 mm of the working points.
    d. At each tower strut location, the relative vertical location of the tower diaphragms between adjacent tower shafts shall not exceed 20 mm. Shear links shall be level to within 1 mm in 1000 mm after connection to the tower shafts. Shim plates may be used at the flange splice plates. At each location, a single shim plate of up to 10 mm in thickness may be used. The tolerance in elevation of each diaphragm shall be 1.0 mmper 2000 mm of elevation or 10 mm, whichever is greater. All modified connections shall be subject to review and approval by the Engineer.
    e. The tolerance on the location of the tower base plate is 10 mm with respect to the as-built foundation.
    f. The misalignment of longitudinal stiffeners at bolted splices shall not exceed 4 mm. At welded splices, the misalignment of tower skin plates and the misalignment of longitudinal stiffeners shall not exceed 10% of the thinner plate thickness or 4 mm, whichever is smaller. The alignment of skin plates and stiffeners of any tower segment or lift to the adjacent segment or lift shall be checked during fabrication using a rigid steel template or other equally positive method, as approved by the Engineer. In addition, the tolerance of the skin plates and stiffeners at each diaphragm shall be checked using the diaphragm or other rigid steel template as approved by the Engineer.
    g. The top surface of the tower saddle grillage top plate shall be level to within a tolerance of 1:1000.

h. The tolerance for the total height of the tower is 75 mm and shall be taken after tower construction is completed and before cable erection.
i. The tolerance on the diameter of the tower anchorage anchor bolt holes shall be –0/+2 mm.
j. The tolerance for the locations of anchor bolt holes in the tower base plate is 2 mm. This tolerance is relative to the template of the as-fabricated tower footing provided by the State.
k. The tolerance for the location of the tower anchorage stiffeners Types 1 and 2 is ±3 mm.
l. The tolerance of the gap in the vertical direction for longitudinal stiffener bolted splice is –0/+4 mm.
m. The straightness of each tower lift, tower segment and tower skin plate/longitudinal stiffener between diaphragms shall satisfy the requirements of AWS D1.5-02 Section 3.5.
n. The tolerance on the location of longitudinal stiffeners in the tower shaft between diaphragms shall be 1:480 of the diaphragm spacing. The tolerance on the location of longitudinal stiffeners at tower shaft diaphragms shall be 2 mm for stiffeners along face A or adjacent to corners of the shaft, and 5 mm for all other stiffeners."

In the Special Provisions, Section 10-1.51, "STEEL STRUCTURES," subsection "FIELD WELDING," Item A of the ninth paragraph is revised as follows:

"A. Mechanized processes such as SAW or automated FCAW shall be used for field welding of the tower skin and crossbeam and box shell plates. At locations where the Engineer determines that mechanized processes are not feasible or practical, an alternative process may be used as approved by the Engineer."

In the Special Provisions, Section 10-1.52, "CABLE SYSTEM," subsection "MATERIALS AND FABRICATION," subsection "Handropes and Handrope Fittings," the third paragraph is revised as follows:

"The handrope strand shall be pre-stretched to 50 percent of the specified minimum breaking strength and shall be held at the prestretched tension for a minimum of 5 minutes. After pre-stretching, the tension shall be lowered to 44 kN and the strand length shall be measured with a calibrated tape. While under measuring tension, a paint stripe shall be placed along the full length of handrope strand. The handrope strands shall be measured and marked with the location of each stanchion. The measured total length shall be within an accuracy of plus or minus 1/5,000 of its theoretical length."

In the Special Provisions, Section 10-1.52, "CABLE SYSTEM," subsection "ERECTION," subsection "Cable Bands," the fourth paragraph is revised as follows:

"After the design load of the steel box girder has been transferred to the cable system and before dismantling the footbridge system, the Contractor shall re-tension the cable band bolts to the minimum tension as shown on the plans. Cable band bolts may be re-tensioned prior to or during paving operations. The zero length, final length, and bolt location of each cable band bolt shall be recorded and submitted to the Engineer."

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In the Special Provisions, Section 10-1.52, "CABLE SYSTEM," subsection "ERECTION," subsection "Handropes and handrope fittings," the first paragraph is revised as follows:

"After the design load of the box girder has been transferred to the cable system and before dismantling the footbridge system, the handrope cables shall be installed and tensioned as shown on the plans. Handrope and utility support stanchions shall be plumb to a tolerance of 1:100 in any direction."

In the Special Provisions, Section 10-1.56, "TRAVELER SCAFFOLDS," subsection "MATERIALS AND WORKMANSHIP," the first paragraph is revised with the following two paragraphs:

"All bolts, nuts and washers, except where specified to be stainless steel, shall be galvanized in accordance with the provisions in Section 75-1.05, “Galvanizing,” of the Standard Specifications. Bolts, nuts and washers shall conform to the United States Standard Measures version of ASTM Designation: A325 unless noted otherwise on the plans.

Bolted connections shall conform to requirements in “Specification for Structural Joints Using ASTM A 325 or A 490 Bolts” (RCSC Specification) approved by the Research Council on Structural Connections of the Engineering Foundation."

In the Special Provisions, Section 10-1.56, "TRAVELER SCAFFOLDS," subsection "TRAVELER SCAFFOLD MECHANICAL," subsection "Products," the third paragraph is revised as follows:

"Any such proposed substitutions shall be submitted to the Engineer with sufficient documentation and calculations to support their acceptance. The Engineer will determine the acceptability of the proposed substitution."

In the Special Provisions, Section 10-1.56, "TRAVELER SCAFFOLDS," subsection "TRAVELER SCAFFOLD MECHANICAL," subsection "Products," Item R of the fourth paragraph is revised as follows:

"R. **Linear Actuators** – Linear actuators shall be supplied by one of the following manufacturers, or equal:

VENDOR ADDRESS AND PHONE NUMBER
TEMPLETON KENLY SIMPLEX (A Division of Templeton Kenly) 2525 Gardner Road Broadview, IL 60155 Phone: 800-275-5225 Fax: 708-865-0894
NOOK INDUSTRIES, INC. 4950 East 49th Street Cleveland, Ohio 44125-1016 Phone: 216-271-7900 Fax: 216-271-7020 Contact: Ron Giovannone

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JOYCE-DAYTON CORP. P.O. Box 1630 Dayton, Ohio 45401 Phone: 937-294-6261 Fax: 937-297-7173 Contact: Eric Claudepierre

For the purposes of completing the detailing of all associated components, a specific selection has been made for linear actuators. The units selected are Templeton Kenly, Unilift, M Series screw actuators. The specific unit descriptions are shown on the plans. Substitutions of equivalent performance may be proposed for review by the Engineer. Should such substitution be accepted, the traveler supplier shall re-detail, at his expense any components affected by the substitutions.

Ball screw actuators will not be accepted as a substitution due to potential backwards movement under load.

The actuator load screws and exposed shafts shall be steel that is electroplated as specified in these special provisions, that will withstand severe environmental exposure including salt-laden air.

The actuator screws for the M50 units shall be made from mechanical tubing to reduce weight.

Each actuator shall be supplied with a protective rubber boot as shown on the plans.

Actuators shall be marine grade epoxy coated."

In the Special Provisions, Section 10-1.56, "TRAVELER SCAFFOLDS," subsection "TRAVELER SCAFFOLD MECHANICAL," subsection "Products," Item S of the fourth paragraph is revised as follows:

"S. **Actuator Drive Air Motors** – Actuator drive air motors shall be supplied by one of the following manufacturers, or equal:

VENDOR ADDRESS AND PHONE NUMBER
INGERSOLL-RAND Ingersoll-Rand Tool and Hoist Division 11909 Telegraph Road Santa Fe Springs, CA 90670 Phone: 562-777-0808 Fax: 562-777-0818
COOPERTOOLS 2000 S. Santa Cruz Street Anaheim, CA 92805-6816 Phone: 714-712-5800 Fax: 714-712-5801 Contact: Glenn Anderson

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PSI AUTOMATION
P.O. Box 34486
Houston, TX 77234-4486

Phone: 800-392-3602
Fax: 281-280-8795

Contact: Bob Arnett

For the purposes of completing the detailing of all associated components, a specific selection has been made for the drive motors for the linear actuators. The units selected are Ingersoll Rand units. The specific model numbers are as shown on the plans.

Substitution of units with equivalent performance and durability may be proposed for review by the Engineer.

Should such substitutions be accepted, the traveler supplier shall re-detail, at his expense, all affected components.

Substitute air motors shall have starting, running and stall torque values within 10% of the values for the selected motors within the pressure range of 490 to 690 kPa.

The maximum force in the actuators at stall out of the motors must not exceed the current value by more the 10%.

The motor starting torque available at 490 kPa air pressure shall be sufficient to extend the proposed actuators under the following axial compressive loads:

Type	Axial Compressive Load
ACT 03, 04, 05, and 06 (M50)	40.0 kN, min
ACT 01 and 02 (M30)	31.5 kN, min

The ultimate column buckling strength of the proposed actuators shall meet or exceed the following values:

Unit Type	Unsupported Length, min	Ultimate Column Buckling Load
M30	3581 mm	176 kN
M50	4583 mm	170 kN

Ultimate column buckling load = (1.5 x dead load) + (10 x live load)

Drive motors shall be marine grade epoxy coated."

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In the Special Provisions, Section 10-1.57, "TRAVELER SUPPORT RAILS," the second paragraph is revised as follows:

"The work includes the detailing, supply and installation of all traveler rail support material and appurtenances necessary for rail support that are not part of the permanent main structure of the bridge including, but not limited to, connection angles, spacer plates, bolts and other material to be installed within or upon the structural box girder and cross beam."

In the Special Provisions, Section 10-1.57, "TRAVELER SUPPORT RAILS," the following paragraph is added after the fourth paragraph:

"Bolts, nuts and washers shall conform to the United States Standard Measures version of ASTM Designation: A325. Bolted connections shall conform to requirements in “Specification for Structural Joints Using ASTM A 325 or A 490 Bolts” (RCSC Specification) approved by the Research Council on Structural Connections of the Engineering Foundation."

In the Special Provisions, Section 10-1.62, "CLEAN AND PAINT STRUCTURAL STEEL," the following paragraph is added after the first paragraph:

"High-strength fasteners consisting of ASTM Designation: A490M bolts shall be coated in conformance with the requirements of this section."

In the Special Provisions, Section 10-1.62, "CLEAN AND PAINT STRUCTURAL STEEL," the following subsection is added before the subsection "PAYMENT":

"**COATING A490M BOLTS**

Bolts conforming to ASTM Designation: A490M shall receive a corrosion protection coating, in accordance with requirements of this section.

The corrosion protection coating applied to A490M bolts shall consist of Dacromet 320 P or equal. Dacromet 320 P is manufactured by the following supplier:

VENDOR ADDRESS AND PHONE NUMBER
METAL COATINGS INTERNATIONAL, INC. 275 Industrial Parkway Chardon, OH 44024-1083 Phone: (440) 285-2231 Fax: (440) 279-1483

The corrosion protection coating shall conform to the manufacturer’s recommendations and shall be applied by an applicator licensed by the manufacturer. Licensed applicators may be found at the Internet website http://www.metal-coatings.com."

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In the Special Provisions, Section 10-1.62, "CLEAN AND PAINT STRUCTURAL STEEL," subsection "PAYMENT," the following paragraph is added after the last paragraph:

"Full compensation for furnishing and applying the corrosion protection coating to ASTM Designation: A490M bolts shall be considered as included in the contract lump sum price paid for clean and paint structural steel of the types listed in the Engineer's Estimate and no additional compensation will be made therefor."

In the Special Provisions, Section 10-1.66, "WATER PIPES (UNDERGROUND)," is deleted.

In the Special Provisions, Section 10-1.67, "COMPRESSED AIR (UNDERGROUND)," is deleted.

In the Special Provisions, Section 10-4.02, "PIPE, FITTINGS AND VALVES," subsection "PART 2. PRODUCTS," subsection "MATERIALS," subsection "PIPES AND FITTINGS," subsection "Class Description," the third paragraph is deleted.

In the Special Provisions, Section 10-4.02, "PIPE, FITTINGS AND VALVES," subsection "PART 2. PRODUCTS," subsection "MATERIALS," subsection "VALVES," subsection "Ball Valve," is deleted.

In the Special Provisions, Section 10-4.02, "PIPE, FITTINGS AND VALVES," subsection "PART 2. PRODUCTS," subsection "MATERIALS," subsection "MISCELLANEOUS ITEMS," the following items are added after "Link Type Penetration Seal":

"**Automatic Moisture Trap**
Trap shall be inverted bucket type, screwed connection, ASTM-A 48 Class 30 Cast Iron body, suitable for working pressure to 1720 kPa. Drain valve Trap shall be Armstrong Model 811 or equal.

Air Release Valve
Valve shall be free floating lever type designed to provide automatic positive venting of accumulated air from water piping. Valve shall be sized for 54 L/s discharge and be rated for 34 bar at 38 degree Celsius. Valve body, cap, float, seat and all working parts shall be stainless steel."

In the Special Provisions, Section 10-4.02, "PIPE, FITTINGS AND VALVES," subsection "PART 3- EXECUTION," subsection "INSTALLATION," subsection "INSTALLATION OF PIPES AND FITTINGS," subsection "Pipe and Fittings" is revised as follows:

"**Pipe and Fittings**
Pipe and fittings shall be installed in accordance with the following designated uses:

Designated Use	Pipe and Fitting Class
Domestic water	B3
Compressed air	B3"

In the Proposal and Contract, Pre-Award Information/Questionnaire (QUESTIONNAIRE), Section "VI. MANUFACTURING AND FABRICATION SELF QUALIFICATION AUDIT," is revised as follows:

"The Contractor shall submit a "Manufacturing and Fabrication Self Qualification Audit," (MFSQA) of each facility used by any subcontractor, supplier, or fabricator, including those of all lower subcontracted tiers, to prepare materials for all the items of work listed in Section 2-1.03, "Pre-Award Information/Questionnaire," of the special provisions."

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In the Proposal and Contract, in the Engineer's Estimate, Alternative 1 and Alternative 2, Item 9 is revised, and Items 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 147, 148, 149, and 150 are deleted as attached.

To Proposal and Contract book holders:

Replace pages 28, 29, 35, 36, 37, and 43 of the Engineer's Estimate in the Proposal with the attached revised pages 28, 29, 35, 36, 37, and 43 of the Engineer's Estimate. The revised Engineer's Estimate is to be used in the bid.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This office is sending this addendum by UPS overnight mail to Proposal and Contract book holders to ensure that each receives it. A copy of this addendum and the modified wage rates are available for the contractor's use on the Internet Site:

http://www.dot.ca.gov/hq/esc/oe/weekly_ads/addendum_page.html

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY:

REBECCA D. HARNAGEL, Chief
Office of Plans, Specifications & Estimates
Office Engineer

Attachments

SECTION 4. BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES

Attention is directed to the provisions in "Order of Work," of these special provisions, Section 8-1.03, "Beginning of Work," in Section 8-1.06, "Time of Completion," and in Section 8-1.07, "Liquidated Damages," of the Standard Specifications and these special provisions.

The Contractor shall furnish the Engineer with a statement from the vendor that the order for the electrical materials required for this contract has been received and accepted by the vendor; and the statement shall be furnished within 15 days after the contract has been approved by the Attorney General, or the attorney appointed and authorized to represent the Department of Transportation. The statement shall give the date that the electrical materials will be shipped. If the Contractor has the necessary materials on hand, the Contractor will not be required to furnish the vendor's statement.

The Contractor shall begin work within 15 days after the contract has been approved by the Attorney General or the attorney appointed and authorized to represent the Department of Transportation.

A working day as defined in said Section 8-1.06 is re-defined for this project. Paragraph 2 through paragraph 5, inclusive, of said Section 8-1.06 shall not apply. Saturdays, Sundays and legal holidays, including days of inclement weather, will be counted as working days.

The work shall be completed in phases as described in Section 10-1.01 "Order of Work" of these special provisions.

Phase 1 shall comprise of the Pier W2 capbeam, as defined in Section 10-1.01 "Order of Work," and shall be diligently prosecuted to completion by **May 1, 2006**.

The Contractor shall pay to the State of California the sum of $100,000 per day, for each and every day's delay in finishing Phase 1 beyond May 1, 2006, not to exceed $18,000,000.

Phase 2 work shall be diligently prosecuted to completion before the expiration of the **NUMBER OF WORKING DAYS BID MINUS 180 DAYS** beginning on the fifteenth day after approval of the contract.

The Contractor shall pay to the State of California the sum of $100,000 per day, for each and every day's delay in finishing Phase 2 work in excess of the number of working days prescribed above for Phase 2.

Phase 3 work shall be diligently prosecuted to completion before the expiration of the **NUMBER OF WORKING DAYS BID** beginning on the fifteenth day after approval of the contract.

The Contractor shall pay to the State of California the sum of $100,000 per day, for each and every day's delay in finishing Phase 3 work in excess of the number of working days prescribed above for Phase 3.

Phase 4 work shall be diligently prosecuted to completion before the expiration of the **NUMBER OF WORKING DAYS BID PLUS 180 DAYS** beginning on the fifteenth day after approval of the contract.

The Contractor shall pay to the State of California the sum of $100,000 per day, for each and every day's delay in finishing Phase 4 work in excess of the number of working days prescribed above for Phase 4.

Should two or more liquidated damages accrue concurrently, no more than $100,000 per day will be assessed.

Inspection, testing, and review duties performed by the Engineer shall be considered as included in the number of working days for completion of the Designated Portions of Work and no extensions of time will be allowed for such actions in determining liquidated damages.

The time limit specified for the completion of the work contemplated herein is considered insufficient to permit completion of the work by the Contractor working a normal number of hours per day or week on a single shift basis. Should the Contractor fail to maintain the progress of the work in accordance with the "Progress Schedule (Critical Path Method)" required in these special provisions, additional shifts will be required to the extent necessary to ensure that the progress conforms to the above mentioned schedule and that the work will be completed within the time limit specified.

Full compensation for additional costs occasioned by compliance with the provisions in this section shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

5-1.17 COST REDUCTION INCENTIVE PROPOSALS

Cost Reduction Incentive Proposals (CRIP) shall conform to the provisions in Section 5-1.14, "Cost Reduction Incentive," of the Standard Specifications and these special provisions.

Attention is directed to "Description of Bridge Work" of these special provisions for the description of basic design of the bridge.

The Contractor shall attend facilitated enhanced CRIP workshops. The first workshop will occur within 30 days of contract award and the workshops will continue on a semi-monthly basis until 180 days after contract award, or at a frequency mutually acceptable to both the Contractor and the Engineer. The purpose for having the workshops is to identify and manage value enhancing opportunities, and to consider modifications to the plans and specifications that will reduce the total project cost or time of construction without impairing, in any manner, the essential functions or characteristics of this contract including, but not limited to, service life, economy of operation, ease of maintenance, benefits to the travelling public, desired appearance, or design and safety standards. Scheduling of the workshops, selecting the facilitator and workshop site, and other administrative details shall be determined cooperatively by the Contractor and the Engineer. The Contractor may submit recommendations resulting from an enhanced CRIP workshop for approval by the Engineer as cost reduction incentive proposals in conformance with these special provisions.

The Contractor shall submit the preliminary concept of a proposed CRIP in writing to the Engineer for acceptance prior to proceeding with the complete CRIP and at least 5 days prior to the next scheduled facilitated enhanced CRIP workshop. The preliminary concept will be discussed at the facilitated enhanced CRIP workshop to determine whether it will be accepted by the Department. Items of discussion will include permit issues, impact on other projects, impact on the project schedule, traffic considerations, safety and health issues, design criteria, and review times required by the Department and other agencies. Each preliminary concept submittal shall include:

1. A brief description of both the existing contract requirements for performing the work and the proposed changes.
2. A summary of contract requirements that must be changed if the proposal is adopted.
3. An estimate of the cost savings from the proposed changes.
4. An estimate of the impact on the construction schedule.

With the preliminary CRIP concept submittal, the Contractor shall indicate if the proposal affects the seismic performance of the structure. If the preliminary CRIP concept affects the seismic performance of the structure, as determined by the Engineer, the Contractor, if still interested with pursuing the CRIP, shall present the CRIP and necessary supporting information to the Seismic Safety Peer Review Panel (SSPRP). It is anticipated that this presentation to the SSPRP will require a 2-month notice and 6 meetings (occurring once a month), and compensation to the SSPRP. The meeting location(s) will be in California, and the meeting location and schedule will be determined by the SSPRP. The Engineer will no longer consider such a CRIP unless it is approved by the SSPRP. Determination by the Engineer that a preliminary CRIP concept will not be considered further will be deemed rejection of the proposal. Acceptance of a preliminary CRIP concept submittal will in no way constitute approval nor guarantee future approval of a Contractor’s CRIP.

Attention is directed to Section 10-1.14, "Working Drawing Campus," of the Special Provisions. By mutual agreement, the Contractor and the Engineer may elect to utilize the Working Drawing Campus to facilitate development, submittal, investigation, review and approval of CRIPs in the shortest and most efficient manner possible.

The eighth paragraph of Section 5-1.14, "Cost Reduction Incentive," of the Standard Specifications shall not apply. If, within 45 days of award of the contract, the Contractor submits one or more preliminary CRIP concepts as provided herein, a 30 day non-compensable contract time extension will be granted. The 30 day non-compensable contract time extension will be one-time and non-cumulative, regardless of the actual number of preliminary CRIP concepts submitted. If the Contractor obtains conceptual acceptance of one or more preliminary CRIP concepts that were submitted within 45 days of award of the contract, and both the Contractor and the Engineer mutually concur to further develop such preliminary CRIP concepts, an additional non-compensable contract time extension, not to exceed a cumulative total of 90 non-compensable days for all such accepted preliminary CRIP concepts, will be granted in order to facilitate CRIP development, submittal, investigation, review and approval. The term non-compensable, as used herein, shall be construed to mean that no payment including, but not limited to, such costs as direct, indirect, consequential, time related overhead, overhead, and right of way delay costs, will be made in association with the non-compensable contract time extension. Non-compensable days shall be applied after the current contract completion date. Other than as provided herein, no additional contract time extension will be provided for CRIP development; submittal; investigation; review, time associated with the SSPRP; or acceptance of a CRIP and performance of the work thereunder, unless specifically provided for in the contract change order authorizing the use of the CRIP.

The costs involved in providing the enhanced CRIP facilitator and workshop site for the enhanced CRIP workshop will be paid for by the State in conformance with the provisions in Section 9-1.03B, "Work Performed by Special Forces or Other Special Services," of the Standard Specifications, except no markups will be allowed. If, as provided in these special provisions, the Contractor and the Engineer elect to utilize the working drawing campus to facilitate development, submittal, investigation, review and approval of CRIPs, compensation shall be made in accordance with the sixth paragraph of Section 5-1.14, "Cost Reduction Incentive," of the Standard Specifications. The Contractor's cost of the enhanced CRIP workshops, preliminary CRIP concepts, preliminary CRIP concept meetings and the Department's costs of investigating said proposal, presentation, meeting attendance, and compensation to the SSPRP, including any portion thereof paid by the Contractor, shall be excluded from consideration in determining the estimated new savings in construction costs. All other costs associated with these special provisions including, but not limited to, wages and travel expenses, associated with the facilitated enhanced CRIP workshops shall be considered to be included in the various items of work and borne separately by the party incurring the costs, and no additional compensation will be allowed therefor.

5-1.20 AREAS FOR CONTRACTOR'S USE

Attention is directed to the requirements specified in Section 7-1.19, "Rights in Land and Improvements," of the Standard Specifications, plans and these special provisions. The Contractor's attention is directed to the project plans "Construction Details - Areas for Contractor Use" and Section 10-1.08 "Cooperation" of these special provisions.

The Contractor shall have use of the areas as indicated on the plans and as follows and shall plan his work accordingly:

"Area EF" is primarily available to Contract 04-0120E4 until July 1, 2007, and then to this contract after that date. Prior to July 1, 2007, the Contractor shall coordinate any planned work in "Area EF" with the Engineer and Contract 04-0120E4 contractor. Additionally, footings at tower T1 and footing and piers at Pier E2 to be constructed by others under Contract 04-0120E4 will be substantially complete by July 1, 2007, to allow the Contractor to complete the tower and E2 work specified under the contract.

"Area CE" is designated for use by Contract 04-0120E4 until December 31, 2006. The Contractor shall have access through "Area CE" to the work area at Pier W2. After December 31, 2006 "Area CE" becomes a part of the area provided to the YBI Structures contractor on contract 04-0120P4. The Contractor shall continue to have access through the area to the work area at Pier W2.

"Area CF" is designated for use by Contract 04-0120C4 and will not be available to the Contractor until October 1, 2004. Additionally, footing and piers at Pier W2 to be constructed by others under Contract 04-0120C4 will be substantially complete by October 1, 2004 to allow the Contractor to complete the W2 work specified under the contract.

"Area FPR" is primarily available to Contract 04-0120R4 until June 1, 2006. Prior to June 1, 2006, the Contractor shall coordinate any planned work in "Area FPR" with the Engineer and Contract 04-0120R4 contractor. After June 1, 2006, "Area FPR" shall be considered a part of "Area FP."

"Area FP" is available for use by this contract until May 1, 2006. "Area FP" shall then be made available to the contractor constructing the YBI transition structures under contract 04-0120P4 until May 1, 2008. After May 1, 2008, "Area FP" is available to this contractor to complete Phase 2 activities as described in Section 10-1.01 "Order of Work" and Section 4 "Beginning of Work, Time of Completion and Liquidated Damages" of these special provisions. After completion of Phase 2 activities, "Area FP" shall be made available to the YBI Structures contractor prosecuting contract 04-0120P4. The Contractor shall coordinate any planned work in "Area FP" with the Engineer and Contract 04-0120P4 contractor.

The western portion of the Skyway constructed by others under Contract 04-012024 will be substantially complete by July 1, 2007, in order to allow the Contractor to complete the Hinge A connection and other work specified under the contract.

The Contractor’s access to/from the work area may be limited by closures of the Westbound YBI onramp to I-80 and Southgate Road during the contract period. The Contractor will have access to the work area during these closures via posted detours.

The highway right of way shall be used only for purposes that are necessary to perform the required work. The Contractor shall not occupy the right of way, or allow others to occupy the right of way, for purposes which are not necessary to perform the required work.

No area is available within the contract limits for the exclusive use of the Contractor. However, temporary storage of equipment and materials on State property may be arranged with the Engineer, subject to the prior demands of State maintenance forces and to other contract requirements. Use of the Contractor's work areas and other State-owned property shall be at the Contractor's own risk. The State shall not be held liable for damage to or loss of materials or equipment located within these areas.

The Contractor shall remove the equipment, materials, and rubbish from the work areas and other State-owned property which the Contractor occupies and shall leave the areas in a presentable condition, in conformance with the provisions in Section 4-1.02, "Final Cleaning Up," of the Standard Specifications.

The Contractor shall secure, at the Contractor's own expense, areas required for storage of plant, equipment, and materials, or for other purposes if sufficient area is not available to the Contractor within the contract limits, except as stated in subsection Port of Oakland Pier 7.

Port of Oakland Pier 7

The Department intends to occupy and make available to contractors Port of Oakland Pier 7 for the life of the contract.

Attention is directed to Section 10-1.14 "Working Drawing Campus" of these Special Provisions.

Attention is also directed to Section 5-1.12 "Project Information" for reference to plot map titled, "Pier 7 – Area for Contractor's Use, "sample document titled "Sample Pier 7 Occupancy Agreement," and "Settlement Agreement regarding Burma Road Easement and Pier 7 Temporary Construction Easement."

In addition to locating the Working Drawing Campus within the designated area as shown on plot map titled, "Pier 7 – Area for Contractor's Use," the Contractor may also locate their field office for work exclusive to the 04-0120F4 contract. The Department will enter a no-cost occupancy agreement with Contractor to occupy property described in the plot map. The Department will consider a written request from the Contractor for other use of the area, such as for marine access, staging of construction, temporary storage of equipment and materials, or other pertinent use of the area for the construction of the 04-0120F4 contract. The Contractor shall certify that sufficient space exists for the proposed use, including vehicle parking. The Contractor is responsible for all move in and move out costs for Pier 7. Provided that the terms of the occupancy agreement and the settlement agreement are complied with, should the Department order the Contractor to vacate Pier 7 early, the additional relocation costs as directed by the Engineer will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

The Contractor shall investigate utility capacity to support the needs of any intended use. The Contractor shall be responsible for all cost related to utility connections, maintenance and operational cost, improvements needed for intended use, and cost related to vacate and restore property to original conditions at the termination of the occupancy agreement. The existing warehouse building shall not be removed or demolished, although it may be modified with approval of the Engineer.

5-1.31 ENVIRONMENTALLY SENSITIVE AREAS (GENERAL)

Attention is directed to the nine designated Environmentally Sensitive Areas (ESA), shown on the plans:

A. ESA 1, Environmentally Sensitive Area
B. ESA 2, including the Senior Officers' Quarters Historic District and grounds, Quarters 8 and grounds, and Building No. 262.
C. ESA 3, Quarters 10 and grounds.
D. ESA 4, Building No. 267 and grounds.
E. ESA 5, Vegetation, Environmentally Sensitive Areas, including Specific plants and trees, Holly trees, and Live Oak and Pittosporum trees
F. ESA 6, Tidal wetlands and eelgrass beds, located on the north side of YBI
G. ESA 7, Eelgrass beds, located on the south sides of YBI
H. ESA 9a and 9b, historic resources

Water-based ESA boundaries will be marked with USCG-approved buoys, and will be established by others. No construction activities in water within 200 meters of the ESA boundaries shall be allowed until the high visibility USCG-approved delineators have been installed.

Within the boundaries of land-based ESAs 1 through 5 and 9a and 9b, and water-based ESAs 6 and 7, no project related activities shall take place, without the written approval from the Engineer. This specifically prohibits vehicle and barge access, storage or transport of any materials, including hydrocarbon and lead contaminated material, or any other project related activities. The Contractor shall take such measures, including the posting of written notices to his employees and subcontractors, to ensure that ESAs are not entered or disturbed.

No construction activities involving asphalt removal or earth disturbance and/or removal shall be allowed within ESA 1 and ESA 9a and 9b as shown on the plans. All other construction activities are permissible within these ESA, such as heavy equipment movement and storage and stock piling.

In the event that human skeletal material or archaeological resources are uncovered within the contract limits, the Contractor shall immediately notify the Engineer, and the State may conduct an archaeological investigation. The Contractor's construction activities within 10 meters of the find shall be halted immediately and shall not resume until permitted, in writing, by the Engineer. If, in the opinion of the Engineer, the Contractor's operations are delayed or interfered with by reason of such discoveries, the State will compensate the Contractor for the delays to the extent provided in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

RESOURCE REGULATIONS AND MANDATES

In compliance with Section 106 of the National Historic Preservation Act of 1966, any archaeological resource discovered during construction activities must be evaluated by the Department of Transportation Archaeologist.

The California Public Resources Code (PRC) Sections 5097.00 and 5097.8 require protection of Native American remains which might be discovered and outlines procedures for handling any burials found. The California PRC Section 5097 and Health and Safety Code Section 7050 require coordination with the Native American Heritage Commission.

Under California PRC, Chapter 1.7, Section 5097.5, it is a misdemeanor charge for anyone to knowingly disturb a historical feature or steal an archaeological resource. The California Administrative Code, Title 14, Section 4307, mandates that no person shall disfigure any object of historical interest or value. Under California Penal Code, Title 14, Part 1, Section 622-1.2, it is a misdemeanor to destroy anything of historical value within any public place.

All archaeological resources located on Department of Transportation property are property of the State of California. All archaeological resources located on Federal property are property of the Federal government and are governed by federal environmental laws, such as, but not limited to, the Antiquities Act of 1906, the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act.

PAYMENT

Full compensation for checking, repairing or replacing the ESA markings shall be considered as included in the contract prices paid for the various contract items of work and no separate payment will be made therefor.

10-1.01 ORDER OF WORK

Order of work shall conform to the provisions in Section 5-1.05, "Order of Work," of the Standard Specifications and these special provisions.

The first order of work shall be to place the order for the traffic signal equipment, electrical engineered and miscellaneous equipment, consumable materials and aviation and marine navigational aids systems. The Engineer shall be furnished a statement from the vendor that the order for the said systems has been received and accepted by the vendor.

Attention is directed to "Strong Motion Detection System," of these special provisions regarding the order of work concerning electrical work for the seismic monitoring system.

No above ground electrical work shall be performed on any system within the project site until all Contractor-furnished electrical materials for that individual system have been tested and delivered to Contractor.

For each box girder location at Pier E2, the shear key shall be installed before the spherical bushing bearings are installed.

The State will furnish to the Contractor working drawings and a steel template for the as-fabricated tower footing for locating the holes in the tower base plate for the tower anchorage anchor bolt pipe sleeves and the dowels no later than May 1, 2006, in accordance with the requirements in "STEEL STRUCTURES," subsection "TEMPLATE," of these special provisions.

DESIGNATED PORTION OF WORK

Attention is directed to Section 4, "Beginning Of Work, Time Of Completion And Liquidated Damages".

Designated Portion of Work - Phase 1

The Designated Portion of Work – Phase 1 shall be defined as the completion of all work required for the W2 capbeam through Step 4 as shown on the "Pier W2 Construction Sequence" plan sheet.

This phase also includes removal of all temporary works in the area west of the Pier W2 centerline.

Designated Portion of Work - Phase 2

The Designated Portion of Work – Phase 2 shall be defined as including the following items of work:

1. All work necessary to allow the completion of Hinge "K" by the YBI Structures contractor prosecuting Contract No. 04-0120P4 as provided for under "Cooperation," of these special provisions. Temporary supports shall be fully released and shall be clear of any superstructure member by a minimum of 2 meters in any direction.
2. Cable wrapping in the area west of Pier W2(including saddle housings and cable shrouds).
3. Painting of the cable system in the area west of Pier W2
4. Removal of all temporary works in the area west of Pier W2.
5. Dehumidification of cable loop.
6. All mechanical, electrical and access details west of Pier W2.

At the completion of the Designated Portion of Work – Phase 2, the contractor shall vacate the area west of the W2 centerline to allow completion of the Hinge K closure pour by the 04-0120P4 Contractor.

Designated Portion of Work – Phase 3

The Designated Portion of Work – Phase 3 shall be defined as the completion of all elements of work, as shown on the plans and special provisions, except as described below. This phase includes all work required to place traffic on the structure in the westbound direction.

Designated Portion of Work - Phase 4

The Designated Portion of Work – Phase 4 shall be defined as the completion of all the remaining work, including the following items of work:

1. Complete removal of the temporary towers
2. Tower fender
3. Tower Skirt
4. Traveler installation
5. Internal deck painting

6. Final paint coat below deck level
7. Dehumidification System (except cable loop dehumidification)
8. Access details below the roadway level
9. Eastbound access details
10. Final tightening of the eastbound barriers
11. Eastbound electrical and mechanical work
12. Eastbound Hinge A joint seal assembly
13. Eastbound striping and signs
14. Bike path striping and joint sealing
15. Bike path railing and lighting

Attention is directed to "Maintaining Traffic" of these special provisions and construction sequences as shown on the plans.

Attention is directed to "Progress Schedule (Critical Path Method)" of these special provisions regarding the submittal of a general time-scaled logic diagram within 15 days after approval of the contract. The diagram shall be submitted prior to performing any work that may be affected by any proposed deviations to the construction staging of the project.

The work shall be performed in conformance with construction sequences shown on the plans and these special provisions. Nonconflicting work in subsequent sequences may proceed concurrently with work in preceding sequences, provided satisfactory progress is maintained in the preceding sequences of construction.

Attention is directed to "Environmental Work Restrictions," and "Environmentally Sensitive Areas (General)," of these special provisions.

Not less than 60 days prior to applying seeds, the Contractor shall furnish the Engineer a statement from the vendor that the order for the seed required for this contract has been received and accepted by the vendor. The statement from the vendor shall include the names and quantity of seed ordered and the anticipated date of delivery.

Attention is directed to "Move-In/Move-Out (Temporary Soil Stabilization/Erosion Control)" in these special provisions regarding the mobilization of equipment and materials for erosion control work.

Attention is directed to "Fiber Rolls" of these special provisions, regarding restrictions for erosion control (Type D) operations.

ENGINEER'S ESTIMATE
ALTERNATIVE 1 FOREIGN STEEL AND IRON ALTERNATIVE
04-0120F4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
1	030748	WORKING DRAWING CAMPUS	LS	LUMP SUM	LUMP SUM	
2	030702	ELECTRONIC MOBILE DAILY DIAIRY COMPUTER SYSTEM DATA DELIVERY	LS	LUMP SUM	LUMP SUM	
3	BLANK					
4	030704	EROSION CONTROL (TYPE B)	M2	1570		
5	070010	PROJECT SCHEDULE (CRITICAL PATH)	LS	LUMP SUM	LUMP SUM	
6	070018	TIME-RELATED OVERHEAD	LS	LUMP SUM	LUMP SUM	
7	071322	TEMPORARY FENCE (TYPE CL-1.8)	M	205		
8	030705	3.66 M TEMPORARY GATE (TYPE CL-1.8)	EA	1		
9	049281	FURNISH AND REMOVE TEMPORARY TOWERS	LS	LUMP SUM	LUMP SUM	
10	BLANK					
11	BLANK					
12	BLANK					
13	BLANK					
14	BLANK					
15	BLANK					
16	BLANK					
17	BLANK					
18	BLANK					
19	BLANK					
20	BLANK					

REVISED PER ADDENDUM NO. 21 DATED APRIL 20, 2004

ALTERNATIVE 1
04-0120F4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
21	BLANK					
22	BLANK					
23	BLANK					
24	BLANK					
25	049297	REMOVE SKYWAY TEMPORARY TOWER (AE)	LS	LUMP SUM	LUMP SUM	
26	049298	REMOVE SKYWAY TEMPORARY TOWER (AW)	LS	LUMP SUM	LUMP SUM	
27	074019	PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	LUMP SUM	LUMP SUM	
28	074020	WATER POLLUTION CONTROL	LS	LUMP SUM	LUMP SUM	
29	030706	NON-STORM WATER DISCHARGES	LS	LUMP SUM	LUMP SUM	
30	030707	TURBIDITY CONTROL	LS	LUMP SUM	LUMP SUM	
31	074032	TEMPORARY CONCRETE WASHOUT FACILITY	LS	LUMP SUM	LUMP SUM	
32	074034	TEMPORARY COVER	M2	1350		
33	030708	ACCELERATED WORKING DRAWINGS SUBMITTAL	LS	LUMP SUM	LUMP SUM	
34	120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM	LUMP SUM	
35	150605	REMOVE FENCE	M	90		
36	150620	REMOVE GATE	EA	2		
37	030709	RECONSTRUCT CHAIN LINK FENCE (TYPE CL-2.4, BLACK VINYL-CLAD) WITH BARBED WIRE EXTENSION ARMS	M	150		
38	030710	RECONSTRUCT 3.66 M CHAIN LINK GATE (TYPE CL-2.4, BLACK VINYL-CLAD) WITH BARBED WIRE EXTENSION ARMS	EA	2		
39	203061	STABILIZING EMULSION	KG	35		
40	203014	FIBER (EROSION CONTROL)	KG	155		

ALTERNATIVE 1
04-0120F4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
141	030735	CCSF SEWER FORCE MAIN (10 NPS)	M	640		
142	030736	CCSF WATER MAIN (12 NPS)	M	640		
143	030737	DOMESTIC WATER (2 NPS) (T1 TOWER)	M	152		
144	030738	DOMESTIC WATER (2 1/2 NPS)	M	2560		
145	030739	COMPRESS AIR (4 NPS)	M	2560		
146	030740	COMPRESS AIR (3 NPS) (T1 TOWER)	M	152		
147	BLANK					
148	BLANK					
149	BLANK					
150	BLANK					
151	030745	DEHUMIDIFIER SYSTEM	LS	LUMP SUM	LUMP SUM	
152	BLANK					
153	030747	BOOSTER PUMP STATION	EA	1		
154	BLANK					
155	031195	TRANSPORTATION FOR THE ENGINEER	LS	LUMP SUM	LUMP SUM	
156	031196	PHOTO SURVEY OF EXISTING FACILITIES	LS	LUMP SUM	LUMP SUM	
157	031197	VIBRATION MONITORING	LS	LUMP SUM	LUMP SUM	
158	031198	CONSTRUCTION SURVEY	LS	LUMP SUM	LUMP SUM	
159	031199	ESTABLISH MARINE ACCESS	LS	LUMP SUM	LUMP SUM	
160	BLANK					

ENGINEER'S ESTIMATE
ALTERNATIVE 2 DOMESTIC STEEL AND IRON ALTERNATIVE
04-0120F4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
1	030748	WORKING DRAWING CAMPUS	LS	LUMP SUM	LUMP SUM	
2	030702	ELECTRONIC MOBILE DAILY DIAIRY COMPUTER SYSTEM DATA DELIVERY	LS	LUMP SUM	LUMP SUM	
3	BLANK					
4	030704	EROSION CONTROL (TYPE B)	M2	1570		
5	070010	PROJECT SCHEDULE (CRITICAL PATH)	LS	LUMP SUM	LUMP SUM	
6	070018	TIME-RELATED OVERHEAD	LS	LUMP SUM	LUMP SUM	
7	071322	TEMPORARY FENCE (TYPE CL-1.8)	M	205		
8	030705	3.66 M TEMPORARY GATE (TYPE CL-1.8)	EA	1		
9	049281	FURNISH AND REMOVE TEMPORARY TOWERS	LS	LUMP SUM	LUMP SUM	
10	BLANK					
11	BLANK					
12	BLANK					
13	BLANK					
14	BLANK					
15	BLANK					
16	BLANK					
17	BLANK					
18	BLANK					
19	BLANK					
20	BLANK					

ALTERNATIVE 2
04-0120F4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
21	BLANK					
22	BLANK					
23	BLANK					
24	BLANK					
25	049297	REMOVE SKYWAY TEMPORARY TOWER (AE)	LS	LUMP SUM	LUMP SUM	
26	049298	REMOVE SKYWAY TEMPORARY TOWER (AW)	LS	LUMP SUM	LUMP SUM	
27	074019	PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	LUMP SUM	LUMP SUM	
28	074020	WATER POLLUTION CONTROL	LS	LUMP SUM	LUMP SUM	
29	030706	NON-STORM WATER DISCHARGES	LS	LUMP SUM	LUMP SUM	
30	030707	TURBIDITY CONTROL	LS	LUMP SUM	LUMP SUM	
31	074032	TEMPORARY CONCRETE WASHOUT FACILITY	LS	LUMP SUM	LUMP SUM	
32	074034	TEMPORARY COVER	M2	1350		
33	030708	ACCELERATED WORKING DRAWINGS SUBMITTAL	LS	LUMP SUM	LUMP SUM	
34	120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM	LUMP SUM	
35	150605	REMOVE FENCE	M	90		
36	150620	REMOVE GATE	EA	2		
37	030709	RECONSTRUCT CHAIN LINK FENCE (TYPE CL-2.4, BLACK VINYL-CLAD) WITH BARBED WIRE EXTENSION ARMS	M	150		
38	030710	RECONSTRUCT 3.66 M CHAIN LINK GATE (TYPE CL-2.4, BLACK VINYL-CLAD) WITH BARBED WIRE EXTENSION ARMS	EA	2		
39	203061	STABILIZING EMULSION	KG	35		
40	203014	FIBER (EROSION CONTROL)	KG	155		

ALTERNATIVE 2
04-0120F4

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
141	030735	CCSF SEWER FORCE MAIN (10 NPS)	M	640		
142	030736	CCSF WATER MAIN (12 NPS)	M	640		
143	030737	DOMESTIC WATER (2 NPS) (T1 TOWER)	M	152		
144	030738	DOMESTIC WATER (2 1/2 NPS)	M	2560		
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147	BLANK					
148	BLANK					
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151	030745	DEHUMIDIFIER SYSTEM	LS	LUMP SUM	LUMP SUM	
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153	030747	BOOSTER PUMP STATION	EA	1		
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157	031197	VIBRATION MONITORING	LS	LUMP SUM	LUMP SUM	
158	031198	CONSTRUCTION SURVEY	LS	LUMP SUM	LUMP SUM	
159	031199	ESTABLISH MARINE ACCESS	LS	LUMP SUM	LUMP SUM	
160	BLANK					