

DEPARTMENT OF TRANSPORTATION

ESC/OE MS #43
1727 30TH Street, 2ND Floor
Sacramento, CA 95816



August 4, 2000

07-LA,SBd-30-R10.6/R13.2,
R11.7/R11.9,R0.0/R0.1,R0.0/R0.3
07-1264A4
ACNH-S030(041)E

Addendum No. 3

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in LOS ANGELES and SAN BERNARDINO COUNTIES IN AND NEAR CLAREMONT AND UPLAND FROM 0.1 km EAST OF INDIAN HILL BOULEVARD TO 0.1 km EAST OF SAN BERNARDINO COUNTY LINE.

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 August 10, 2000.

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 1, 38, 67, 69, 70, 72, 77, 90, 125, 198, 199, 200, 201, 242, 407, 455, 458, 459, 466, 470, 472, 474, 481 and 518 of 521 are revised. A half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

In the Special Provisions, Section 8-4.01, "BAR REINFORCEMENT SPLICE TESTING (ULTIMATE BUTT SPLICES)," is deleted.

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the following paragraphs are added:

"No lanes on Monte Vista Avenue and Baseline Road shall be closed until October 1, 2000.

The area between the westerly property line of Monte Vista Avenue and a line perpendicular to Station 8+94.984 Baseline Road Detour, and between the southerly right of way line of Baseline Road and the northerly limit of the Baseline Detour Road easement is designated as a "Work Around Area." The Contractor will not be permitted to do any work in this area until after November 1, 2000.

The Contractor will not be permitted to do any work from Route 210 Station 205+80 to Station 218+44 until after November 1, 2000."

In the Special Provisions, Section 10-1.08, "OBSTRUCTIONS," in the table of the sixth paragraph, under the "Date" column, 8/15/2000 is revised to 11/1/2000 in all rows.

In the Special Provisions, Section 10-1.08, "OBSTRUCTIONS," in the table after the eighth paragraph, under the "Working Days" column, 14 is revised to 21 in all rows.

In the Special Provisions, Section 10-1.08, "OBSTRUCTIONS," following the last paragraph, change the "Dates" in the last three sentences from 8/31/2000 to 11/1/2000.

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In the Special Provisions, Section 10-1.20R, "BRIDGE REMOVAL," the second paragraph is revised as follows:

"LOCATION A

The San Antonio Wash Channel is a reinforced concrete open channel approximately 6.1 meters wide and 3.6 meters high. The channel floor varies in depth from approximately 300 mm to 400 mm, with sidewalls approximately 300 mm wide. Portions of the channel to be removed are between Stations 3+84.355 to 5+00.00 and 11+38.10 to 13+18.10 of the San Antonio Wash RCB Culvert."

In the Special Provisions, Section 10-1.20V, "CRACK EXISTING CONCRETE (CHANNEL BED)," is added as attached.

In the Special Provisions, Section 10-1.21, "CLEARING AND GRUBBING," the eighth paragraph is deleted.

In the Special Provisions, Section 10-1.50, "REINFORCEMENT," the subsection, "ULTIMATE BUTT SPLICES," are added after last paragraph as attached.

In the Proposal and Contract, the Engineer's Estimate Items 17, 87, 96, 112, 153, 181 and 220 are revised and Item 221 is added, as attached.

To Proposal and Contract book holders:

Replace pages 3, 7, 8, 10, 12, 13 and add page 13A of the Engineer's Estimate in the Proposal with the attached revised pages 3, 7, 8, 10, 12, 13 and 13A 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.

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

NICK YAMBAO, Chief
Office of Plans, Specifications & Estimates
Division of Office Engineer

Attachments

10-1.20V CRACK EXISTING CONCRETE (CHANNEL BED)

Existing concrete channel bed, at the locations shown on the plans as areas to be cracked shall be cracked to form discrete segments of channel bed as specified in these special provisions.

Attention is directed to Section 7-1.09, "Public Safety," of the Standard Specifications. Positive provision shall be provided to contain flying debris during cracking operations.

Existing concrete (channel bed) shall be cracked into segments nominally measuring 1.8 m transversely by 1.2 m longitudinally. Concrete (channel bed) shall be cracked such that vertical cracks are formed completely through the (channel bed). The vertical cracks shall not deviate from vertical by more than 150 mm between the surface and bottom of the pavement. The cracks shall be continuous without extensive surface spalling along the crack and without excessive shattering of the (channel bed). Spalling over 30 mm in depth will be considered as extensive surface spalling.

Equipment for cracking concrete (channel bed) shall impact the channel bed with a variable force which can be controlled in force and point of impact. Equipment and procedures that utilize unguided free-falling weights such as "headache balls" shall not be used.

Prior to starting cracking operations, the Engineer will select and mark, as a test section, within the limits of channel bed to be cracked. The Contractor shall demonstrate, to the satisfaction of the Engineer, the ability of the selected equipment and procedure to produce cracks in the concrete (channel bed) as specified in these special provisions. Immediately prior to cracking the test section slabs, water shall be applied to the surface of the slabs in sufficient quantity that cracking can readily be determined. After the application of water, the test section channel bed shall be cracked with the equipment proposed for use on the project using varying impact energy and striking patterns until a proper procedure is established. To verify that the procedure is producing cracked channel bed as specified in these special provisions, the Contractor shall take at least 2 core drilled pavement cores, 150 mm or more in diameter, in the cracked channel bed test section. The exact location where cores are to be taken will be designated by the Engineer. Cores shall be obtained in conformance with the requirements in ASTM Designation: C 42. Core holes in the existing channel bed shall be filled with a concrete mix containing a fast setting premixed magnesium phosphate cement or a fast setting premixed modified high alumina cement approved by the Engineer.

Once the equipment and the procedure for cracking channel bed have been approved by the Engineer, that equipment and procedure shall be utilized to crack the concrete channel bed for the project. Cores of the cracked concrete channel bed shall be taken by the Contractor in the same manner specified for coring test sections, at intervals of not less than one core per 500 m for each machine used to crack the channel bed. In the event that cores indicate that cracking is unsatisfactory, as determined by the Engineer, or the equipment or procedures are changed, an additional test section will be selected and marked by the Engineer. The Contractor shall crack the additional test sections until the equipment and procedure produce cracked channel bed conforming to these special provisions.

Crack existing concrete (channel bed) will be measured by the square meter determined from the full width and length of the channel bed cracked. The contract price paid per square meter for crack existing concrete (channel bed) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in cracking existing concrete (channel bed), testing, seating cracked channel bed, including coring cracked channel bed and filling core holes, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

SECTION 10-1.50 REINFORCEMENT

ULTIMATE BUTT SPLICES

Ultimate butt splices shall be either welded or mechanical splices, shall be used at the locations shown on the plans, and shall conform to the provisions in Section 52, "Reinforcement," of the Standard Specifications and these special provisions.

GENERAL REQUIREMENTS

The Contractor shall designate in writing an ultimate butt splicing Quality Control Manager (QCM). The QCM shall be responsible directly to the Contractor for 1) the quality of all ultimate butt splicing including the inspection of materials and workmanship performed by the Contractor and all subcontractors; and 2) submitting, receiving, and approving all correspondence, required submittals, and reports regarding ultimate butt splicing to and from the Engineer.

The QCM shall not be employed or compensated by any subcontractor, or by other persons or entities hired by subcontractors, who will provide other services or materials for the project. The QCM may be an employee of the Contractor.

The length of any type of ultimate mechanical butt splice shall not exceed 10 times the bar diameter of the larger bar to be spliced.

All ultimate prejob, production, and job control sample splices shall be 1) a minimum length of 1.5 meters for reinforcing bars No. 25 or smaller and 2 meters for reinforcing bars No. 29 or larger, with the splice located at mid-point, and 2) suitably identified prior to shipment with weatherproof markings that do not interfere with the Engineer's tamper-proof markings or seals. Any splice that shows signs of tampering will be rejected.

A minimum of one control bar shall be removed from the same bar as, and adjacent to, all ultimate prejob, production, and job control sample splices. Control bars shall be 1) a minimum length of one meter for reinforcing bars No. 25 or smaller and 1.5 meters for reinforcing bars No. 29 or larger, and 2) suitably identified prior to shipment with weatherproof markings that do not interfere with the Engineer's tamper-proof markings or seals. The portion of adjacent bar remaining in the work shall also be identified with weatherproof markings that correspond to its adjacent control bar.

Shorter length sample splice and control bars may be furnished if approved in writing by the Engineer.

Each sample splice and its associated control bar shall be identified and marked as a set. Each set shall be identified as representing a prejob, production, or job control sample splice.

The portion of hoop reinforcing bar, removed to obtain a sample splice and control bar, shall be replaced using a prequalified ultimate mechanical butt splice, or the hoop shall be replaced in kind.

Reinforcing bars, other than hoops, from which sample splices are removed, shall be repaired using ultimate mechanical butt splices conforming to the provisions in "Prejob Test Requirements for Ultimate Butt Splices" specified herein, or the bars shall be replaced in kind. These bars shall be repaired or replaced such that no splices are located in the "No Splice Zone" shown on the plans.

Section 52-1.08E, "Job Control Tests," of the Standard Specifications shall not apply.

The provisions for total slip shall not apply to any ultimate splices that are welded or that are used on hoops.

The independent qualified testing laboratory used to perform the testing of all ultimate butt sample splices and control bars shall not be employed or compensated by any subcontractor, or by other persons or entities hired by subcontractors who will provide other services or materials for the project, and shall have the following:

- A. Proper facilities, including a tensile testing machine capable of breaking the largest size of reinforcing bar to be tested.
- B. A device for measuring the total slip of the reinforcing bars across the splice to the nearest 25 μm , that, when placed parallel to the longitudinal axis of the bar is able to simultaneously measure movement across the splice, at 2 locations, 180 degrees apart.
- C. Operators who have received formal training for performing the testing requirements of ASTM Designation: A 370/A 370M and California Test 670.
- D. A record of annual calibration of testing equipment performed by an independent third party that has 1) standards that are traceable to the National Institute of Standards and Technology, and 2) a formal reporting procedure, including published test forms.

ULTIMATE BUTT SPLICE TEST CRITERIA

Ultimate prejob, production, and job control sample splices shall be tensile tested in conformance with the requirements described in ASTM Designation: A 370/A 370M and California Test 670.

Ultimate prejob and production sample splices shall rupture in the reinforcing bar either: 1) outside of the affected zone or 2) within the affected zone, provided that the sample has achieved at least 95 percent of the ultimate tensile strength of the control bar associated with the sample. In addition, necking of the bar shall be visibly evident at rupture regardless of whether the bar breaks inside or outside the affected zone.

The affected zone is the portion of the reinforcing bar where any properties of the bar, including the physical, metallurgical, or material characteristics, have been altered by fabrication or installation of the splice.

The ultimate tensile strength of each control bar shall be determined by tensile testing the bar to rupture and shall be determined for all control bars, regardless of where each sample splice ruptures. If 2 control bars are tested for one sample splice, the bar with the lower ultimate tensile strength shall be considered the control bar.

Testing to determine the minimum tensile strength, in conformance with the provisions in the ninth paragraph of Section 52-1.08, "Splicing," of the Standard Specifications, will not be required.

PREJOB TEST REQUIREMENTS FOR ULTIMATE BUTT SPLICES

Prior to use in the work, all ultimate butt splices shall conform to the following prejob test requirements:

- A. Eight prejob sample splices for each bar size of each splice type including ultimate mechanical butt splices, ultimate complete joint penetration butt welded splices, and ultimate resistance butt welded splices, that will be used in the work, shall be fabricated by the Contractor. For deformation-dependent types of couplers, 8 sample prejob splices shall also be fabricated for each reinforcing bar size and deformation pattern that will be used in the work.
- B. The sample splices shall be fabricated using the same splice materials, position, operators, location, and equipment, and following the same procedures as will be used to make the splices in the work.
- C. At the option of the Contractor, operator qualification tests may be performed simultaneously with the preparation of prejob sample splices.
- D. If different diameters of hoops are shown on the plans, prejob sample splices, as described above, will only be required for the smallest hoop diameter. In addition, these splices shall be fabricated using the same radius as shown on the plans for these hoops.
- E. Unless otherwise directed in writing by the Engineer, 4 prejob sample splices and control bar sets shall be shipped to the Transportation Laboratory and the remaining 4 sets shall be tested by the Contractor's independent qualified testing laboratory.
- F. Each group of 4 sets from a prejob test shall be securely bundled together and identified by location and contract number with weatherproof markings prior to shipment. Bundles containing fewer than 4 sets will not be tested by the Transportation Laboratory, nor shall they be tested by the independent laboratory.
- G. All 8 sample splices from each prejob test shall conform to the provisions in "Ultimate Butt Splice Test Criteria" specified herein.
- H. Prior to performing any tensile tests on prejob test sample splices, one of the 4 samples shall be tested for, and shall conform to, the provisions for total slip. Should this sample not meet these requirements, one retest, in which the 3 remaining samples are tested for total slip, will be allowed. All 3 of these remaining samples tested shall conform to the aforementioned slip requirements.
- I. For each bundle of 4 sets, a Prejob Test Report shall be prepared by the independent testing laboratory performing the testing. The report shall 1) be signed by an engineer who represents the laboratory and is registered as a Civil Engineer in the State of California; 2) include, as a minimum, the following information for each set: contract number, bridge number, bar size, type of splice, length of mechanical splice, physical condition of test sample splice and control bar, any notable defects, limits of affected zone, total measured slip, location of visible necking area, ultimate strength of each splice, ultimate strength and 95 percent of this ultimate strength for each control bar, and a comparison between 95 percent of the ultimate strength of each control bar and the ultimate strength of its associated splice; and 3) be submitted to the QCM for review and approval, and then to the Engineer.
- J. Test results for each bundle of 4 sets will be reported in writing to the Contractor within 10 working days after receipt of the bundle by the Transportation Laboratory. In the event that more than one bundle is received on the same day, 2 additional working days shall be allowed for providing test results for each additional bundle received. A test report will be made for each bundle received.
- K. Should the Engineer fail to provide the test results within this time allowance and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in providing the test results, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

PRODUCTION TEST REQUIREMENTS FOR ULTIMATE BUTT SPLICES

Production tests shall be performed for all ultimate butt splices used in the work. A production test shall consist of 4 sets of sample splices and control bars removed from each lot of completed splices, except when quality assurance tests are performed.

A lot of ultimate butt splices is defined as 1) 150, or fraction thereof, of the same type of ultimate mechanical butt splices used for each bar size and each bar deformation pattern that is used in the work or 2) 150, or fraction thereof, of ultimate complete joint penetration butt welded splices, or ultimate resistance butt welded splices for each bar size used in the work. If different diameters of hoop reinforcement are shown on the plans, separate lots shall be used for each different hoop diameter.

After all splices in a lot have been completed, the QCM shall notify the Engineer in writing that all couplers in this lot conform to the specifications and are ready for testing. The sample splices will either be selected by the Engineer at the job site or a fabrication facility, provided the facility is located within an 80-km radius of the jobsite.

After notification has been received, the Engineer will randomly select the 4 sample splices to be removed from the lot and place tamper-proof markings or seals on them. The Contractor or QCM shall select the adjacent control bar for each sample splice bar, and the Engineer will place tamper-proof markings or seals on them. These ultimate production sample splices and control bars shall be removed by the Contractor, and tested by an independent qualified testing laboratory, in the presence of either the Engineer or the Engineer's authorized representative.

The Engineer or the Engineer's authorized representative will be at the independent qualified testing laboratory within a maximum of 5 working days after receiving written notification that the samples are at the laboratory and ready for testing. Should the Engineer or the Engineer's authorized representative fail to be at the laboratory within this time allowance, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of this action, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

A sample splice or control bar from any set will be rejected if any tamper-proof marking or seal is disturbed prior to testing.

The 4 sets from each production test shall be securely bundled together and identified with a completed sample identification card prior to shipment to the independent laboratory. The card will be furnished by the Engineer. Bundles of samples containing fewer than 4 sets of splices shall not be tested.

A Production Test Report for all testing performed on each lot shall be prepared by the independent testing laboratory performing the testing and submitted to the QCM for review and approval. The report shall be signed by an engineer who represents the laboratory and is registered as a Civil Engineer in the State of California. The report shall include, as a minimum, the following information for each set: contract number, bridge number, lot number and location, bar size, type of splice, length of mechanical splice, physical condition of test sample splice and control bar, any notable defects, limits of affected zone, total measured slip, location of visible necking area, ultimate strength of each splice, ultimate strength and 95 percent of this ultimate strength for each control bar, and a comparison between 95 percent of the ultimate strength of each control bar and the ultimate strength of its associated splice.

The QCM must review, approve, and forward each Production Test Report to the Engineer for review before any splices represented by the report are encased in concrete. The Engineer shall have 3 working days to review each Production Test Report and respond in writing after a complete report has been received. Should the Contractor elect to encase any splices prior to receiving notification from the Engineer, it is expressly understood that the Contractor will not be relieved of the Contractor's responsibility for incorporating material in the work that conforms to the requirements of the plans and specifications. Any material not conforming to these requirements will be subject to rejection. Should the Contractor elect to wait to encase any splices pending notification by the Engineer, and should the Engineer fail to complete the review and provide notification within this time allowance, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in notification, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

Prior to performing any tensile tests on production test sample splices, one of the 4 samples shall be tested for, and shall conform to, the provisions for total slip. Should this sample not meet these requirements, one retest, in which the 3 remaining samples are tested for total slip, will be allowed. Should any of the 3 remaining samples not conform to these requirements, all splices in the lot represented by this production test will be rejected.

If 3 or more sample splices from any production test conform to the provisions in "Ultimate Butt Splice Test Criteria" specified herein, all splices in the lot represented by this production test will be considered acceptable.

Should only 2 sample splices from any production test conform to the provisions in "Ultimate Butt Splice Test Criteria" specified herein, one additional production test shall be performed on the same lot of splices. Should any of the 4 sample splices from this additional test fail to conform to these provisions, all splices in the lot represented by these production tests will be rejected.

If only one sample splice from any production test conforms to the provisions in "Ultimate Butt Splice Test Criteria" specified herein, all splices in the lot represented by this production test will be rejected.

If a production test for any lot fails, the Contractor will be required to repair or replace all reinforcing bars from which sample splices were removed, complete in place, before the Engineer selects any additional splices from this lot for further testing.

Whenever any lot of ultimate butt splices is rejected, additional ultimate butt splices shall not be used in the work until 1) the QCM performs a complete review of the Contractor's quality control process for these splices, 2) a written report is submitted to the Engineer describing the cause of failure for the splices in this lot and provisions for correcting these failures in future lots, and 3) the Engineer has provided the Contractor with written notification that the report is acceptable. The Engineer shall have 3 working days after receipt of the report to provide notification to the Contractor. Should the Engineer not provide notification within this time allowance, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of this action, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

Production tests will not be required on any repaired splice from a lot, regardless of the type of prequalified ultimate mechanical butt splice used to make the repair.

Should an additional production test be required, the Engineer may select any repaired splice for use in the additional production test.

QUALITY ASSURANCE TEST REQUIREMENTS FOR ULTIMATE BUTT SPLICES

For the first production test performed, and for at least one, randomly selected by the Engineer, of every 5 additional production tests, or portion thereof, performed thereafter, the Contractor shall concurrently prepare 4 additional ultimate job control sample splices along with associated control bars. These ultimate job control samples shall be prepared in the same manner as specified herein for ultimate prejob sample splices and control bars.

Each time 4 additional ultimate job control sample splices are prepared, 2 of these job control sample splice and associated control bar sets and 2 of the production sample splice and associated control bar sets, together, shall conform to the requirements for ultimate production sample splices in "Production Test Requirements for Ultimate Butt Splices" specified herein.

The 2 remaining job control sample splice and associated control bar sets, along with the 2 remaining production sample splice and associated control bar sets shall be shipped, unless otherwise directed in writing by the Engineer, to the Transportation Laboratory for quality assurance testing. The 4 sets shall be securely bundled together and identified by location and contract number with weatherproof markings prior to shipment. Bundles containing fewer than 4 sets will not be tested.

Quality assurance testing will be performed in conformance with the requirements for ultimate production sample splices in "Production Test Requirements for Ultimate Butt Splices" specified herein.

Test results for each bundle of 4 sets will be reported in writing to the Contractor within 3 working days after receipt of the bundle by Transportation Laboratory. In the event that more than one bundle is received on the same day, 2 additional working days shall be allowed for providing test results for each additional bundle received. A test report will be made for each bundle received. Should the Contractor elect to encase any splices prior to receiving notification from the Engineer, it is expressly understood that the Contractor will not be relieved of the Contractor's responsibility for incorporating material in the work that conforms to the requirements of the plans and specifications. Any material not conforming to these requirements will be subject to rejection. Should the Contractor elect to wait to encase any splices pending notification by the Engineer, and should the Engineer fail to complete the review and provide notification within this time allowance, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in notification, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

MEASUREMENT AND PAYMENT

Measurement and payment for reinforcement in structures shall conform to the provisions in Section 52-1.10, "Measurement," and Section 52-1.11, "Payment," of the Standard Specifications and these special provisions.

Full compensation for conforming to the provisions of "Ultimate Butt Splices," of these special provisions shall be considered as included in the contract prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

**ENGINEER'S ESTIMATE
07-1264A4**

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
1	018230	AIR POLLUTION CONTROL	LS	LUMP SUM	LUMP SUM	
2	070010	PROGRESS SCHEDULE (CRITICAL PATH)	LS	LUMP SUM	LUMP SUM	
3 (S)	071322	TEMPORARY FENCE (TYPE CL-1.8)	M	2100		
4 (S)	018231	TEMPORARY FENCE (TYPE CL-1.8, SLATTED)	M	800		
5	074019	PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	LUMP SUM	LUMP SUM	
6	074020	WATER POLLUTION CONTROL	LS	LUMP SUM	LUMP SUM	
7 (S)	120090	CONSTRUCTION AREA SIGNS	LS	LUMP SUM	LUMP SUM	
8 (S)	120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM	LUMP SUM	
9	120120	TYPE III BARRICADE	EA	75		
10 (S)	120149	TEMPORARY PAVEMENT MARKING (PAINT)	M2	120		
11 (S)	120159	TEMPORARY TRAFFIC STRIPE (PAINT)	M	6870		
12 (S)	120165	CHANNELIZER (SURFACE MOUNTED)	EA	90		
13 (S)	120300	TEMPORARY PAVEMENT MARKER	EA	520		
14 (S)	129000	TEMPORARY RAILING (TYPE K)	M	750		
15 (S)	129100	TEMPORARY CRASH CUSHION MODULE	EA	36		
16	018232	ABANDON MONITORING WELL	EA	5		
17	150305	OBLITERATE SURFACING	M2	22 700		
18	150604	REMOVE WOOD FENCE	M	13		
19	150608	REMOVE CHAIN LINK FENCE	M	400		
20	150717	REMOVE TRAFFIC STRIPE AND PAVEMENT MARKING	M2	240		

**ENGINEER'S ESTIMATE
07-1264A4**

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
81	401000	CONCRETE PAVEMENT	M3	42 400		
82	404092	SEAL PAVEMENT JOINT	M	73 400		
83	048224	FURNISH STEEL SOLDIER PILING (W360 X 101)	M	3646		
84 (S)	048225	915 MM DRILLED HOLE	M	1824		
85 (S)	500001	PRESTRESSING CAST-IN-PLACE CONCRETE	LS	LUMP SUM	LUMP SUM	
86 (S)	500050	TIEBACK ANCHOR	EA	265		
87 (F)	510051	STRUCTURAL CONCRETE, BRIDGE FOOTING	M3	2807		
88 (F)	510053	STRUCTURAL CONCRETE, BRIDGE	M3	8988		
89 (F)	510060	STRUCTURAL CONCRETE, RETAINING WALL	M3	2105		
90 (F)	018239	STRUCTURE CONCRETE (CHANNEL)	M3	1080		
91 (F)	510064	STRUCTURAL CONCRETE, BRIDGE FOOTING (CHANNEL)	M3	867		
92 (F)	510067	STRUCTURAL CONCRETE, BRIDGE (CHANNEL)	M3	499		
93 (F)	510086	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	M3	484		
94 (F)	510217	CLASS 3 CONCRETE	M3	344		
95 (F)	510410	CLASS 1 CONCRETE (STRUCTURE)	M3	2.5		
96 (F)	510413	CLASS 1 CONCRETE (BOX CULVERT)	M3	12 319		
97 (F)	510502	MINOR CONCRETE (MINOR STRUCTURE)	M3	292		
98 (F)	510520	MINOR CONCRETE (CONCRETE DRAIN)	M3	126		
99 (F)	511035	ARCHITECTURAL TREATMENT	M2	190		
100 (F)	018240	ARCHITECTURAL TREATMENT (RIVER COBBLE FINISH)	M2	60		

**ENGINEER'S ESTIMATE
07-1264A4**

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
101 (F)	018241	ARCHITECTURAL TREATMENT (SPLIT FACE VENEER)	M2	280		
102 (F)	018242	ARCHITECTURAL TREATMENT (CULTURED STONE VENEER)	M2	200		
103 (F)	511046	HEAVY BLAST TEXTURE	M2	739		
104 (F)	048226	COBBLESTONE TEXTURE	M2	2323		
105 (S-F)	518002	SOUND WALL (MASONRY BLOCK)	M2	595		
106 (S-F)	018243	SOUNDWALL (MASONRY BLOCK ON CHANNEL)	M2	1850		
107 (S-F)	518201	MASONRY BLOCK WALL	M2	12.3		
108 (S)	519128	JOINT SEAL ASSEMBLY (MR 100 MM)	M	96		
109 (S)	519144	JOINT SEAL (MR 50 MM)	M	106		
110 (S-F)	520102	BAR REINFORCING STEEL (BRIDGE)	KG	1 633 100		
111 (S-F)	520103	BAR REINFORCING STEEL (RETAINING WALL)	KG	206 149		
112 (S-F)	520107	BAR REINFORCING STEEL (BOX CULVERT)	KG	1 772 682		
113 (S-F)	520112	BAR REINFORCING STEEL (BRIDGE) (CHANNEL)	KG	85 500		
114 (S-F)	018244	BAR REINFORCING STEEL (CHANNEL)	KG	70 450		
115 (F)	560203	FURNISH SIGN STRUCTURE (BRIDGE MOUNTED WITH WALKWAY)	KG	1939		
116 (S-F)	560204	INSTALL SIGN STRUCTURE (BRIDGE MOUNTED WITH WALKWAY)	KG	1939		
117 (F)	560213	FURNISH SIGN STRUCTURE (LIGHTWEIGHT)	KG	3310		
118 (S-F)	560214	INSTALL SIGN STRUCTURE (LIGHTWEIGHT)	KG	3310		
119 (F)	560218	FURNISH SIGN STRUCTURE (TRUSS)	KG	4620		
120 (S-F)	560219	INSTALL SIGN STRUCTURE (TRUSS)	KG	4620		

**ENGINEER'S ESTIMATE
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Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
141	048228	WELDED STEEL PIPE CASING (1375 MM X 9.53 MM THICK)	M	184		
142	705337	600 MM ALTERNATIVE FLARED END SECTION	EA	6		
143	705339	900 MM ALTERNATIVE FLARED END SECTION	EA	1		
144	705341	1200 MM ALTERNATIVE FLARED END SECTION	EA	2		
145	707244	900 MM PRECAST CONCRETE PIPE MANHOLE	M	17		
146	018249	MONITORING POINT	EA	2		
147	720000	ROCK SLOPE PROTECTION	M3	16		
148 (F)	048229	SLOPE PAVING (COBBLESTONE)	M3	475		
149 (F)	731501	MINOR CONCRETE (CURB)	M	223		
150 (F)	731517	MINOR CONCRETE (GUTTER)	M	238		
151	731627	MINOR CONCRETE (CURB, SIDEWALK AND CURB RAMP)	M3	490		
152 (S-F)	750001	MISCELLANEOUS IRON AND STEEL	KG	22 671		
153 (S-F)	750501	MISCELLANEOUS METAL (BRIDGE)	KG	21 495		
154 (S-F)	048230	CHAIN LINK FENCE (MODIFIED)	M	415		
155 (S)	800391	CHAIN LINK FENCE (TYPE CL-1.8)	M	3610		
156 (S)	800701	WOOD FENCE	M	4		
157 (S)	802596	3.7 M CHAIN LINK GATE (TYPE CL-1.8)	EA	2		
158 (S)	802672	4.9 M CHAIN LINK GATE (TYPE CL-1.8)	EA	3		
159 (S)	820107	DELINEATOR (CLASS 1)	EA	120		
160 (S)	820180	INSTALL MEDIAN MILEAGE PANEL	EA	18		

**ENGINEER'S ESTIMATE
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Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
181 (S)	840561	100 MM THERMOPLASTIC STRIPE	M	37 400		
182 (S)	840562	150 MM THERMOPLASTIC TRAFFIC STRIPE	M	1680		
183 (S)	840563	200 MM THERMOPLASTIC TRAFFIC STRIPE	M	1330		
184 (S)	840564	200 MM THERMOPLASTIC TRAFFIC STRIPE (BROKEN 3.66 M - 0.92 M)	M	90		
185 (S)	840570	100 MM THERMOPLASTIC TRAFFIC STRIPE (BROKEN 10.98 M - 3.66 M)	M	950		
186 (S)	018253	100 MM INVERTED THERMOPLASTIC STRIPE (BROKEN 10.98 M-3.66 M)	M	13 500		
187 (S)	840571	100 MM THERMOPLASTIC TRAFFIC STRIPE (BROKEN 5.18 M - 2.14 M)	M	1670		
188 (S)	018254	100 MM INVERTED THERMOPLASTIC STRIPE (BROKEN 5.18 M - 2.14 M)	M	1200		
189 (S)	840574	200 MM THERMOPLASTIC TRAFFIC STRIPE (BROKEN 10.98 M - 3.66 M)	M	680		
190 (S)	850102	PAVEMENT MARKER (REFLECTIVE)	EA	5070		
191 (S)	860251	SIGNAL AND LIGHTING (LOCATION 1)	LS	LUMP SUM	LUMP SUM	
192 (S)	860252	SIGNAL AND LIGHTING (LOCATION 2)	LS	LUMP SUM	LUMP SUM	
193 (S)	860460	LIGHTING AND SIGN ILLUMINATION	LS	LUMP SUM	LUMP SUM	
194 (S)	018255	MODIFY IRRIGATION CONTROLLER ENCLOSURE CABINET	LS	LUMP SUM	LUMP SUM	
195 (S)	860703	INTERCONNECTION CONDUIT AND CABLE	LS	LUMP SUM	LUMP SUM	
196 (S)	018266	LIGHTING (BRIDGE)	LS	LUMP SUM	LUMP SUM	
197 (S)	018256	SIZE 53 CONDUIT (IN SOIL)	M	200		
198 (S)	018257	SIZE 78CONDUIT (TYPE 1) (UNDER ROADWAY)	M	140		
199 (S)	018258	SIZE 25 INNERDUCT	M	17 700		
200 (S)	018259	TWO SIZE 103CONDUITS (TYPE 1) (UNDER ROADWAY)	M	40		

**ENGINEER'S ESTIMATE
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Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
201 (S)	018260	TWO SIZE 103 CONDUITS (IN ASPHALT)	M	2370		
202 (S)	018261	TRAFFIC MONITORING STATION (LOCATION 2710)	LS	LUMP SUM	LUMP SUM	
203 (S)	018262	TRAFFIC MONITORING STATION (LOCATION 2711)	LS	LUMP SUM	LUMP SUM	
204 (S)	018263	AUTOMATIC VEHICLE CLASSIFICATION STATION (LOCATION F95)	LS	LUMP SUM	LUMP SUM	
205 (S)	018264	CLOSED CIRCUIT TELEVISION SYSTEM (LOCATION FT704)	LS	LUMP SUM	LUMP SUM	
206 (S)	018265	CLOSED CIRCUIT TELEVISION SYSTEM (LOCATION FT080)	LS	LUMP SUM	LUMP SUM	
207 (S)	861101	RAMP METERING SYSTEM (LOCATION 1)	LS	LUMP SUM	LUMP SUM	
208 (S)	861102	RAMP METERING SYSTEM (LOCATION 2)	LS	LUMP SUM	LUMP SUM	
209 (S)	018359	VIDEO NODE (LOCATION FT066)	LS	LUMP SUM	LUMP SUM	
210 (S)	018360	VIDEO NODE (LOCATION FT081)	LS	LUMP SUM	LUMP SUM	
211 (S)	018400	SIGNAL AND LIGHTING (REMOVAL)	LS	LUMP SUM	LUMP SUM	
212 (S)	867014	12 SINGLEMODE FIBER OPTIC CABLE	M	490		
213 (S)	867015	24 SINGLEMODE FIBER OPTIC CABLE	M	2290		
214 (S)	867017	48 SINGLEMODE FIBER OPTIC CABLE	M	4470		
215 (S)	867130	FIBER OPTIC SPLICE CLOSURE	EA	12		
216 (S)	869035	NO. 5 PULL BOX	EA	4		
217 (S)	869039	COMMUNICATION PULL BOX	EA	9		
218 (S)	869047	SPLICE VAULT	EA	6		
219 (S)	869075	SYSTEM TESTING AND DOCUMENTATION	LS	LUMP SUM	LUMP SUM	
220	019635	CRACK EXISTING CONCRETE (CHANNEL BED)	MZ	4500		

ENGINEER'S ESTIMATE
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Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
221	999990	MOBILIZATION	LS	LUMP SUM	LUMP SUM	

TOTAL BID: _____